

DUST CONTROL IN LOCAL CONSTRUCTION PROJECT

CHAI KIN YUN

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ABSTRACT

Currently, there are many construction works have been carried out in order to meet the demand from people. These constructions include building constructions, marine constructions or civil constructions. Construction has increased life standard in Malaysia. However, uncontrol construction activities have worsen air quality as a result of dust and gaseous emission from the construction site as well as construction vehicles. This study focuses on Total Suspended Particulate (TSP) monitoring of building construction at Bukit Indah and Sri Pulai Perdana, Johor by using High Volume Air Sampler to collect the data. Total Suspended Particulates (TSP) was collected for two times from five locations near residential areas. Sampling is then analyzed according to Australian Standard, AS 2724.3. Concentration of TSP for the sites is then compared with Recommended Malaysian Air Quality Guidelines (RMG) to determine whether the site implemented dust control is effective or not. The study finds that different method of control showed different results of TSP concentration and the more effective way of control is by using gravelling method. It was found that the TSP concentration on the site which is using gravelling method to control dust emissions is below the permissible limit of RMG. The final outcome can be use for public to decide which method is more suitable and effective to be implemented on site as well as can be use as a reference for future project and development.

ABSTRAK

Sejak kebelakangan ini, terdapat banyak kerja pembinaan telah dilaksanakan bertujuan untuk memenuhi kehendak orang ramai. Kerja pembinaan ini termasuklah pembinaan bangunan, marin, dan pembinaan awam. Pembinaan telah meningkatkan standard hidup di Malaysia. Walau bagaimanapun, aktiviti pembinaan yang tidak terkawal telah memburukkan kualiti udara seperti mana ia disebabkan oleh pelepasan habuk dan gas dari tapak bina serta kenderaan di kawasan pembinaan. Kajian ini memfokuskan kepada pemantauan *Total Suspended Particulates (TSP)* bagi kawasan Bukit Indah dan Sri Pulai Perdana, Johor dengan menggunakan *High Volume Air Sampler* untuk mengumpul data. TSP dicerap sebanyak dua kali dan dari lima lokasi berhampiran kawasan penempatan. Maklumat dapat dari tapak bina akan dianalisa menurut standard Australia, AS 2724.3. Kepekatan TSP dari tapak akan dibandingkan dengan *Recommended Malaysian Air Quality Guidelines (RMG)* untuk menentukan sama ada kawalan habuk yang dilaksanakan itu efektif atau tidak. Kajian ini mendapati cara kawakan habuk yang berbeza menunjukkan keputusan kepekatan TSP yang berbeza dan cara yang lebih efektif adalah dengan menggunakan cara kawalan batu kerikil. Ia juga didapati bahawa kepekatan TSP di tapak yang menggunakan kawalan habuk dengan batu kelikir adalah dibawah had kebenaran RMG. Hasil akhir juga boleh digunakan untuk orang awam bagi memutuskan cara mana yang lebih sesuai dan efektif untuk dilaksanakan ke atas tapak serta boleh digunakan sebagai rujukan kepada projek dan pembangunan masa hadapan.