



STATE OF
COLORADO

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C1980007, West Elk Mine, TR-149, Second Adequacy Review

1 message

Simmons - DNR, Leigh <leigh.simmons@state.co.us>

Thu, Feb 4, 2021 at 4:18 PM

To: "Welt, Kathy" <KWelt@archrsc.com>

Attached

Leigh Simmons
Environmental Protection Specialist



COLORADO
Division of Reclamation,
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Department of Natural Resources

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Adequacy letter, West Elk, TR-149, 2.pdf

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

Kathleen G. Welt
Mountain Coal Company, LLC
5174 Highway 133
Somerset, CO 81434
February 4, 2021

Re: West Elk Mine (Permit No. C-1980-007)
Technical Revision No. 149, (TR-149)
Second Adequacy Review

Dear Ms. Welt,

The Colorado Division of Reclamation, Mining and Safety (Division) received your response to the initial adequacy review, and has the following comments and questions:

Rule 2.05.6(6) Subsidence Survey, Subsidence Monitoring, and Subsidence Control Plan

1. *[Explicit commitment to adhere to consultant's recommendations in the text of section 2.05.6(6) of the PAP]*
The response is sufficient
2. *The proposed text of section 2.05.6(6) has been significantly revised, yet it still contains details that have been duplicated from the Exhibit 60 series. For the sake of clarity, and to avoid the unintentional errors and inconsistencies that creep in when complex technical information is duplicated, the Division would prefer that the text in section 2.05.6(6) be further reduced with the goal of retaining simple factual statements and operational commitments in the text, and to refer to the relevant exhibit for supporting information.*

Please either:

- (i) restore deleted discussion to section 2.05.6(6), or*
- (ii) revise the text more thoroughly to avoid duplicating supporting technical information from the Exhibit 60 series*

The further revisions made to the text of section 2.05.6(6) greatly improve the clarity of the section. Below is a list of suggested minor edits:

- a. Page 2.05-18, paragraph 1; there appears to be an orphan sentence:
The landslides outside the projected longwall mining subsidence effects (i.e., 19 degree angle of draw) by more than 600 feet as described in Exhibit 60C, 60D and 60E.



The currently approved text that includes that sentence reads:

Presently, there are four known locations within the permit area where the reactivation of a landslide could be potentially linked to past or current mining. The first area, in Lone Pine Gulch (Section 20, T13S, R90W, 6th P.M.), contains numerous old landslide features, including steep, hummocky topography with many smaller surficial slumps. Cracking and slumping occurred on one section of a jeep trail in this area in early October 1994. The cracks appeared during mining of the 5NW longwall panel in the B-Seam. Location of the cracks coincides with the boundary of earlier F-Seam room-and-pillar panels. The second area, discussed previously, is above the 8NW longwall panel. This landslide activity, which could not be definitively linked to longwall mining, is described in considerable detail in CDMG's inspection report (CDMG 1996). The third area is above the 9NW longwall panel. Another known landslide area is south of Highway 133 near Box Canyon within the Box Canyon Permit revision area. These landslides are outside the projected longwall mining subsidence effects (i.e., 16 degree angle of draw) by more than 600 feet as described in Exhibit 60C, 60D and 60E.

In this case the currently approved text provides a useful summary of landslide events linked to mining activity with reference to the exhibits for more detail.

Please restore the currently approved text.

- b. Page 2.05-19, paragraph 6; typographic error.
- c. Page 2.05-110, paragraph 5; a detailed discussion of water and methane associated with the Oliver No. 2 Mine is included on pages 2.05-141 through -143 of the currently approved text. Although this information is not especially relevant to the rest of section 2.05.6(6), it should not be removed if it has not been retained elsewhere. **Please either restore the currently approved text, or give a reference to where it may be found.**
- d. Page 2.05-112, paragraph 4; grammatical error.
- e. Page 2.05-112, paragraph 6; a discussion of the potential impacts of subsidence to springs, aquifers and groundwater wells is given on pages 2.05-155 through -156 of the currently approved text. In this case the discussion is a helpful brief summary, and also contains some monitoring commitments. **Please restore the currently approved text.**
- f. Page 2.05-112, paragraph 7; following the statement "...because the highest rockfall potential is mapped in the high category", **please restore the clarifying statement: "Rockfalls were observed to occur only in the "very high" rockfall category areas in the Box Canyon mining area."**

- g. Page 2.05-113, paragraph 6; typographic error.
 - h. Page 2.05-116, paragraph 5; a commitment to measure the water level in crest of Monument Dam using installed piezometers was omitted. **Please restore the text (see page 2.05-166 of the currently approved text).**
 - i. Page 2.05-120, paragraph 6; typographical error (item 3 from the list was appended to item 2)
3. *[Figures 19, 19A, 21A]*
The response is sufficient

Rule 2.10 Maps and Plans

4. *[Updates to Map 51]*
The response is sufficient
5. *[Updates to Map 19]*
The response is sufficient
6. The updated versions of Maps 51 and 19 can be overlain on each other to show the projected depth of cover over the projected E-seam mine workings. Screenshots of small areas of these overlain maps are included below as figures 1 and 2.

Figure 1 shows that the projected depth of cover at the southwest corner of panel LWE-14 is approximately 200 feet.

Figure 2 shows that the projected depth of cover at western end of panel LWSS4 may be less than 300 feet.

WWE recommendations in Exhibit 60E, are that longwall mining height be reduced under shallower depth of cover to allow for a 20% factor of safety, but WWE “do not recommend that longwall mining occur where overburden thickness is not at least 250 feet, even with reduced mining height.”

Please provide a detailed description of the mine plan for panels LWSS4 and LWE-14, consistent with the recommendations in Exhibit 60E. This should be included in the text of section 2.05.6(6)

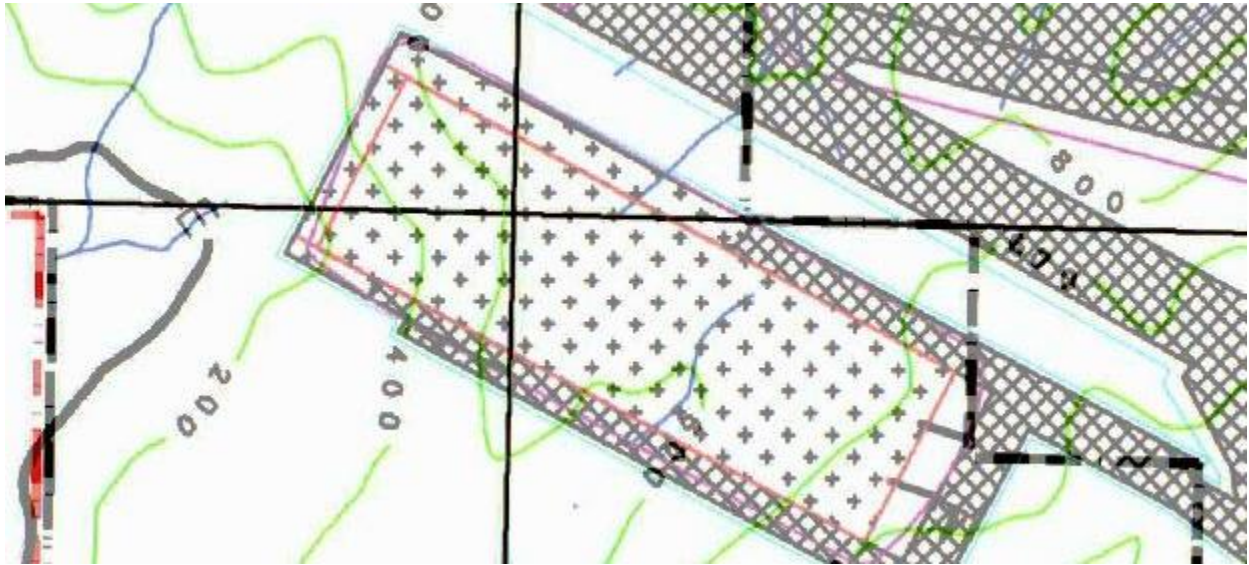


Figure 1: Projected E-Seam overburden over LWE-14

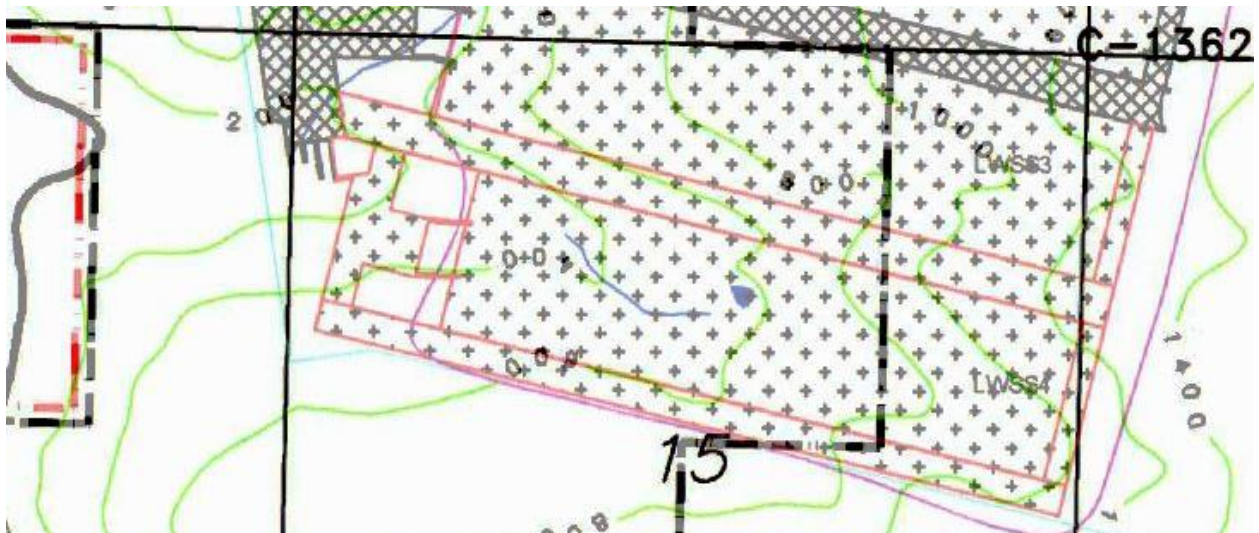


Figure 2: Projected E-Seam overburden over LWSS3 and LWSS4

The proposed decision due date for TR-149 is March 1, 2021.

Yours sincerely,

Leigh Simmons
Environmental Protection Specialist