

## **ABSTRACT**

*PT Duta Nurcahya is one company of coal mining industry, its operation planned from 2013 to 2047. In relation to the end of mining operations, it can cause potential problems, such as disruption of environmental function, baseline environmental changes and decline of economic society. Therefore, it is important to plan a mining closure program. PT Duta Nurcahya has a production area of mining permit covering 4,999 hectares. It is located in Muara Bakah Village, Lahei District, North Barito Regency, Central Kalimantan Province.*

*The study was conducted in an area that includes mine closure activities, including supporting facilities area, coal preparation plant, topsoil disposal, and mine void. Based on the study, the mine closure plan includes the demolition of supporting facilities, landscaping, revegetation, erosion control, and handling of void. The use of mine closure land can be directed towards sengon, jabon, and gamelina plant revegetation. Furthermore, the mining void can be developed into a fishery and reservoir. The mine closure plan is used during 3 years after the end of production operation.*

*The beginning of landscaping reclamation is the arrangement of overburden and topsoil material. Erosion control is achieved by plant cover crops and a water drainage system. The selected base condition for reclamation surface, which is arranged to have a slope of < 8 % (declivous). Landscaping uses heavy equipment such as backhoe, dump truck, and bulldozers. Landscaping begins with the arrangement of material until the thickness of overburden is 1 m and topsoil is 0,25 m. The mine void, formed covering 3,99 ha in 2046-2047, is resolved by making a "safety void" on the north side of the void with a slope of a single bench 30°, which will be revegetated with plant cover crops, a safety buffer of 10 m radius around the void, and a void safety dike. "Safety void" material is peeled as much as 310.477 m<sup>3</sup>, used for filling the void, shallow void base, safety buffer, and void safety dike. Preparation and management of the base void is a heap of clay material with a thickness of 3 m and topsoil 0,25 m on top, calcium oxide (CaO) to neutralize pH, and fertilizer for nutrient enrichment.*

**Keywords:** *mine closure, stakeholders, technical*