

ABSTRACT

PT. Bharinto Ekatama (Pt. BEK) is a company engaged in coal mining, which are located administratively included in the subdistrict of East Teweh North Barito regency, Central Kalimantan Province and District Damai Kutai Barat, East Kalimantan province. PT. BEK using open pit mining system with strip mine method that directly or indirectly can damage the ecosystem surrounding the mining itself. PT. BEK planned mining operations in Block Biangan on three Pit, on Bk02 P3000, P6000 and P3000 Bk03 Bk05 to move the overburden material (overburden or OB) as much as 15.63 million BCM, and BCM as many as 2.93 million or approximately 18.76% of total OB to be moved in 2013 is classified as material Potential Acid Forming (PAF) and BCM 12.7 million or 81.24% are Non Acid Forming (NAF).

Acid Mine Drainage is formed due to the oxidation processes include sulfide minerals, water and air, so it must be done in order to avoid the prevention of contact between these elements. Prevention that can be done is to make the handling of the Potencial Acid Forming materials.

In preventing the formation of Acid Mine Drainage, The Placement of PAF and NAF materials must be planned and scheduled well. Disposal design influenced by several factors, namely:

1. The number and percentage of overburden material will be Disposed.
2. Topography of the Disposal Area.
3. Distance between the pit with hoarding pile design to be made. PT Bharinto Ekatama will be affected by the overcharge if the disposing distances exceeding 1 Km.

Location used is inpit (overburden material backfilled pit in the location that has been completed with backfilling system) and outpit (overburden material disposed outside the pit). The method used to handle PAF materials was encapsulation method by placing the PAF material and covered by the NAF materials. PT. Bharinto Ekatama SOP determines that the thickness of NAF that used to the encapsulation method was 3 m, but in this study it was found that in fact they can capsulating the PAF material with a thickness of more than 3 m, is a minimum thickness of 5 m, even up to 10 m because NAF material contained on the overburden is sufficient to form the layer (NAF Volume BCM 12.7 million or 81.24% of the total overburden volume). Vulnerable Distance disposing in 2013 obtained from the design of the study was 1,273 m - 2,055 m.