ABSTRACT

Liquid waste became the most dominant waste produced by manufactures in industrial area. It is a compulsory for manufacturers to install liquid waste treatment plant as stated by government regulation, Keppres No. 53/1989.

Commonly, effluent charge (TPLC) is based on the characteristics and the amount of substances contained in liquid waste. Greater amount of the substance contained leads to higher difficulties of waste treatment, which is also leads to greater cost of waste treatment. The determination of waste treatment cost has a very significant effect both to the manufacturers and the environment pollution prevention efforts.

This research is aimed to generate alternatives to determine waste treatment costing by using economics approaches. The cost formulation is generated based on the base waste treatment costing, waste volume, and the burdens level caused by pollution. Base costing is determined from the future value or estimated operational cost which considering inflation rate and recent interest rate. Meanwhile, a Fuzzy Multi Criteria Decision Making (MCDM) is used to weight the quality parameters of waste. Hence, the new effluent charge formulation is much more objective due to its consideration to actual waste quality and recent economics condition.

Keywords: Industrial Estate, Fuzzy Multi Criteria Decision Making, Future Value, Inflation Rate, Interest Rate, Tarip Pengolahan Limbah Cair (TPLC)