

P3E Dargol-Fuera-Vamer Complex. The typical topsoil layer for this soil type is 5 inches thick with subsoil of 23 inches over siltstone. Depth to bedrock ranges from 20 to 40 inches. The actual topsoil and subsoil depth will be evaluated at the time of construction. Assuming 9 inches of topsoil, 1,900 BCY will be relocated to topsoil storage pile #1. Subsoil at 23 inches results in 4,855 BCY of subsoil to be relocated and stored temporarily at the subsoil storage area #1 west of topsoil storage pile #2. Approximately 25,000 bank cubic yards of bedrock subsoil and 14,000 bank cubic yards of common subsoil from the Bates Portal excavation will be placed in the subsoil stockpiles #2 and #3 respectively. The topsoil and subsoil storage areas are shown on Map 11, Sheet 3 East Portal Facilities.

For the drill sites on the Bosque del Oso. Topsoil will be salvaged from the drill sites prior to their construction. Salvaging will include removing the top 12 inches of soil or the amount available and stockpiling this material in the general vicinity of its removal in an area where it will not be removed from the drill site area. Stockpiles of topsoil will be compacted to prevent erosion by wind and other elements until used for reclamation. Topsoil at each drill pad if the area has not been previously disturbed will be stored on the upslope side of the drill pad when safe and practicable to do so to minimize risk of erosion.

(e) Depth of Cover Requirement- Development Waste Pile (DWP) and Refuse Disposal Area

New Elk Coal Company Processing (NECC) reviewed the suitability of instituting an Alternative Cover Requirement for the DWP and RDA. NECC is using an Abandoned Mined Lands (AML) reclamation project adjacent to the New Elk Mine as a basis to develop an alternative practice. AML reclaimed an old mine waste dump in 1990. This dump was active in the 1950's and abandoned by CF & I's Allen Mine prior to 1977. It was never included in the New Elk permit. Composition of the pile is believed to be similar to the New Elk DWP.

AML completed the reclamation of the waste dump using cover averaging twelve inches of alternative soil material. The reclamation success of this project was evaluated in 2001 using procedures proscribed in the New Elk permit for evaluating revegetation success. This study can be found as Exhibit 36 of the New Elk permit.

After almost ten years since completion of the reclamation, the AML area appears to support a healthy stand of perennial grasses and forbs. The site appears to be physically stable with no signs of significant erosion. The area meets the standards for herbaceous production, cool season grass diversity, perennial forbs diversity, and woody stem density. The survey did not meet the standard for percentage cover and species diversity for warm season grasses.

The vegetation cover requirement was not met possible for several reasons including soil nutrient deficiencies and grazing. The proposed reclamation plan will include a soil testing and enhancement program and the area will be fenced to restrict domestic grazing activities. The likely explanation for the area not meeting the warm season grass species diversity standard is that warm season grasses were under-represented in the seed mixture used as part of the AML project. The seed mixture was comprised of 13 percent warm season grasses and 70 percent cool season grasses. The seed mix developed as part of the Mine Permit is comprised of 39 percent cool season grasses and 40 percent warm season grasses. As a result, areas reclaimed using this seed mixture are expected to meet the species diversity standard.

DWP and Development Waste Disposal Area #2 and #3 - Reclamation Plan