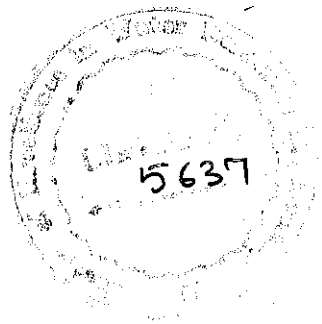
THESIS

CONSTRUCTION MANAGEMENT AND RISK ANALYSIS OF LAHORE URBAN DRAINAGE PROJECT



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(92-PG-WRM-12)

For the degree of

MASTER OF SCIENCE

IN

WATER RESOURCES MANAGEMENT

CENTRE OF EXCELLENCE IN WATER RESOURCES ENGINEERING

UNIVERSITY OF ENGINEERING AND TECHNOLOGY

LAHORE, PAKISTAN

1997

ABSTRACT

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The management of projects is becoming more complex every day. The major factor adding to the complexity of the projects are the risks involved. The unidentified and unforseen risks cannot only increase the cost involved, time required and cause poor quality of work but at some occasions may not even serve the primary purpose of the project. The development of a country depends on the construction industry of that country, because more construction means more facilities and hence a more prosperous country.

It is therefore. important to identify the risk source (if possible during the pre-feasibility stages), quantify those risks and brain storm to manage those risks.

The main objective of this study was to check the hypothesis that the project management software can be used not only for improved planning and monitoring but also for analysis of risk of water resources construction projects. To achieve this, a project management software, Microsoft Project was used for construction planning of the Lahore Urban Drainage Project(LUDP) and risk analysis software @risk were used for the analysis of the risk involved in the construction of the project. Almost complete data was extracted from the reports of consultants and contractors.

Using the available data a detailed construction schedule of LUDP was prepared. It comprised more details and gave an easy look of the project activities as compared to the construction schedule prepared by the contractor. Microsoft Projects's tracking feature was used to obtain the progress of the execution of the project on an assumed date. Resource pool was developed and resources were allocated to the activities along with the cost involved. The cost generated by MS-Project was then used to obtain total cost of the project. This data was then used to develop 'S' curve for the project.

For second part of the study, probable risk involved in the project were identified. @Risk was used to analyze effect on the time required for completion of the critical activities. @Risk also used to check difference between the cost before and after risk analysis.

The results of the study are encouraging and intend to attract use of computer software both by government agencies and private sector for project management. MS-Project is powerful and versatile project management software, featuring scheduling, tracking, preparing reports/charts and generating weekly and monthly budget requirements. @Risk is software wherein if appropriate variables and @function are selected can be very useful in risk analysis.

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