



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

May 9, 2025

Richard Mittasch
Grand Island Resources LLC
12567 West Cedar Road, Suite 250
Lakewood, CO 80228

**Re: Division's Preliminary Adequacy Review, Conversion Application (CN-1), Cross Gold Mine,
Permit No. M-1977-410**

Mr. Mittasch:

On February 6, 2025, the Division of Reclamation, Mining and Safety (Division/DRMS) deemed the above referenced CN-1 application from Grand Island Resources LLC (Operator/Applicant) complete for the purposes of filing. On February 6, 2025, the Division determined the conversion application to convert the current 110(2) permit to a 112(d)-3 Designated Mining Operation (DMO) permit to be complex and extended the decision due date to July 6, 2025, pursuant to Rule 1.4.1(7). The public comment period ended April 2, 2025, and the Division received 427 timely objections and comments.

As the Division has received objections to the CN-1 application, in accordance with Rule 1.4.9 the Division will schedule a hearing before the Mined Land Reclamation Board (MLRB or Board) during the July 16 and 17, 2025, MLRB meeting for consideration of the CN-1 application. The Division will set a date for a pre-hearing conference sometime during the week of June 30, 2025. The details of the pre-hearing conference will be provided to you as soon as possible. The Division is required to issue a recommendation to approve, approve with conditions or to deny the application to the Board no later than July 6, 2025.

The following items will need to be addressed by the Applicant to the Division's satisfaction prior to the decision date. If the Applicant is unable to satisfactorily address the Division's concerns identified in this review before the decision date, it is the Applicant's responsibility to request an extension of the review period from the Division. If there are outstanding issues that have not been adequately addressed prior to the end of the review period, and no extension has been requested, the Division may issue a recommendation to deny the Operator's CN-1 application to the Mined Land Reclamation Board (MLRB or Board). In order to allow the Division sufficient time to review your responses to the adequacy issues, please submit your adequacy responses to the Division no later than **June 16, 2025**. Subsequent to receipt and review of the Applicant/Operator's response to these items the Division may identify additional adequacy items. Please respond to this Preliminary Adequacy Review with the requested additional/updated information on permit replacement pages and summarize each response in a cover letter titled "Preliminary Adequacy Response; M-1977-410".



General CN-1 Application Issues:

1. The Applicant has proposed to not include U. S. Forest Service (USFS) owned lands into the permit boundary. A review of aerial imagery for the site indicates that at least two parcels of USFS land have been affected by mining related activities and will have to be included into the affected land and permit boundaries. Additionally, the letter (dated February 28, 2025) from the USFS provides a path for obtaining a Notice of Intent for these parcels. The Applicant may designate other USFS lands as not part of the affected land area, but they must be included as part of the permit boundary area. Please update and resubmit page one of the Application reflecting the increase in required permit area.
2. Exhibit D Mining Plan and Section 4 of Exhibit U of the application states that an on-site mill is planned and until it receives approval, all ore material will be processed off-site. The mill, associated buildings, and activities (including, but not limited to, paste backfill) not currently constructed on-site will have to go through a separate Amendment process and will not be considered during the Division's review of this conversion application. No response is required by the Applicant.
3. The Applicant submitted both hardcopies and electronic copies of the Conversion Application. There are significant differences between the Applicant's two submittals, e.g., inconsistencies in the maps, missing pages of appendices, that have led to delays in reviewing and verifying the information from one version to the next and has resulted in unnecessary delays.

EXHIBIT A – Legal Description (Rule 6.4.1):

4. Pursuant to Rule 6.4.1(2), please provide the coordinates of the primary mine entrance of the separate permit areas. The applicant will need to specify coordinates of latitude and longitude in degrees, minutes and seconds or in decimal degrees to an accuracy of at least five (5) decimal places (e.g., latitude 37.12345 N, longitude 104.45678 W). For UTM, the operator will need to specify North American Datum (NAD) 1927, NAD 1983, or WGS 84, and the applicable zone, measured in meters.
5. Exhibit A identifies four areas of exclusion of properties administered by the USFS, however the maps included in Exhibit C appear to identify 11 areas of exclusion. Applicant's Exhibit A will have to be updated according to item #1 above to clearly identify each individual area, provide the area of each parcel and the legal description.
6. Additionally, because the application contains non-contiguous permit boundary areas, please update the meets and bounds descriptions to include total acreages of each non-contiguous area to ensure the total permit area is consistent with the numbers presented in the application form as well as throughout the application exhibits.

EXHIBIT C – Pre-Mining and Mining Plan Map(s) (Rule 6.4.3):

7. All maps that are updated need to have the date filled out in the legend and version of the map clearly indicated.
8. Map C-1 lists the property owners within 200 feet of the permit boundary, however the Division cannot locate these parcels on the map provided. Please update the map or provide a separate map to clearly show where the parcels are located.
9. Map C-1 needs to be updated to clearly show where the currently approved permit boundary is located.
10. Map C-1, please update the NRCS Soil mapping units to be consistent with Exhibit I and Appendix I-1.
11. Map C-1, the legend symbology does not reflect what is used in the map. Please update for consistency and clarity.
12. Map C-1 needs to be updated to reflect the individual United States Forest Service (USFS) areas used in Exhibit A.
13. Map C-1 needs to be updated to show the current locations of all the lined ponds (clearly labeled) and the current location of the water treatment system along with the location that was approved during TR-12.
14. The cemetery needs to be clearly labeled on all the maps where it is shown and the owner of the fence needs to be included in the table of structure owners.
15. The inset, Map C-1, for the Comstock area needs to be updated to clearly show the entire proposed permit area, currently it is partially obscured by a text box.
16. The wells onsite are shown but not individually labeled, please label these wells.
17. Please update Map C-1 to show the names and locations of all creeks on the area of affected land and within 200 feet of all boundaries.
18. The symbology used on the map, C-1, does not correspond to what is depicted in the map legend. Please update the map for consistency and accuracy.
19. In general, Map C-1 depicts too much information at too large of scale, causing some elements to be lost, unlabeled and generally too busy. In the revised maps submission required by this review, please use more than one map to convey the required information at an appropriate scale that all elements can be clearly visible, labeled and otherwise identified.

20. The wells that are located within the permit boundary need to be shown on Map C-1A and labeled appropriately.
21. On Map C-1B the major surface features need to be projected on the cross-section including but not limited to the permit boundary (current and proposed), roads, and the Potosi shaft.
22. The Cross Mine Shaft that is shown on the cross-section portion of map C-1B is not shown on the plan-view portion, please add.
23. Map C-1B has two leaders coming off the text box for the Caribou 300 Level Portal please correct.
24. Mining Plan Map, C-2, does not consistently label features depicted on the map, there is no scale bar for the Comstock inset map, and the Legend needs to be updated to be consistent with what is being portrayed on the map.
25. Map C-2 needs to be updated to show the entire permit boundary area. Currently the Comstock Area permit boundary is not shown in its entirety.
26. Ore Storage Facility, map C-2A, the Legend needs to be updated to be consistent with what is being portrayed on the map and the north arrow is inconsistent with how the building is portrayed on other maps.
27. Neither Map C-1, nor C-2, show the Mine Water and Storm Water treatment system in their current configuration. Please update the maps to show the current configuration of the pond system. Items related to the new designs will be addressed later in this review.
28. Please note that the drawings submitted as Map C-2A, C-2B and C-3 are structures that are considered Environmental Protection Facilities (EPF's) and specific items included in this review related to those structures can be found in the Exhibit U section of this preliminary adequacy review.

EXHIBIT D –Mining Plan (Rule 6.4.4):

29. The Applicant stated, on page D-1, that the Cross Gold Mine remains in active production. Production is defined by Rule 1.1(56) and a review of the permit file by the Division indicates that production has not occurred at the site since 2020. Please revise or clarify the statement made in the application that the mine remains in active production. Please note in the Division's inspection report from March 2023 that the approved CDPHE discharge permit (CO0032751) approved in 2014 does not currently allow for the facility to be actively mining.
30. The proposed perimeter fence around the Caribou 300 Level Portal needs to be accurately shown on the map C-2.

31. The proposed perimeter fence around the Potosi Shaft needs to be accurately shown on the map C-2.
32. The Mining Plan needs additional details with associated maps. The Applicant states that the Idaho Tunnel will only be used for exploration drilling removing 1,400 cubic yards (cy) of NAF material. Please clarify if the NAF material is total for 50 years or 1,400 cy per year. The Exhibit C maps show the underground workings of both the Idaho Tunnel and Cross Adit. Please clearly state and show on a new map, using both plan and cross-section views, where exploration is planned to occur and where mining, 70,000 tons/yr, is planned to occur. It appears to the Division that exploration in the Idaho Tunnel will occur in an area where the Cross Adit cannot access unless substantial underground development were to occur.
33. It is stated in Section 1 that non-acid forming (NAF) material and waste-rock will be used to reference the same material. It is the intent of the Applicant that NAF/waste-rock material will be used on-site and processed to be sold to third parties as construction materials. In Section 6 and Exhibit G it is stated that NAF material was characterized using a couple of samples collected in 1994 and analyzed by Core Laboratories (Appendix U-2). The Division does not agree that the samples collected in 1994 and analyzed in 1995 provide sufficient information to adequately characterize the NAF/waste-rock material. The Applicant states that the results were reviewed by the Division, but the Division cannot find any documentation that those samples were accepted by the Division as being representative host-rock/NAF/waste-rock material. If the Applicant/Operator has that documentation, please provide it to the Division.
34. Further it is stated in Exhibit U Section 3.1 that NAF/waste-rock material will be sampled according to the ore sampling plan but at a rate of 10,000 cy. The Division was unable to locate the ore sampling plan. Please provide the Division with the missing ore sampling plan. Lastly, the Applicant will be required to supply a sampling plan that addresses verification sampling of material that will be sold to third parties for use off-site. The Division requires a sampling plan to be in place to ensure that any NAF/waste rock material leaving the site will not spread potential sources of contamination.
35. Section 4.1 needs to be updated to include a discussion of the short-two track road that is discussed in the Reclamation Plan Section 1.5.
36. Section 4.3 Idaho Tunnel needs to be updated to provide up-to-date detailed information regarding the needed stabilization and planned rehabilitation of the tunnel entry. During the last inspection, March 2025, it was noted the shotcrete veneer that was used to stabilize the entry way years ago is cracking and water has been observed weeping from the surface. Additionally, during that inspection the Applicant stated they were still planning a significant upgrade to tunnel entrance to address the erosion and ensure stability of the road way adjacent the tunnel. The Idaho Tunnel has been the subject of several Technical Revisions (TRs-5, -7 and -9) and the Division has concerns that the current conditions at the tunnel entrance are deteriorating.

37. Section 4.4 Cross Adit, it is simply stated that this adit will be used for mine access and mining will continue until reclamation. It is the understanding of the Division that the mine workings accessed via the Cross Adit are flooded and will need to be dewatered to allow for mining. Please provide additional details related to what needs to be done to prepare the workings for mining, how dewatering will be completed and managed, and future maintenance of the workings for continued mining as proposed. Include in the description a discussion about the snow shed installation that was approved in TR-12 and has yet to be installed.
38. Please provide a description of the types of equipment and required infrastructure the Applicant plans on using for mining and exploration.
39. Section 5 discusses the current Ponds and Water infrastructure, which as stated are considered Environmental Protection Facilities. It is presented in the application that mine effluent water is held in Ponds 3A, 3B and 3C and conveyed to Pond 1 for treatment. Note, the effluent water from the Idaho Tunnel has not been held in Ponds 3A, 3B or 3C since March 2024. Please provide the Division a more detailed and up to date narrative discussing the water treatment system including treatment methods, chemicals used, discharge rates of the portals, etc. Describing the ponds and water infrastructure using dated information from 2023 is disingenuous. Additionally, please show, on the revised maps, any and all storm water control systems currently in place to direct surface flows to the ponds. Please note that further items related to the new treatment system will be addressed in the Exhibit U section of this review.
40. Section 5.2, beginning on pg. D-4 states that the amount of annual waste rock production is between 20,000 and 40,000 cubic yards (cy), however the Waste Rock Landform (WRL) only has a working stacked capacity of 30,000 cy. Please provide more information regarding the total capacity of the WRL including its estimated life span given the projected waste rock generation of 20-40,000 cy per year. Additionally, please include details regarding what will be done with waste rock once the WRL's capacity is reached.
41. In the same section, as well as elsewhere in Exhibit D, it is stated that waste rock is to be processed and trucked off site periodically for beneficial use by third parties. Please propose a QA/QC testing program as well as the frequency of tests to ensure the waste rock is not potentially acid generating. If no measures currently exist, please propose a QA/QC regiment (i.e. Acid Base Accounting, Synthetic Precipitate Leachate Procedure test, etc.) including a frequency schedule to ensure no potentially acid generating material leaves the site. A response to this item can be incorporated along with the response to item #33 but it needs to be clearly stated that is occurring.
42. Section 5.5 discusses the proposed Cross Caribou Access Road and that road is depicted on Map C-2. The approximately 1,000 ft. road has a proposed grade of 8% and all areas of sloping, both cut and fill, are less than 2H:1V. Please provide a geotechnical stability exhibit, specific to the road, ensuring all slopes meet the Division's Factor of Safety Requirement.

43. The same section mentions that energy dissipation structures will be constructed both upstream and downstream of the culverts to further control erosion and maintain the stability of the waterway. Please provide the Division with more information regarding the energy dissipation structures, whether the structures are subject to any US Army Corps of Engineer (USACE) permitting, supported by drawings and maps depicting their location.
44. The Applicant has stated that the use of a pre-cast box culvert may not be used, and a bridge will be used instead. Please comment on this proposal and provide additional details on USACE permitting needed. If details of this option are not currently available, the Applicant/Operator will have to submit the details through a Technical Revision of the Permit and get approval from the Division prior to initiating any construction activities.
45. Section 7, 7.1, and 7.2 discuss Ore Processing, Ore Storage and the Mill and Tailings Management. Specific items related to these portions of the application will be better addressed in the Exhibit U section of this review as all three components of the Operations involve or are themselves Environmental Protection Facilities. Additionally, it is noted that the Mill designs are conceptual at this point and are stated to be addressed in a follow up Technical Revision, however changes of that magnitude will require an Amendment rather than a Technical Revision as mentioned in item #2 above.
46. Section 9 on Pg. D-10 states that explosives are used in the ore extraction process, however no blasting plan or ground vibration analysis were submitted. Pursuant to Rule 6.5(4) please provide a demonstration through appropriate blasting, vibration geotechnical and structural engineering analyses, that off-site areas will not be adversely affected by blasting. Additionally, please provide an evaluation of the potential effects blasting may have on the prevailing hydrologic balance. Lastly, provide a discussion along with maps about where the explosives will be stored and how they will be adequately protected in a high-risk wildfire area. Cite specific MSHA requirements as needed.
47. Please provide a general discussion about the purpose and intent of the diversion structures and include in the discussion how and when each structure will be constructed. Along with those items provide an operation and maintenance discussion of the structures.
48. Please explain why 200 feet of the Cross Mine Diversion structure is located outside the proposed permit boundary and how that portion will be constructed. If the structure has already been constructed, please clearly state who constructed it. If it has been constructed, then the permit boundary needs to be adjusted to incorporate it into the proposed permit boundary.
49. The Idaho Tunnel - High Path and Caribou 300 diversions are close to USFS parcels that are either unpermitted or areas not included in the affected land boundary. Please provide a discussion on how the Applicant will make certain that those parcels are not affected during construction or maintenance of the structures.

EXHIBIT E – Reclamation Plan (Rule 6.4.5):

50. In Section 1 the Applicant cites “Exhibit D, Section 1.1” as containing information of what surface areas and features would be removed to allow for reclamation and revegetation. There is no Section 1.1 in Exhibit D. Please provide a list of features and structures the Applicant is referring to in this section.
51. Section 1.11 please provide an updated list of structures, with appropriate documentation, the Applicant is proposing to leave after the completion of reclamation activities that meet the requirements stated in TR-2. Specifically, during TR-2 Boulder County stated that “Any structures that had the proper permits (or were built before permits were required) could be left on the property.”
52. Section 1.3 Ponds the Applicant states the pond liner and accumulated sediment will be disposed of to an approved off-site disposal facility. During the June 2024 inspection the Division provided the Applicant with the minimum requirements for disposing of the liner and associated sediment. Please update this section to include those requirements along with other relevant testing requirements such as technologically enhanced naturally occurring radioactive materials (TENORM). Note, no liner material, sediment, sludge or water treatment filter material may be disposed of without prior written approval from the Division.
53. It is stated in Section 1.3 that the pond footprint will be backfilled as necessary with soil sourced from the pond berms, graded to blend with the surrounding natural contours and revegetated. The Division does not believe there is a sufficient amount of berm material available to backfill the ponds to natural contours without leaving a ponding area. Additionally, in the June 2024 inspection the Applicant expressed a specific desire to reclaim the 3 series ponds to provide additional room for equipment and mine operation adjacent to Idaho Tunnel, please comment on this reclamation scenario, the possibility there is not sufficient berm material to backfill to natural contours and update this section with those details as needed.
54. What is the status of the leach field downgradient of the NOAA Shed and provide a discussion of what, if any, reclamation needs to be completed?
55. Both Sections 1.7.1 and 1.7.2 propose using the Concrete Block Wall closure method, however it is understood that the mine will continue to discharge water post reclamation. With a potential perpetual water discharge in mind, please provide justification for utilizing this closure method.
56. Section 1.8 discusses the water handling system of the Reclamation Plan. It states that mine water treatment piping will be left in place to facilitate discharge of mine water into Coon Track Creek. Please provide an estimate, supported by a hydrologic demonstration as to what the flow of mine discharge from the Cross Mine Adit and Idaho Tunnel Portal will be post reclamation, including seasonal variability, along with a discussion regarding meeting discharge standards.

57. On the Reclamation Plan Map the piping that is proposed to be left in place has several turns in the piping that could lead to clogging and possibly freezing. Please provide a discussion on the size of the pipe, how and what long-term maintenance will be needed to keep the pipes clear and free flowing during and after reclamation.
58. Section 1.7.2 needs to be updated to discuss more up-to-date detailed information regarding the needed stabilization and planned rehabilitation of the tunnel entry. During the last inspection, March 2025, it was noted the shotcrete veneer that was used to stabilize the entry way years ago is cracking and water has been observed weeping from the surface. Additionally, during that inspection the Applicant stated they were still planning a significant upgrade to tunnel entrance to address the erosion and ensure stability of the road way adjacent the tunnel.
59. Section 1.9, Pg. E-7 states that 5,750 cy of topsoil will be sourced from Nederland, CO. Please provide a written contract from the source for the purchase and delivery of the topsoil to ensure an accurate Reclamation Cost Estimate. Alternatively, that material may be purchased and imported to the site on completion of this revision process to demonstrate that adequate topsoil is on site and available for reclamation.
60. The topsoil volume estimates, Table E-3, does not appear to account for the 4,000 cy needed to reclaim the WRL, please review and update to be consistent with the text.
61. Please verify that it is the intent to broadcast seed all areas requiring revegetation.
62. The footnote associated with Table E-4 needs additional explanation. It is stated that the Idaho Tunnel slope will be seeded with the species in Table 3, there is no Table 3 provided with seeding specifications. It goes on to state that seeding will be supplemented by trees and shrubs listed in Table 4. Table 4, assumed to be Table E-4, does not have trees and shrubs.
63. Please provide a copy of the Stormwater Management Plan for the site. This plan is referenced in Section 1.10 and again in sections 1.1.3 (Exhibit G), Appendix G-2 and 6.3 (Exhibit U). It is stated in Appendix G-2 that the plan was provided in TR-10, but a review of TR-10 shows there is no Stormwater Management Plan that was provided to the Division by the Applicant.
64. Section 1.13, the Division will require quarterly surface water, effluent, and groundwater monitoring throughout all reclamation activities and will only be discontinued or reduced through submission and approval of a Technical Revision. Please update this section accordingly.

EXHIBIT F – Reclamation Plan Map (Rule 6.4.6):

65. Map F-1 needs to be updated to show where the various plant species listed in Tables E-4, E-5, and E-6 will be used. Currently, the map only shows “rangeland” which is not a proposed seed mix.

66. There is symbology used on the map that is not defined in the Legend or on the map. Please update the map to account for these omissions.
67. The map appears to have the current location of the water treatment plant remaining after reclamation is complete. Please state if it is intended to leave the water treatment structures and if so, please update Exhibit E accordingly.
68. The Applicant states in Exhibit E Section 1.8 that piping will be left in place to convey water from the Cross Mine portal to Coon Track Creek. However, the piping from the Cross Mine is not depicted on the map, please update for accuracy.
69. In the Comstock Area there is a red-dashed line that is not accurately defined, please indicate what this represents.
70. The fencing that is to remain around the various mine features needs to be accurately shown and defined on the Reclamation Plan Map.

EXHIBIT G – Water Information (Rule 6.4.7):

71. Pursuant to Rule 6.4.21(9)(b) and 6.4.21(11)(b) the Applicant was required to provide the Division with five successive quarters of baseline quality data to adequately characterize baseline surface water and groundwater quality conditions at the site. The Applicant did not supply this information to the Division despite knowing of the requirement with commitments made with the approval of TR-10. Additionally, the Applicant has consistently noted this commitment through the quarterly updates to the MLRB. Please note five successive quarters of surface and groundwater data to adequately characterize conditions at the site will be required for the Coon Track Creek drainage (Operations Area) and the Caribou Creek drainage (Comstock Area). Include within the reports detailed evaluations of the existing and reasonably potential future uses (both groundwater and surface water) on and within two (2) miles down-gradient of the affected lands.
72. The baseline quality report must address the concerns raised by Boulder County Park & Open Space regarding the hazard mitigation measures planned for the Boulder County Tunnel. The Boulder County Park & Open Space concerns are detailed in an objection the Division received on March 31, 2025, and forwarded to the Applicant on April 4, 2025.
73. A site-specific conceptual groundwater flow model needs to be developed to demonstrate and aid in demonstrating the effects on the prevailing hydrologic balance will be minimized by the proposed mining and exploration activities planned for the site.
74. Appendix G-5 Groundwater Baseline Data has several errors throughout the submission. Please review and verify the details provided and resubmit the updated and corrected tables as needed.

75. Section 1, the Applicant states there is no site-specific stream flow data for Coon Track Creek. However, the Applicant has been collecting surface water analytical data along with flow data at locations upgradient and downgradient of the Operations Area since the second quarter 2022 providing site-specific stream flow data. Please clarify and revise this statement.
76. Please clearly provide a statement in this exhibit what activities may impact wetlands and thus require additional permitting from the USACE. Additionally, please provide information on whether or not current or proposed permitted areas will come under the jurisdiction of CDPHE Regulation 87 - Dredge and Fill Regulation when the rule comes into effect in 2026.
77. Please provide a discussion of the mine discharge permit CO-0032751 and how it currently does not allow for active mining at the site, detail what steps are needed to change the permit, or obtain a new permit, to allow for active mining, a timetable for gaining approval of the updated permit, and other details regarding the permit.
78. The water treatment system has been the subject of several CDPHE notices of violations for not having a qualified operator for the treatment system. Please provide the background and details about the issue, include within the response the steps the Applicant is taking to gain compliance, along with a timetable for gaining compliance. The Applicant must commit to providing documentation of compliance once the Applicant has gained compliance.
79. Please clearly show the Boulder County maintained culvert that is under the Cross Mine access road.
80. The last sentence on page G-1 states that "Surface water flows in these lower wetlands will be maintained by the water treatment discharge during and after mining." The final reclamation plan proposes terminating water treatment and leaving the piping in place to convey mine effluent to the drainage. Please revise for consistency.
81. In Section 1.1.1 it is mentioned that a sediment pond structure will be located at the toe of the WRL and the location of the pond is shown only on Map G-1. All Mining Plan Maps need to be updated to show this structure. Construction details, e.g. dimensions, need to be provided along with a water balance model that shows that the design of the basin, at a minimum, has been appropriately sized for a 100-year, 24-hour storm while maintaining sufficient freeboard.
82. The Reclamation Plan needs to be updated to specifically address the reclamation of the WRL sediment pond.
83. The information for the diversion ditches is inconsistent. On the Mining Plan Map C-2 the division cross-section does not provide complete information. It shows the ditches to be 2-foot deep, but the side slopes are not complete. In Appendix G-1 there are a variety of ditch slope configurations proposed. These details need to be provided and included on the Mining Plan Map and the G-1 Map to be consistent along with the text in Exhibit D and G. It is noted that some of the diversion

ditches are located outside the proposed permit boundary, please revise this so that the affected land is within the proposed affected land boundary.

84. As currently proposed in the application, unimpacted runoff will be diverted around the Operations Area via several diversion ditches. These diversion ditches will need to convey the peak flow from the 100-year, 24-hour design storm with sufficient freeboard (the lesser of one foot or half the velocity head $[v^2/2g]$, but an absolute minimum of six inches) and include armoring protection as necessary. Please address the following:
 - a. Provide a hydrologic analysis estimating the peak flow in the diversion ditches resulting from the design storm.
 - b. Provide a hydraulic analysis of the diversion ditches demonstrating it has sufficient capacity (including freeboard) and the necessary scour protection for both the flattest and steepest reaches of the channel.
85. An operations and maintenance program needs to be provided that addresses how the ditches will be maintained throughout the life of mine.
86. Please provide a detailed discussion on how the natural reclamation of the ditches will impact mine effluent discharges from the Cross and Idaho Tunnel during and after the completion of reclamation.
87. An updated Surface and Groundwater Sampling and Analysis Plan needs to be submitted that addresses monitoring through mining and reclamation. Throughout the application it is stated that monitoring will be reduced or discontinued. The Division does not agree with discontinuing any monitoring at the site. The updated Surface and Groundwater Sampling and Analysis Plan will need to address an increase in the analyte list several quarters prior to initiating mining activities.
88. Please provide the seasonal discharge rates of mine effluent from the Cross Portal under non-pumping conditions. Provide the same data for the Idaho Tunnel. Include a discussion about the seasonal variability concentrations and how they compare to surface water discharge standards.
89. Section 2.6 Geochemistry, in conjunction with Items 33, 40 and 119, the Division does not agree that the samples collected in 1994 adequately characterize all the waste rock that will be generated during the mining Operation. Please develop and execute a strategic sampling plan from several locations in the current and proposed mining areas necessary to complete a whole rock analysis, including SPLP and ABA.
90. The provided lithologic and well construction diagrams for the currently installed wells at the site do not specifically identify which log and diagram is associated with which well. Please update and resubmit the information to clarify.

91. Section 3.2, please provide a copy of the substitute water supply plan that is in place with the Colorado Division of Water Resources for all water uses at the Cross Gold Mine.
92. Appendix G-2 needs to be updated. The Ore Sampling rate of QA/QC sample collection is insufficient and needs to be updated to reflect current industry practices.
93. The Water Treatment Plant Operation and Sampling Plan included in Appendix G-2 has not been updated to reflect what is currently occurring at the site, please update to reflect current conditions and provide a detailed summary of what has changed.

EXHIBIT H – Wildlife Information (Rule 6.4.8):

94. Pursuant to Rule 6.4.8(2) all new applicants shall contact CPW for their recommendations. It is noted that CPW provided a comment letter and the Applicant states that they will contact CPW during the permitting process. Please provide an update on whether the Applicant has contacted CPW to discuss the application and its impacts to wildlife. Additionally, the Division wants an updated comment letter from CPW based on the meeting. During the meeting the Division recommends the Applicant discuss with CPW staff the numerous objections received regarding impacts on wildlife.
95. During the CPW specific meeting please incorporate any comments regarding wildfire impacts as it relates to the expanded permit application.

EXHIBIT I – Soils Information (Rule 6.4.9):

96. Map C-1, please update the NRCS Soil mapping units to be consistent with Exhibit I and Appendix I-1 as stated in Exhibit C above.

EXHIBIT J – Vegetation Information (Rule 6.4.10):

97. Pursuant to Rule 6.4.10(b) please provide a map that only shows the relationship of present vegetation types to soil types.

EXHIBIT K – Climate (Rule 6.4.11):

98. Pursuant to Rule 6.4.21(13)(b)(i) please update the information in this exhibit to include a discussion of the wettest year on record for the area. Additionally, please provide the average direction and velocity of the prevailing winds in accordance with Rule 6.4.21(13)(b)(ii).
99. The water balance section needs to be updated to include a discussion of the sediment pond at the toe of the WRL.

100. The water balance section needs to be updated with a discussion of the diversion ditches that are proposed.
101. The water balance section needs to include a discussion of surface water and precipitation and how those items affect inflows to the underground workings and the resulting mine effluent discharges. The discussion should include a discussion of seasonality impacts.

EXHIBIT L – Reclamation Costs (Rule 6.4.12):

102. The Reclamation Cost estimate provided is from 2021 and is well below the Division's currently held bond amount calculated during TR-10. The cost estimate is insufficient, please provide an up-to-date accurate reclamation cost estimate.

EXHIBIT M – Other Permits and Licenses (Rule 6.4.13):

103. The Federal Explosives/License Permit is in the name of Calais Resources, Inc., not Grand Island Resources LLC, provide the Division a copy of the permit once Grand Island Resources LLC gets a permit, or the permit noted has been updated, prior to using any explosives at the site.
104. A copy of the Mine Backfill Wells permit #CO50000-12075 was indicated to be included in the application but it is missing, please submit to the Division the missing attachment.

EXHIBIT N – Source of Legal Right to Enter (Rule 6.4.14):

105. The Applicant has provided a table that lists all the claims that overlap with the permit and affected area. Appendix N-1 then provides information on the legal right to enter the claims that are owned along with maps of the claims. Please provide a map that shows the proposed permit boundary with the individual claim permit boundaries and names of the claims along with a reference to where the legal right to enter is located.
106. Please update the table to list any use restrictions, see Boulder County's Conservation Easement Program comment from March 23, 2025, along with a list of partial or fractional owners of the land and mineral rights of the claims.
107. This section will have to be updated to include the areas of USFS land that has been affected by mining activity and will have to be traversed to access mine buildings.

EXHIBIT O – Owner(s) of Record of Affected Land (Surface Area) and Owners of Substance to be Mined (Rule 6.4.15):

108. As mentioned above, a table needs to be provided that lists all claims within the proposed permit boundary along with the owners of record clearly stated. The Division has identified the Idaho Lode, parcel 158308000011, as having multiple owners. The Applicant will have to demonstrate

that these and any other co-tenants have been appropriately notified in accordance with Rule 1.6.2(e)(i).

109. Please comment on Boulder County Park & Open Space question #4 that indicates that GIR has the mineral rights to the Boulder County Mine, Boulder County Tunnel and Jack Pot Mine seeking clarification of surface and subsurface ownership rights and plans for these parcels. These concerns are detailed in an objection the Division received on March 31, 2025, and forwarded to the Applicant on April 4, 2025.

110. This section will have to be updated with USFS information as well.

EXHIBIT Q – Proof of Mailing of Notices to Board of County Commissioners and Conservation District (Rule 6.4.17):

111. The attached documents included in Exhibit Q include the Certified Mail Receipts but not a copy of the notice. Please provide a copy of the notice that was sent.

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

112. This exhibit does not meet the requirements of Rule 6.4.21. Specific items are called out below and the commitment to provide future revisions is noted, however, for the purposes of this review process for CN-1 this Exhibit should be replaced in its entirety. The replacement Exhibit should address all sections of Rule 6.4.21 and Rule 7.3 for the operation in its current state, complete with drawings and appendices as necessary.

113. Pg. U-1 states that “Currently in place EPF’s are certified by the approval of this EPP by CDRMS.” This statement is inaccurate as EPF certification is not inherently granted by the approval of this revision. Each EPF that is currently in place must be individually reviewed and certified in accordance with Rule 7.3.2. Table U-1 does provide a list of future EPF’s in various stages of design, however it does not account for the current facilities on site. The modification or addition of EPF’s may be handled in future revisions as proposed in this application. However, for this revision, the Division requires an in-depth evaluation, meeting all requirements of Rule 6.4.21 and 7.3 of all EPF facilities currently on site. This includes but is not limited to;

- All stormwater control structures, including upland diversion ditches
- All ponds included in the on-site water management system as well as the bypass pipe
- The current waste rock storage facility
- Ore storage building

This in-depth evaluation should include design drawings and construction information. For the pond system as well as stormwater control structures, an evaluation of their capacity, average flows, liner composition where applicable, freeboard demonstration where applicable and design

specification in compliance with Rule 7.3.1(3). The evaluation of the above listed facilities must include a certified verification by a professional engineer in accordance with Rule 7.3.2(2).

114. Additionally, in the replacement Exhibit U, Pursuant to Rule 6.4.21(7)(e) for each existing and proposed Environmental Protection Facility in this Amendment please describe any release response procedures, redundancies and “backup” measures necessary, appropriate and economically reasonable to mitigate the risk to human health, property and the environment. These measures should be focused on possible situation resulting in prolonged power outages, access exclusions or other events that may hinder normal operations
115. Section 3 “Ore Handling” discusses the future potential for an onsite mill however does not include the current plan for ore handling. Please provide more information including how ore will be transported from the underground workings to the ore storage facility, the construction information of that facility, and how ore will be packaged and transported offsite for processing.
116. Section 3.1 discusses Waste Rock Handling that waste rock will be sampled according to the ore sampling plan but at a frequency of one sampling event every 10,000 tons. In addition, with previous items in this review, please propose a detailed QA/QC testing program (i.e. Acid Base Accounting, Synthetic Precipitate Leachate Procedure test, etc.) as well the frequency of tests to ensure the waste rock is not potentially acid generating and to ensure no potentially acid generating material leaves the site.
117. Section 11 on Pg. U-12 presents the Geochemical Data and Analysis of samples taken in 1995. While this information is helpful, it is insufficient to properly evaluate the Acid Generating Potential given the vast expanse of underground workings. Please provide an updated Geochemical Evaluation of both the vein material and waste rock, utilizing a strategic sampling plan from several locations and analyzed for ABA and SPLP. The evaluation should also include a map depicting where the samples came from and should also include the waste rock currently being stored on the surface.
118. The drawing submitted as Map C-2A shows a plan view of the ore storage building. In addition to the in-depth evaluation and additional drawings of this facility as required above, please provide a profile view of the Ore Storage Building with sufficient detail to demonstrate adequate containment and coverage of ore material stored within it.

Rule 6.5 Geotechnical Stability Exhibit

119. The Geotechnical Stability Exhibit submitted as an approved version of Technical Revision 7 which applied to the slopes adjacent to the Idaho Tunnel Area. In addition to the Geotechnical Stability Analysis of the road requested above, please provide a similar Geotechnical Stability Analysis for the Waste Rock Storage Area.

120. Also, in conjunction with item 35 of this review, recent discussions with the Operator and observed onsite conditions have caused the stability of the Idaho Tunnel to be of concern. Please provide an updated Geotechnical Stability Exhibit to supplement the provided material to evaluate the stability of the Idaho Tunnel.

Objections and Comments:

121. The Division received timely objections and comments, in accordance with Rule 1.7.1(2)(b), from 427 individuals. Please be prepared to respond to items raised by objectors. All objections and comments can be accessed online.

Other:

122. Please provide proof of publication of the public notice in a newspaper of general circulation as required by Rule 1.6.3 and Rule 1.6.2(1)(d). Proof of publication may consist of either a copy of the last newspaper publication that includes the date published, or a notarized statement from the newspaper.

123. Pursuant to Rule 1.6.2(1)(e), please provide proof that all Owners of Record of all land surface within 200 feet of the boundary of the affected lands received a copy of the notice in Rule 1.6.2(1)(d) immediately after the first publication.

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

Please respond to these adequacy issues by **June 16, 2025**, to ensure ample time for the Division to complete its review prior to the decision deadline. **The current decision due date for this application is July 6, 2025.** If additional time is required to respond to these adequacy issues, please submit a written request for extension of the review period. The Division reserves the right to further supplement this document with additional adequacy issues and details as necessary.

If you need additional information or have any questions, please contact me by email at patrick.lennberg@state.co.us.

Sincerely,

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

Patrick Lennberg
Environmental Protection Specialist

cc: Jared Ebert; DRMS
Lucas West, DRMS

ec: Richard Mittasch, Grand Island Resources, LLC, rmittasch@nedmining.com
Ben Langenfeld, Lewicki & Associates, PLLC, benl@lewicki.biz