

# ***ANALYSIS OF NOISE LEVELS AT PANGKALAN BATANG PLTD REGARDING THE SURROUNDING COMMUNITIES***

Name : Mohd. Haikal Oky Fanani  
Student ID : 2204211286  
Supervisor : Ibnu Hajar, S.T., M.T

## ***ABSTRACT***

*Noise is one of the environmental impacts generated by the operation of Diesel Power Plants (PLTD), especially in residential areas around the Pangkalan Batang PLTD location. High noise levels can trigger physical and psychological health problems for the community, such as hearing loss, stress, and decreased quality of life. This study aims to analyze the noise levels generated by the Pangkalan Batang PLTD and its impact on the surrounding community. The research method used includes measuring noise levels using a sound level meter at a distance of 20 to 120 meters from the sound source at eight sampling points and three times (morning, afternoon, evening). The results show that within a radius of 20 meters, the average noise level reaches 72.54 dB and decreases to 57.16 dB at a radius of 120 meters. At a distance of up to 100 meters from the source, the noise level still exceeds the environmental quality standards according to the Decree of the Minister of Environment No. KEP-48/MENLH/11/1996 (55 dB with a tolerance of +3 dB). The safe zone for new settlements is achieved at a radius of 120 meters from the noise source. Therefore, this study recommends the development of a buffer zone (green belt), the installation of sound dampeners on engines, the rezoning of residential zones, and community outreach as mitigation efforts. The results of this study are expected to serve as a reference for better environmental management of diesel power plants and the protection of the health of surrounding communities.*

***Keywords:*** noise, diesel power plants, environmental impact, surrounding communities, mitigation