



A System Dynamics Assessment on the Dispersion of Incinerator Pollutant Emission From Environmental Impact Assessment (EIA) Study: A Case of Medical Waste in Sidoarjo Regency

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Abstract: The present study aims to evaluate and to project the prediction of the incinerator pollutant emission from medical waste. The dispersion of pollutant emission cited from environmental impact assessment (EIA) study on medical waste in Sidoarjo Regency was assessed by using the Gauss equation and resulted in a range of disperse emissions standard quality in 2014. However, the assessment only reaches in the short temporal time. The present study aims to project the dispersion of pollutant emission in a relatively long projection of 5 years. Five parameters to include dust, SO_x, NO_x, CO and HC were assessed. A projection model was made and was simulated by system dynamic approach. The result revealed the disperse emissions were still in the range of standard quality within the 5 years projection.

Keywords: Incinerator Emission, Medical Waste, Emission Standard Quality, System Dynamics.