

DESIGN OF A WATER TREATMENT PLANT

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ABSTRACT

This project shows the design of a Water Treatment Plant. The Water Treatment Plant is design according to the local standard of requirements such as the JKR Design Criteria and Standard for Water Supply Systems. The design guidelines is adopted according to the manual entitled MWA Design Guidelines for Water Supply Systems which is an adoption of the JKR Design Criteria and Standards for Water Supply Systems.

Design of the Water treatment Plant is focused mainly on the types of conventional treatment being used to treat raw water such as aeration, coagulation, flocculation, sedimentation, filtration and etc. the capacity of the plant has been determined by calculating water demand estimation for a given location. Water quality requirement for raw water and treated water has been defined in the design according to WHO standards. The conventional treatment plant to treat raw water is such as aerators, mixing devices, flocculates, sedimentation and filtration. The design criteria for each conventional treatment processes have also been stated clearly in the project.

The layout of the operation building and the chemical store facilities such as the alum store, chlorine store, etc, is shown in figures. A schematic diagram showing the pipeline system and the hydraulic section of the treatment plant has also been developed. Finally, the Water Treatment Plant plan layout, which shows the location of the structure of the treatment works and buildings, is also shown in the project.