

# **PENGARUH BUANGAN LIMBAH AIR PANAS PLTU TERHADAP PERUBAHAN PARAMETER BIOLOGI**

**(Studi Kasus : Kolam Pelabuhan Tanjung Emas Tambak Lorok)**

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## **ABSTRACT**

PLTU Tambak Lorok is a electrical generator plant that uses steam as the main generator to produces electrical power. The electrical generator plant's instalation needs water as a media to cool the boiler. Because of that PLTU Tambak Lorok has some kind of side effect by forming some kind of heat wastewater which temperature reaches about 37°C. When the heat wastewater is disposed to some near water site, the temperature could be risen vastly that it could affect all sorts of physical and chemical character which also has it own affect to the water quality and the water organism lives. Phytoplankton which's a part of the food chain system for sea organisms could be used as some kind of biology indicator to watch over the polluting that caused by thermal discharge. For knowing the intensity of the polluting, polluting index is used with Shanon-Wiener's Diversity Index.

Based in Shanon-Wiener's Diversity Index and using phytoplankton as the indicator, Semarang Tanjung Emas's port's pool is currently in a medium polluted state with diversity index 1.48. The measurable parametres are temperatur, dissolved oxygen and salinity. From the analysist of physical-chemical parameter changes to the diversity index we could assume that each time the temperature is increased by 1°C it will causes a decreasing water quality index as far as 0.03. The increasing of the dissolved oxygen in the water as high as 1 mg/l will causes a risen index as high as 0.23 and the increasing of salinty about 1‰ which will causes an increasing index to 0.51.

*Keywords : Heat Wastewater, Phytoplankton, Diversity Index*