

ABSTRACT

CV XYZ is a mining company focusing in sand and stone commodities. Ijin Usaha Pertambangan (IUP) CV XYZ located on the Gendol River, Wukirsari Village, Cangkringan Subdistrict, Sleman Regency, Yogyakarta Special Province, with an area of 4,86 ha. When conducting research, mining activities mining activities have not yet proceeded so that environmental studies are needed to get a picture of the initial environmental condition before the mining operation takes place. The purpose of this study is to assess the noise level prior to mining activities and noise level prediction after mining activities takes places, analyze the estimated maximum time of workers exposed to noise due to sand and stone mining activities; and formulate environmental management strategies.

The study uses a quantitative and qualitative approach with primary data collection techniques through field observations and sampling in the field. The sampling method is purposive sampling method. The purposive sampling method is based on the planned use of tools planned for 3 units of loading and unloading equipment representing the northern, central and southern regions of IUP CV XYZ. In addition, by considering the location of residential areas around the mine, namely Wukirsari Village and Glagaharjo Village. Based on these considerations so that observations were made on 8 sampling points that included 3 points at the location of IUP of CV XYZ and 5 points at the location of residential areas.

The results of the study indicate the noise level in the condition before mining activities or the initial environmental hue conditions are below the threshold values determined by government regulations. The noise level forecast when mining operations operate there are 3 points in the location of IUP of CV XYZ which are predicted to exceed the threshold values determined by government regulations, namely at the mine location (sample code T1, T2 and T3), and the rest 5 points located in the residential area which are predicted below the threshold values determined by government regulations, namely at the location of residential areas (sample code T4, T5, T6, T7 and T8). Prediction of the maximum time of workers can be exposed to noise due to sand and stone mining activity at all sampling locations is still below the threshold value according to NIOSH which is 85 dB for 8 working hours per day. The environmental management strategy to anticipate noise due to sand and stone mining activities is one of them by not using heavy equipment with a tool life >5 years and predically checking the machine.

Keywords: Noise, Sand and stone mining, NIOSH