



COLORADO

Division of Reclamation,
Mining and Safety

Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

June 18, 2018

Stevan O'Brian
Environment, Inc.
7985 Vance Drive, Suite 205A
Arvada, Colorado 80003

**RE: Colorado Rose Red Granite Quarry, DRMS Permit Number M-1978-332
Amendment No. 2 (AM02) Application, Adequacy Review No. 3**

Dear Mr. O'Brian,

The Colorado Division of Reclamation, Mining, and Safety (DRMS or Division) received your response to the first and second adequacy review letter on June 12, 2018. Below is a list of the outstanding adequacy review items that will need to be addressed prior to the Division's approval of the amendment application. The items listed below are the original adequacy items identified followed by your response to the item. If additional information or clarification is needed the Division's response will indicate this. If an item has been resolved it is no longer listed.

Rule 6.3.4 Exhibit D – Reclamation Plan

8. The applicants plan to close the mine openings using welded rebar cemented into place is not consistent with the standard adit closure practices. The Division recommends installing a grated adit closure with doors to allow the landowner access or a wire rope netting closure. Details regarding the specifications, materials required and the execution of these types of closures are available on the Division's website:

<http://mining.state.co.us/Programs/Abandoned/Documents/General%20Bid%20Specifications.pdf>

This document is the General Bid Specifications guide that our Inactive Mine Program uses as a standard for mine closures similar to this. The Division would accept a plan for closure of the mine openings consistent with these standard practices.

- a. **Environment, Inc. Response:** I have reviewed the Bid Spec.s document to see what you were recommending. I do not have an alternative to present and think that the cost you have would average out to around \$1.45 per square foot which seems reasonable to me. Im pretty sure that if mining ended prematurely the landowners would not want the opening shut in. The Openings are not easily accessible from off-site and would require trespassing by anyone by the owners.
- b. **DRMS Response:** Please clarify, is the applicant proposing a different closure method than that was originally proposed with the AM02 submittal? If a closure method is selected from the IMP guide, please indicate which closure method will be used.



9. The Division has conducted a reclamation cost estimate for the site and included the cost for installing three grated adit closures with doors for access. These costs are based on costs incurred by the Division's Inactive Mine Program for closing similar adits. The cost estimate included with the application did not take account of a cost for spreading soil material or conducting revegetation. The attached cost estimate includes costs for these tasks.
 - a. **Environment Inc. Response:** The estimate did not include resoiling or revegetation because until all State and Local permitting is complete the quarry mining operation will not start as noted in the first sentence of the cost estimate presented. Prior to disturbing any new area that would require resoiling and revegetation the operator will notify the Division of a plan to increase the disturbed area and submit the necessary cost estimate to cover reclaiming the new disturbance area. This keeps the costs in line with covering only what reclamation is required at the one time on the existing 2 acres permit area. We wish to thank the staff for preparing the specification and cost for using a grated adit closure on each opening. Colorado Rose Red has incorporated this closure plan in the Exhibit D – Reclamation Plan we request that all resoiling and revegetation costs be removed from the Reclamation Cost amount until such time as it can be recalculated in the Technical Revision we propose to file prior to opening the surface quarry side of the operation.
 - b. **DRMS Response:** A new reclamation cost estimate is enclosed. Please indicate if the applicant concurs with the estimate.

Rule 6.5 – Geotechnical Stability Exhibit

16. Page 67 of the stability analysis indicates an area of potential failure was estimated for the combination of Joint Orientation 6 and 7. The report shows an area where stabilization may become necessary if the excavation were extended in that direction. Please depict the location of this area on the Exhibit E-1 map. If this area will eventually be mined please indicate how this area will be stabilized to prevent failure or otherwise mitigated.
 - a. **Environment Inc. Response:** I have added strike/dip line to Map Exhibit E-1 showing the location of Joint 7. No mining is planned in this area. The location of where joint 6 is has not been proved by GE as noted above.
 - b. **DRMS Response:** The Division could not locate Joint 7 on the revised Exhibit E-1 Map or the strike and dip lines. Please revise the map to include these features.
19. According to page 65 of the application the interior roofs of the 'rooms' were not included in the stability evaluation performed for this study. Please provide a geotechnical evaluation of geologic hazards associated with the existing and proposed underground roofs and 'rooms'. Based on this evaluation, where there is the potential for failure of any geologic structure caused or exacerbated by the existing and proposed underground mining operation please demonstrate

that off-site areas will be protected with appropriate factors of safety incorporated into the analysis.

- a. **Environment, Inc. Response:** The cost to obtain this type of analysis is beyond the means of Colorado Rose Red at this time. It is the Divisions speculation that there will be failure so having to prove there won't is ridiculous. Colorado Rose Red is willing to take the risk and understands that if a failure occurs that affects areas outside the permit area they will be the responsible party. Also, the land surrounding the permit area where potential rock fall could end up is owned by Colorado Rose Red and ranges from 500 feet on the east and over 1000 on the south most of which is cover by large trees, so only their property would be impacted.
- b. **DRMS Response:** The Division will not approve any additional underground mining without a geotechnical evaluation demonstrating off-site areas will be protected with appropriate factors of safety incorporated into the analysis in accordance with Rule 6.5(3). Here are the applicant's options:
 - i. Provide the geotechnical evaluation.
 - Or,
 - ii. Commit to cease and desist from all underground mining operations and revise the proposed mining plan as such.

Please be aware that Colorado Rose Red's underground mining operation is currently out of compliance with the approved mining plan. The Division may take enforcement action if this adequacy issue is not addressed to the Division's satisfaction and underground mining continues.

20. Regarding the proposed quarry operations (separate from the underground dimensional stone operation), the stability analysis conducted by Ground Engineering and submitted should not be used to draw conclusions regarding the stability of the proposed future mine benches and highwalls. As indicated on page 67 of the report, the evaluation may not contain sufficient information for other purposes. Given this, please provide engineering stability analysis for the proposed final reclaimed slopes/highwalls. Based on this evaluation, where there is the potential for failure of any geologic structure, demonstrate that off-site areas will be protected with appropriate factors of safety incorporated into the analysis.

- a. **Environment, Inc. Response:** Ground engineering has been contacted and will not do that evaluation. Colorado Rose Red is in the process of finding someone that can address it but due to the financial state of the company it is proving impossible to find someone that will take the job on. We propose limiting the mines operation to no blasting or above ground quarrying until this can be addressed. At the current time Colorado Rose Red will not start the quarry operations until it has the proper county permits for a rock quarry have been obtained and those are on hold. They can, under the existing land use status continue to removed underground stone and remove the stone in the Spill areas without blasting. Processing can be done in the plant site area until the spill areas have been cleaned up. Colorado Rose Red will commit to filing a Technical Revision to address the

structural stability for the new quarry highwalls prior to commencing blasting and mining on the surface quarry.

- b. **DRMS Response:** The Division cannot conditionally approve the surface quarry as proposed. The applicant will need to provide the engineering stability analysis for the proposed reclaimed slopes/highwalls. If this cannot be done during this review process for this amendment application, please revise the proposed mining plan to remove the surface quarry operation. The applicant will need to submit a future amendment for the surface quarry operation. The Division would consider approval of a plan to finish mining in the former 111c area and surface removal of the "spill area" material at this time.

Adequacy Review No. 2 – Items identified in the DRMS letter dated January 29, 2018

Rule 6.5 – Geotechnical Stability Exhibit

1. As part of the additional information provided with GE's Report, it appears that Colorado Rose Red Granit Quarry is applying to blast within the quarry. It also appears that GE's slope stability evaluation does not consider dynamic loading in the Report. Please have GE reevaluate slope stability to include dynamic loading in which it may experience in the event of blasting.
 - a. **Environment Inc. Response:** Ground engineering has been contacted and will not do that evaluation. We propose limiting the mines operations to no blasting or above ground quarrying until this can be addressed and filing a Technical Revision for approval prior to commencing these activities.
 - b. **DRMS Response:** Similar to the items above, the Division will not conditionally approved the amendment application as proposed. The engineering/stability analysis will need to consider dynamic loading. Please either provide the required evaluation or revise the proposed mining plan to exclude the surface quarry and blasting.
3. Within the Report, only the results of the stability analysis have been provided. Please submit the model associated with each joint orientation analyzed in the Report.
 - a. **Environment Inc. Response:** As noted before Ground Engineering will not provide additional information for their study. We have no way to generate the model used, or provide it as requested.
 - b. **DRMS Response:** For any future analysis, the Division will need to evaluate the model used.

This concludes the Division's third review of the amendment application and revised material. The decision date for this application is June 22, 2018. If you need additional time to address the Division's adequacy review, please request an extension of the decision date. If you have any questions feel free to contact me at (303) 866-3567, extension 8120 or Jared.Ebert@state.co.us.

Stevan O'Brian, Environment Inc.

Page 5

June 18, 2018

Sincerely,

A handwritten signature in blue ink, appearing to read "Jared Ebert", with a stylized flourish at the end.

Jared Ebert

Environmental Protection Specialist III

Enclosure: 1.) *DRMS Reclamation Cost Estimate, CIRCES Sheets dated June 14, 2018*

EC: Caleb Liesveld, Colorado Rose Red, Inc. Caleb@coloradorosered.com