

Risk Management For The Mengkuang Dam Upgrading And Enlargement Project

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Abstract. This paper describes the risk management plan implemented for a large dam project which involved raising the existing dam and construction of a new dam. Construction of this dam upgrading and enlargement project was exposed to serious risks on safety of existing dam, risk of delay, cost overrun and contractual claim. A three tiered approach in risk assessment and risk mitigation was implemented. A quantitative risk analysis on risk of piping failure of the existing dam due to foundation excavation works was conducted to aid in the decision making process for resolving the construction risk encountered. The risk management of the project has created opportunities for design optimization. The integration of risk management and value engineering in the project has resulted in cost saving of over RM 150 million. The framework of the risk management plan and process involved in risk identification, risk assessment, mitigating measure options evaluation, risk control and the issues resolved are described.

Keywords: Earthfill Dam, Risk Control, Risk Management, Event Tree