

ABSTRACT

PT . Pesona Khatulistiwa Nusantara is a coal mining company that uses the surface mining in mining process. Proses of mining will shape the slope in which the top soil and overburden be deposited in an area and forming disposal slopes.

Disposal of material tend to be sticky in wet conditions and the cracks in dry conditions, this condition causes irregular shape disposal. The conditions under which the irregular pile cause disposal capacity is limited. Therefore, research was conducted to determine the cause of the limited capacity of the pile, and the pile slope stability analysis of existing and provide a safe slope design recommendations to be made.

The minimum value of the safety factor recommended by the company and the Department of Public Works (1994) for the single slope for $FK \geq 1.3$ and $FK \geq 1.5$ for overall slope. The method used in the calculation is the limit equilibrium method with the help of slides software version 5.0.

Disposal material at the study sites tend to be sticky in wet conditions as well as cracked and hard on this matter because of the clay minerals that are in locations including group study montmorillonite or smectite clays. This type of mineral has properties very easy to expand by an additional water content.

The results of the analysis of the actual disposal of the overall slope stability safety factor value in a row that disposal 2A with FK 2.71, disposal 1B with FK 2.28, disposal 1A with FK 2.58 and disposal 3B with FK 1.88. To have the overall slope slope between 3^0 - 4^0 and 3^0 - 16^0 for a single slope and high slope for every single disposal vary between 6m-19m.

Slope geometry in order to secure the overall capacity of the pile can be optimally disposal 2A 27m high and the overall slope 9^0 , disposal 1B 21m high and overall slope 10^0 , disposal 1A 36m high and the overall slope 12^0 , and disposal 3B 27m high and the overall slope 12^0 .

Disposal slope at the study site is less than optimal, it is necessary to repair a single slope geometry and the overall slope, surface water handling, compaction and monitoring of the embankment slope.