

UNIVERSITI TEKNOLOGI MARA



REUSE OF SLUDGE FROM WATER
TREATMENT PLANT AS A CONSTRUCTION
MATERIAL

MOHAMMAD FADZLI TAJON AROS

B.ENG (HONS) (CIVIL)
UNIVERSITI TEKNOLOGI MARA
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DECLARATION OF THE CANDIDATE

I Mohammad Fadzli bin Tajon Aros, 2003479466 confirm that the work is my own and that appropriate credit has been given where reference has been made to the works of others.

(12 MAY 2007)

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ABSTRACT

Although earthquakes have never caused any structural damage to Peninsula Malaysia, the consequences of even a moderate level of ground motion may be enormous because of the high concentration of population and commercial activities taking place in structures that have not been designed for seismic loads in the area. In order to design the structure to withstand the seismic loading, the initial important soil dynamic terms need to be analyzed. They are including the acceleration, and response spectra of the soil. Earthquake ground motions are usually predicted in two stages. In the first stage, an attenuation relationship is used to relate the earthquake magnitude, depth of epicenter, and location of earthquake source and study areas by using essential relationship based on adjusted relationship that is commonly used for Peninsular Malaysia. Attenuation relationship for Perai due to Sumatran Earthquake on December 2004 was used to determine the Peak Ground Acceleration (PGA) at bedrock. The result then was applied together with the NERA software to determine the Spectrum Response and Peak Surface Acceleration for the soil surface (PSA). Data collection included the search for the earthquake history data, strong ground motion data and soil data from different site location.

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