UNIVERSITI TEKNOLOGI MARA

WATER QUALITY ASSESSMENT AT KANCHING AND SERENDAH WATERFALLS

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Project submitted in fulfillment of the requirements for the degree of

Bachelor in Environmental Health and Safety (Hons.)

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DECLARATION BY STUDENTS

Project entitled “Water Quality Assessment at Kanching and Serendah Waterfalls” is a presentation of our original research work. Whenever contributions of others are involved, every effort is made to indicate this clearly, with due reference to literature, and acknowledgement of collaborative research and discussions. The project was done under the guidance of Project Supervisor, Mr. Mohd Pozi bin Mohd Tahir. It has been submitted to the Faculty of Health Sciences in partial fulfilment of the requirement for the Degree of Bachelor in Environmental Health and Safety (Hons).

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In the name of Allah, The Most Gracious, The Most Merciful.

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ABSTRACT

Recreational water quality assessment is very important in determine the quality of the water weathers it is safe for human contact. The study was conducted at Kanching and Serendah Waterfall. These two places were selected due to the intensity of people that visit this recreational area. This study was carried out in order to determine the physico-chemical parameter, biological parameter, heavy metal concentration and WQI of Kanching and Serendah Waterfall. The comparison of the heavy metal concentration and WQI between the sample point (upstream, midstream and downstream), the day sample taken (weekdays and weekend) and seasons (dry and wet season) also have been analyzed. The data was obtained through in-situ analysis, laboratory analysis and analysis through AAS. The results for physico-chemical parameter, biological parameter and heavy metal concentration at both of the waterfall are all the parameter complies with National Water Quality Standard Class II (B). The WQI for Kanching and Serendah Waterfalls are under slightly polluted categories. The overall comparison of the heavy metal concentration and WQI between the sample point (upstream, midstream and downstream), the day sample taken (weekdays and weekend) and seasons (dry and wet season) are not significantly different as the p-value is more than 0.05. However, for Serendah Waterfall there is significantly different for WQI comparison between the weekend and weekday. The WQI results indicate that the proper solid waste management is needed as trough observation, the visitors that visit the waterfall throw their rubbish on the ground instead in the provided dustbin. The rubbish that enters the waterfall not only can alter the water quality but also can become medium for bacteria growth. Thus, practical approach is needed in order to overcome this issue and to protect the water resource from contaminate or pollutant.

Keywords: *water quality, waterfall, WQI, heavy metals concentration, recreational area*