



Memo

To: Zach Trujillo
From: Janet Binns
Date: December 10, 2020
Re: Colowyo Mine, C1981-019, TR143 Review

I have reviewed Colowyo Coal Company's (CCC) submittal for a technical revision, TR143. This revision proposes to revise the reclamation plan, and consolidate text for Rule 2 and Rule 4.

CCC will discontinue the PERA (prescribed ecological reclamation approach) methodology to reclamation of each of the three areas of the mine, the East & West Pits, South Taylor Pit, and Collom Pit. CCC proposes to establish Tall Shrub field trials within the West and East Pit reclamation areas. CCC proposes to remove the mine-wide shrub standard and replace with a percentage of low/high density shrub areas for each bond release evaluation package (bond release block).

The Division is in agreement with the proposed seed mixes:

Table 2.05-7 Grazingland Seed Mixture:

Table 2.05-8 Wildlife habitat Seed Mixture (sagebrush steppe-Sage grouse brooding habitat) targeted areas

Table 2.05-9 List of Contingency Seed Mixture Substitutions

The postmining land use has previously been approved as Rangeland. The Rangeland postmining land use will be further delineated into grazingland and wildlife habitat. The wildlife habitat seed mix

The Wildlife habitat seed mix has been formulated to minimize sod forming grasses in an effort to reduce completion for shrub species. Small areas within the areas seeded to wildlife habitat may be fenced to reduce herbivory.

The Division has the following questions or requests additional detail:

1. Page 4-38 doesn't flow correctly from approved page 4-38, revised date 8/19/20, MR-222, to the proposed TR-143 page 4-38. Some information is lost on the top of the new page.
2. Section 4.15.6 Field trial. The proposed TR143 text summarizes the tall shrub/aspen test plots. Although the trial had unfavorable results, The Division contends that there may be value in maintaining the details of the X-Pod field trial in the permit. The previously approved Section 4.15.6 may be appropriate to retain in a historic appendix.

CCC is proposing a New Field trial: The following questions relate to the proposed field trial. CCC notes that plots will be fenced during first few years..

3. Please provide more detail regarding the fencing. What kind of fencing is planned? Will the fencing be designed to exclude elk? Will the fencing exclude rabbit and other small herbivores? How long will the fencing be maintained? What is the plan for fencing removal?

CCC states that the operator will collect native soil and inoculate test site with soil for mycorrhizae. The Division wants to encourage this practice as we have observed positive results from mycorrhizae inoculation of shrub seedlings at other mine sites in Colorado.

4. Please provide detail on how mycorrhizal inoculation will occur. For example, Seneca sent soil to greenhouse and the tubelings were inoculated with the soil. Will mixing soil into the replaced soil plots have the same impact? Does CCC have any detail on this part of the plan?

CCC states that weed guard will be put in place around the shrub seedlings.

5. Will CCC weed annuals that come up in the weed guard during the first growing season when water resource is limited by the tubelings root system?
6. Will dead plantings be replaced?

Section 4.17: Previously CCC had committed to establishing 450 acres Sagebrush steppe habitat development.

7. Has CCC met the 450 acres during previously approved bond releases? Was the 450 acres of Sagebrush Steppe habitat a commitment required by CPW? If this commitment was previously required by CPW, does CPW accept the elimination of this commitment?

Reclamation Success standards: Colowyo commits to establishing wildlife habitat, of both low and high density areas, on approximately 20% of the acres in each bond release evaluation. At least half of the 20% acres will meet the high density standard. High density shrub standard shall be 375 live plants per acre. At least half will be comprised of sagebrush species. In low-density areas, the standard shall be 200 live plants per acre.

8. Please define live plants as live woody plant species.

This concludes my review of the TR143 submitted pages. If you have additional questions or need clarification, please contact me.