



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

1313 Sherman Street, Room 215
Denver, CO 80203

February 25, 2019

Jodi Schreiber
Fremont Paving and Redi Mix, Inc.
839 Mackenzie Ave.
P.O. Box 841
Canon City, CO 81212

**Re: Goodrich Pit, 112c Application Number M-2019-005
Adequacy Review No. 1**

Dear Ms. Schreiber,

The Colorado Division of Reclamation, Mining and Safety ("DRMS" or "Division") deemed the above referenced application complete on February 5, 2019. The Division is required to issue a decision on the application by May 6, 2019. The following items will need to be addressed prior to the Division's approval of the application:

Rule 6.4.3, Exhibit C- Pre-mining and Mining Plan Map(s) of Affected Lands

1. Please provide a pre-mining plan map that depicts the existing topography of the area with contour lines of sufficient detail to portray the direction and rate of slope of the affected land.
2. It appears there are three structures located within 200 feet of the affected land; County Road 185, what appears to be a stock pond in the northwest corner of the permit area, and a fence owned by the landowners. Please depict the stock pond embankment and the fence on the Exhibit C map. Please provide the name of the owners of both structures on the Exhibit C map.
3. Please update the mining plan maps to depict the 50 foot buffer area to be located on the south face of the mesa as discussed in the Mining Plan narrative provided for Exhibit D.
4. Please depict where topsoil stockpiles will be located throughout the mining operation.
5. All of the Exhibit C maps must be signed by the person who prepared the map. Please submit revised maps with the appropriate signature.



Rule 6.4.4, Exhibit D – Mining Plan

6. For the two phases of the operation, please estimate the period of time which will be required for each phase and update the mining plan accordingly.
7. As indicated above, there appears to be a stock pond located in the northwest corner of the permit area. The area where this pond is located will be mined through. Please confirm if this is the case. If not, please revise the mining plan accordingly. If the stock pond embankment will be removed or mined through, please provide documentation the owner of this structure approves this activity.
8. The mining plan indicates that explosives will be used. The applicant included a blasting plan and what appears to be a letter with additional details about blasting from BlackWing Blasting, Inc. These documents indicate that structures are located over one mile away and over 5,000 feet away from where blasting will occur. Based on the Division's review of the site's location, a home is located less than ½ mile to the northeast of the permit area. Also, what appears to be a stock pond embankment is located about 2,000 feet north of the permit area. Please revise the blasting plan to account for these structures.
9. DRMS reviewed the dominant soil units found at the site based on the USDA Web Soil Survey. The dominant soil types found at the site are Capulin Loam ("CpC") and Apache Cobbly Loam ("Ap"). The A horizon for the CpC series is reported to be 8 inches deep and the A horizon for the Ap series is reported to be 5 inches deep. The applicant indicates 2 to 4 inches of topsoil will be salvaged for reclamation. Please commit to salvaging 5 to 8 inches of topsoil for reclamation and revise the mining plan accordingly.

Rule 6.5, Geotechnical Stability Exhibit

10. Rule 6.5(4) requires an operator who proposes blasting to provide an appropriate blasting, vibration, geotechnical and structural engineering analyses that off-site areas will not be adversely affected by blasting. While the Rules do not provide details of the exact type of analysis or demonstration that needs to be conducted, the DRMS Minerals program typically follows the protective standards accepted by the Office of Surface Mining, Reclamation and Enforcement for airblast and ground vibration. Regarding airblast, it should be controlled so that it does not exceed the values specified below at any significant structure (home, building, etc.) outside the permit area:

| Lower Frequency Limit of Measuring System, Hz (3dB) | Maximum Level in dB |
|---|------------------------|
| 0.1 Hz or lower – flat response ¹ | 134 peak |
| 2 Hz or lower -- flat response..... | 133 peak |
| 6 Hz or lower -- flat response..... | 129 peak |
| C-weighted, slow response | 105 C |

For ground vibration, the maximum peak particle velocity should not exceed the following limits at any significant structure (home, building, etc.) outside the permit area:

| Distance (D) from the Blasting Site (in feet) | Maximum Allowable Peak Particle Velocity (V max) for Ground Vibration (in inches/secondH) | Scaled-Distance Factor to be Applied without Seismic Monitoring (DsI) |
|---|---|---|
| 0 to 300 | 1.25 | 50 |
| 301 to 5000 | 1.00 | 55 |
| 5001 and beyond | 0.75 | 65 |

H Ground velocity shall be measured as the particle velocity. Peak particle velocities shall be recorded in three mutually perpendicular directions from the blasting site. The maximum peak particle velocity shall be the largest of any of the three measurements.

The applicant may either provide an appropriate demonstration that offsite areas will not be adversely affected by the proposed blasting operation in accordance with Rule 6.5(4) or commit to conducting blasting in such a manner that the above referenced standards will not be exceeded. If the latter option is chosen, please provide a monitoring plan that will be used to document compliance with the above referenced standards.

Rule 6.4.5, Exhibit E – Reclamation Plan

11. Based on adequacy review item #9, please revise the topsoil replacement depth accordingly.
12. Please revise the reclamation plan to include an explanation of the timing/sequencing of reclamation. For example, will the operator initiate reclamation of the Phase 1 mining area prior to affecting land within the Phase 2 mining area?
13. The reclamation plan narrative indicates the site will be graded to blend in with the surrounding topography and the historic surface water flow will be restored. However, based on the Reclamation Plan Map, it appears the 3H:1V side slopes will direct all the flow to the base of the pit.

The mining and reclamation as proposed will leave a basin at the top of the mesa. Please explain how the historic surface water flow will be restored?

Rule 6.4.6, Exhibit F – Reclamation Plan Map

14. Based on item #13 above, please revise the post mine topography depicted on the map to depict how the historic surface water flow will be restored.
15. The Exhibit F map must be signed by the person who prepared the map. Please submit revised maps with the appropriate signatures.

Rule 6.4.7, Exhibit G – Water Information

16. This exhibit indicates a well map is attached. The Division could not locate this map. Please submit this attachment and revise the exhibit to indicate where the attachment will be located.

Rule 6.4.9, Exhibit I – Soils Information

17. The soils map submitted is illegible. Please submit a revised soils map for the proposed affected area.
18. Please revise the exhibit to indicate where in the application the NRCS soils information can be found.

Rule 6.4.10, Exhibit J – Vegetation Information

19. Please revise this exhibit to provide an estimate of the carrying capacity of the affected land in accordance Rule 6.4.10(1)(c).
20. Please revise the exhibit to indicate where in the application the NRCS soils information can be found.

Rule 6.4.11, Exhibit K – Climate Information

21. This exhibit indicates that climate information for Kim, Colorado is attached. The Division could not locate this attachment. Please submit this attachment and revise the exhibit to indicate where in the application this attachment is located.

Rule 6.4.12, Exhibit L – Reclamation Cost

22. The Division has conducted a reclamation cost estimate based on the mining and reclamation plan and the information provided in Exhibit L. The cost estimate provided in Exhibit L did not include

the cost for highwall reduction and grading. The Division's cost estimate included these items. The Division's estimate is included for your review. Please indicate if you concur with the estimate.

Rule 6.4.13, Exhibit M - Other Permits and Licenses

23. Please revise Exhibit M to list any other permits and licenses that will be needed for the use of explosives at the site.

Rule 6.4.19, Exhibit S – Permanent Man-made Structures

24. In addition to the fence listed in Exhibit S, two additional structures are within 200 feet of the affected land. These include Las Animas County Road 185 and what appears to be a stock pond embankment located in the northwest corner of the permit area. If the stock pond will not be mined through or otherwise affected, the requirements of Rule 6.4.19 apply. For County Road 185 and the stock pond (if required) please either:
- a. Provide a notarized agreement between the applicant and the person(s) having an interest in the structure, that the applicant is to provide compensation for any damage to the structure or,
 - b. Where such an agreement cannot be reached, the applicant shall provide an appropriate engineering evaluation that demonstrates that such structures shall not be damaged by activities occurring at the mining operation.

Rule 1.6.2(1)(d) and (e)

25. Please provide a copy of the proof of publication of the notice required by Rule 1.6.2(1)(d).
26. Please provide documentation the notice required by Rule 1.6.2(1)(d) was mailed or personally served to:
- a. All Owners of Record of the surface and mineral rights of the affect land; and
 - b. The Owners of Record of all surface within 200 feet of the boundary of the affected lands.

This concludes the Division's review of the application. As indicated above, the Division is required to issue a decision on the application by May 6th, 2019. If you need additional time to address the items noted above please request an extension of the decision date. Please feel free to contact me if you have any questions at jared.ebert@state.co.us or (303) 866-3567 ext. 8120.0

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.) CIRCES Reclamation Cost Estimate, Goodrich Pit, M-2019-005