

**A CASE STUDY OF DRINKING WATER QUALITY
MONITORING OF WATER SUPPLY IN KEPALA BATAS,
SEBERANG PERAI UTARA**

By

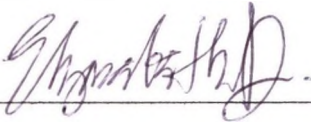
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ABSTRACT

Water has many remarkable properties. Its physical and chemical characteristics in combination with its great abundance have an enormous impact to human and environmental conditions of the earth. Water plays an essential role in supporting life, consequently, the availability of water is often a critical sociopolitical issue. Managing the quality and quantity of water has been important to fulfill consumers' satisfaction. Recently, there are many cases of disease caused by drinking water supply. Many reports from consumers about receiving murky supplied water have been raised. Since a lot of money spent to improve the quality of water, a lot of problems relate with quality of supplied water never goes down.

The basic major problem that affects drinking water quality at distribution system are because of the cross-connection and leaking at distribution system which may cause the contamination of supplied drinking water. It is about 80 percent of the raw water treated by PBAPP for use in the State of Penang is sourced from the Muda River on the mainland which is treated at main water treatment plant at Sungai Dua Treatment Plant.

The objective of this study is to identify the quality of drinking water after it is through Sungai Dua Treatment Plant, at several secondary schools and residential areas at Kepala Batas, Seberang Perai Utara, Pulau Pinang. The scopes of this study consist sampling activity, laboratory testing for data collection, and make a comparison between results and WHO Drinking Water Quality Standard. Physical, chemical and microbial parameters had been tested.

In mission to accomplish the objectives, in-situ and laboratory testing were done. Through the testing, this study concludes that treated water at Kepala Batas distribution system is following allowable range established by WHO and safe to be used. However, there were several parameters do not comply WHO Standard for such as ferum and chlorine. On December 2005, point BTA 004, ferum contents was 0.44 mg/l exceeding 0.3 mg/l while on January 2006 and February 2006, BTA 040, BTA 026 and BTA 011, chlorine contents were less than 0.2 mg/l which were 0.14 mg/l, 0.09 mg/l and 0.12 mg/l respectively. Besides, microbial parameter (coliform) on December 2005, at point BTA 011 was 3 colonies had counted. The other tested parameters for physical, chemical and microbial were complying with WHO Standard from November 2005 until February 2006.

Keywords: WHO, physical parameters, chemical parameters, microbial parameters, drinking water quality.

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