

ABSTRACT

PT. Aman Kokoh Mandiri is one of the coal mining contractor services that focussed throughout Indonesia which operates at Patangkep Tutui Sub-district, Barito Timur Regency, Santip Village , Kalimantan Tengah. PT. Aman Kokoh Mandiri is carried out by open mining system, which after cleaning, the maturation of land and the stripping cover (overburden) and coal excavation.

As a result of overburden stripping activities and the excavation of coal will result in sulfide minerals, especially Pyrit (FeS_2) will exposed so that the reaction between these minerals with air (O_2) and water (H_2O) will produce acid mine water (*acid mine drainage*).

Acid mine water treatment process carried out through the drainage system where acid mine water from the excavation area and the runoff flowed into the mud settling pond (settling pond) to precipitate solids derived from water runoff eroded soil. The method used by PT. Aman Kokoh Mandiri for neutralizing acid mine water is an active method by adding $\{\text{Ca}(\text{OH})_2\}$ directly into the body of water in the settling pond. This method is considered not effective because it is not exactly the dose that would so difficult to evaluate its effectiveness.

The study was conducted with laboratory scale experiments and field observations and analysis. From the laboratory analysis, found that a dose of $\{\text{Ca}(\text{OH})_2\}$ that effective to raise the pH of acid mine water that comes from *stock Run Of Mine* with initial pH $\pm 3,6$ until 7,1 is of 0.01 g / l. Based on the dose obtained from field testing, 0,01 gr/l of lime can raise the pH of the water debit 268,866 liters / hour reached 6.9 . With a dose of lime 0.01 gr / l, the estimated lime requirement is 1935 kg /per month.

Keywords : *Settling Pond, Acid Mine*, pH, Hydrated Lime $\{\text{Ca}(\text{OH})_2\}$.