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

`

INTEROFFICE MEMORANDUM

TO: Jared Ebert

FROM: Clayton Wein

DATE: 6/13.2022

SUBJECT: New Elk Mine PR-5 Review of Subsidence Monitoring Plan for the Blue Seam

Hi Jared,

As requested, I have reviewed the New Elk Mine's PR-5 adequacy responses with regard to the sections addressing the Subsidence Monitoring Plan for the Blue Seam. After reviewing the new materials, I have the following adequacy questions/concerns:

Rule 2.05.6(6) –

1. The applicant did not provide the Division with any new information regarding the subsidence section of the permit (Rule 2.05.6(6)). There was no update to the subsidence information about mining in the Blue Seam. The applicant needs to provide specific information about the characteristics of the blue seam. Information about the proposed mining method should be included.

2. The applicant provided two new surveys to the Division; Multiple Seam Stress Distribution and pillar Stability Analysis, and the Analysis of Surface Subsidence for Development Mining in the Blue Seam. The Applicant did not provide the Division with any discussion of how the results of these surveys will be used to minimize the effects of subsidence and prevent material damage. The Applicant must provide the Division with a comprehensive discussion of how the data collected in the analysis will be applied to the mining plan.

3. The Depth of overburden used in the analysis was assumed to be >1000 ft. Depending on various locations throughout the mine plan area the overburden depths change. The applicant should address why this value is used instead of applying different values to the analysis, or state why the value provided is sufficient to use for the analysis.

4. The Multiple Seam Stress Distribution and Pillar Stability Analysis recommends enlarging the size of the pillars to obtain the safety factor of over 2.0. The current proposed pillars were 50 ft by 50 ft. These pillars are not large enough to meet the required factor of safety. The applicant needs to address this deficiency by modifying the

mining plan to reflect the data provided by the analysis. As it stands now the current pillar dimensions are unsafe.

Rule 2.05.6(6)(b) –

5. The adequacy response to address this section is insufficient. The operator's response of "… mining in the Blue Seam will include room and pillar mining with no secondary recovery. As a result no subsidence will occur." The operator further stated that sections of Exhibits 8, 24, and 42 have been updated accordingly. The operator did not provide the division with any new text for Exhibits 8, 24, or 42. Information in these sections should explain why there is going to be no anticipated subsidence using the room and pillar mining method, not just that subsidence isn't anticipated using this mining method. This information will be important because the Blue Seam has the least amount of overburden of any of the seams mined at this site. Information should be included if the operator plans to mine coal in areas that have already had the coal mined from the Allen and/or the Apache Seams. If there are plans to mine coal in areas above seams that have already been mined, the operator should consider if subsidence has previously occurred in those areas.

6. This following comment is also applicable to Rule 2.05(6)(3). The information provided in the adequacy responses does not include any new information regarding the development mining underneath the Purgatoire River. The existing information in the C-012 permit only covers the previously mined coal seams and does not account for the Blue Seam. The Blue Seam is roughly 250-300 above the Apache Seam. New information regarding undermining the Purgatoire River in the Blue Seam needs to be addressed and included. This should include depth of the Blue Seam from the Purgatoire River in the areas planned to be over the mining areas. As well as, if/what type of measures taken to prevent impacts to the hydrologic balance.

Please feel free to contact me if you have any questions or concerns.

Sincerely,
Clayton