



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

1313 Sherman Street, Room 215
Denver, CO 80203

May 16, 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. 2**

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 20, 2019. The Division received your response to the second adequacy review letter on May 13, 2019. The adequacy review items identified in the Division’s second letter are listed below, followed by a summary of Fremont Paving and Redi-Mix, Inc.’s (“FPRM”) response to the item. If additional information or clarification is need for an adequacy item, it is noted below FPRM’s response. If an adequacy review item has been resolved, it is deleted from the list. Please address the remaining items noted below:

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 (Dsl)
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.

- a. **FPRM Response:** Fremont Paving and Redi-Mix commits to conducting blasting in such a manner as to not exceed the referenced standards.
- b. **DRMS Response:** DRMS acknowledges FPRM's commitment to complying with the referenced standards. Please provide a monitoring plan that will be used to verify compliance with the applicable standards. This should include information on the instrumentation used to monitor for airblast and ground vibration, location information on where monitoring equipment will be placed and where records of blasting and associated monitoring will be kept.
- c. **FPRM Response 2:** According to the adequacy review response letter, a monitoring plan was supposed to be included with the adequacy response submittal.
- d. **DRMS Response 2:** The monitoring plan was not included with the adequacy review response. Please submit the monitoring plan.

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 20, 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.

Sincerely,

A handwritten signature in blue ink, reading "Jared Ebert". The signature is fluid and cursive, with the first name "Jared" and last name "Ebert" clearly distinguishable.

Jared Ebert
Environmental Protection Specialist III