

**THE EFFECTIVENESS OF PHYSIO-CHEMICAL
TREATMENT OF LEACHATE FROM SEMI AEROBIC
SANITARY LANDFILL, PULAU BURUNG,
PULAU PINANG**

By

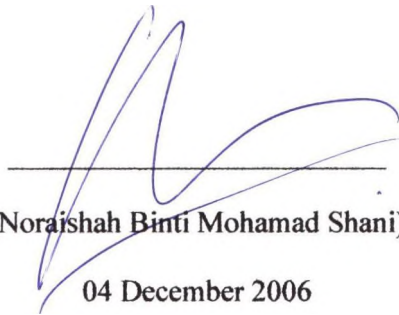
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DECLARATION

I Noraishah Binti Mohamad Shani 2002634333 confirm that the work is my own and that appropriate credit has been given where reference has been made to work of others.



(Noraishah Binti Mohamad Shani)
04 December 2006

ACKNOWLEDGEMENT

In the name of Allah, the most gracious and most merciful, with His permission, the proposal of the project has been successfully completed. Praised to Prophet Muhammad, his companions and those who are on the path as what he preached upon, may Allah almighty keep us blessing and tenders.

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ABSTRACT

This study focused on leachate from Pulau Burung Sanitary Landfill. The Pulau Burung Sanitary landfill is semi-aerobic sanitary landfill and it uses physio-chemical treatment method. The objective of this research is to determine the turbidity, COD, pH, and temperature parameters in order to see the effectiveness of the treatment from point to point. Thus, the leachate was collected at every point of treatment in order to determine the parameters and to determine the effectiveness of the method applied. The effectiveness of the method used evaluated by looking at the controlled pH and temperature and removal of the leachate parameters such as COD and turbidity. The leachate collected for 8 weeks but only 6 weeks the data are successfully determined by using Hydro lab equipment and from the environment laboratory. The data analyzed and graphs were plot. From the graph, comparison on leachate quality before treatment, during treatment, and after treatment made to evaluate the effectiveness of the leachate treatment used. The results indicated that by using physio-chemical and semi-aerobic landfill treatment, it had effectively remove turbidity from around 129.8 NTU to 11.1 NTU, which comply with the standard of effluent discharge set by Environmental Quality Act 1974. However, the treatment is not effective for COD removal, which is from around 3690 mg/l to 430 mg/l.