

**DETERMINATION OF WATER QUALITY PARAMETERS FOR
KLANG RIVER IN KUALA LUMPUR AREA**

By

AMELIA ABDUL MALEK

2002328932

Report is submitted as
the requirement of the degree of
Bachelor Engineering (Hons) (Civil)

UNIVERSITI TEKNOLOGI MARA

NOVEMBER 2005

ABSTRACT

Environmental challenges faced by cities around the world are more complex now than at any other time in history. In many parts of the world, and notably in the Asia Pacific, rapid economic growth, decentralization, privatization, and related-socio cultural changes are leading to the emergence of a complex decision making environment. Water pollution is one of the problems that urban cities face in the process of the urbanization.

Much of the pollution from the city is the result of the saturated population of Kuala Lumpur. Several years of data indicate the water quality parameters values for Klang River are poor. Sulaiman Bridge as the most polluted location for Klang River is due to the external loads from its major tributary, Gombak River which located just upstream of Sulaiman Bridge. These external loads have created a combined pollution loads, where pollution loads from Gombak River is combined with the existing pollution loads in the Klang River itself. Thus, the combined pollution loads worsen the water quality in Klang River. In addition, Sulaiman Bridge is also located in the middle of heavily urbanized Kuala Lumpur. Gombak River, is believed to contribute to the Klang River pollution as indicated by Baki (2005), but the pollution sources was not well defined and received little attention from the regulating authorities.

The river flow effects on physical water quality also receive less attention because researchers are keener to look into the chemical water quality aspects. This is the reason this study were conducted.

DECLARATION BY THE CANDIDATE

I Amelia Binti Abdul Malek (2002328932) confirm that the work is my own and that appropriate credit has been given where reference has been made to the work of others.

.....

ACKNOWLEDGEMENT

Praise to Allah S.W.T for giving me strength and courage to face all barriers and shortcoming in completing this 537 final report. It is my pleasure to take this opportunity to convey my sincere appreciation and a very big thank you to Assoc. Prof. Ir. Dr. Hj. Suhaimi Hj. Abdul Talib, my supervisor who has contributed to the success of this report.

I would like to thank the following people for their guidance and assistance in facilitating the completion of this study namely Pn. Nora Sufian and En. Azuan.

Not forgotten our special appreciation thanks to Jabatan Pengairan & Saliran, especially En. Badrul and Cik Siti Azlina, for being my guide to the sampling location and assist me on the gauging system used by JPS. This thank also extent to Pn. Yuhaslin Yusof from Jabatan Pengairan dan Saliran (Ampang), for providing me a set of previous and latest data on river flow.

My specials appreciation to my beloved parents, my family, members and those people who have encouraged me from the beginning in every possible way and in all aspects throughout my life. Last but not least, I would like to extend my appreciation to all my colleagues for their ideas, cooperation, views and comments. Thank you.

TABLE OF CONTENT

DESCRIPTION	PAGE
DECLARATION OF THE CANDIDATE	i
ACKNOWLEDGEMENT	ii
LIST OF FIGURES	v - vi
LIST OF TABLES	vii
LIST OF ABBREVIATIONS	viii
LIST OF APPENDICES	ix
ABSTRACT	x
CHAPTER 1. Introduction to the Problem	
1.1 General	1
1.2 Problem Statement	2
1.3 Objectives	3
1.4 Scope of works	4
CHAPTER 2 Literature Review	
2.1 Water Pollution Causes	7
2.2 Impacts of Water Pollution	8
2.3 Present River Pollution in Malaysia	8 - 9
2.4 Background for Klang River and its Vicinity	9 -10
2.5 The Causes of Pollution for Klang River	11
2.6 Water Quality Parameters Indication	12 – 13
2.6.1 Biological Oxygen Demand	13 – 15
2.6.2 Chemical Oxygen Demand	15 - 16
2.6.3 Correlation between BOD and COD	16
2.6.4 Turbidity	17