

EVALUATION SYSTEM AND TRASH COMPOSTERS BASED ON INTEGRATED RISK BASED APPROACH IN LANDOH VILLAGE, DISTRICT OF SULANG, REGENCY OF REMBANG, CENTRAL JAVA

By

Dinda Kurnia Budi

114140049

ABSTRACT

The waste management which done in Landoh landfill, Landoh village, district of Sulang, Regency of Rembang, applied Controlled Landfill system, however ironically Landoh Landfill is not fit with the set of Controlled Landfill system standardization so it caused environmental pollution. This condition must be fixed considering the amount of trash increasing, and more environment issue happened around Landoh landfill environment. Research purposes to discover environmental quality and planning to manage Landoh landfill directionally using Environmental Risk Index.

The methodology in this research are research methods (survey and mapping) , sampling methods (purposive sampling, grab sampling, and cluster sampling), and analyze methods (laboratory test, quality and scoring test based on Environmental Risk Index). The observed parameters are landfill criteria (20 parameters), trash composters at landfill criteria (4 parameters) and leachate characteristics (3 parameters) based on Regulation of Indonesia Minister of Public Works number 03 year 2013 about Infrastructure Organizer and Waste Infrastructure in Handling Household Waste and Household-like Waste. The data in each of these parameters are calculated and scored with Environmental Risk Index to discover the environmental risk value about closing or landfill rehabilitation.

The result shows that Landoh landfill is included in medium dangerous level criteria with index risk value of 592,35. The matter is there are some parameters with a dangerous sensitivity index value or nearly dangerous because its distance to the nearest water source, the ground water depth, soil permeability, its distance to protected forest, the basic types of soil layers, the ground water level depth, to the nearest settlement on the dominant wind direction, community acceptance, Leachate BOD,COD, and TDS. Therefore, the recommend action is continue the landfill and do rehabilitation to be gradually controlled landfilling. The management directions to overcoming and minimizing the problem of Landoh landfill environment quality are by mining the landfilling, make waste disposal cell with a sanitary base layer, make geosynthetics base coating, make leachate catches system diameter 315mm, leachate collectors system diameter 500mm, and gas control pipes diameter 200mm.

Key Words: Trash, Landoh Landfill, Environmental Risk Index, Controlled Landfill, Mining Landfilling, Base Layer.