12.1 Plaines Wilhems Sewerage Project

Introduction

In 1991, Government appointed Consultants to prepare a National Sewerage Master Plan (NSMP) for the comprehensive development of waste water facilities to abate and control waste water pollution.

Following the recommendations of the NSMP, Government embarked in the implementation of the main projects - Grand Baie, Baie du Tombeau and Montagne Jacquot Sewerage Projects and the St Martin Sewerage Treatment Plant Extension Project (STP).

One project interlinking with the STP is the Plaines Wilhems Sewerage Project (PWSP) which is required for its viability and the commercial sustainability of the Waste Water Management Authority.

Contracts under the PWSP

The PWSP comprises the construction of the new Trunk Sewer, reticulation networks and house connections including consultancy services for design and preparation of tender documents as well as supervision of the construction works. There are nine contracts which fall under the PWSP.

Contract WW67X-Consultancy Services for the Detailed Design and Preparation of Tender Documents - Rs 17.8 million

Project Description

Under this contract, the Consultant is required to prepare the detailed design and tender documents for:

- The construction of 27 kms of trunk sewer
- The construction of 235 kms of reticulation network
- 32,500 house connections

In June 2000, the above contract was awarded for the sum of Rs 15.9 million (excluding VAT). The contract agreement was signed on 7 July 2000 and works were to be completed by August 2001.
The original contract sum was ultimately revised to Rs 17.8 million (excluding VAT) due to removal of certain works and inclusion of new ones.

The following were noted:

- This contract was awarded as far back as June 2000 and was to be completed in August 2001. The completion date was revised in several instances and as of March 2006, some five years later, two components have not yet been finalised, namely the tender documents for construction of reticulation works including house connections.

- The review/finalisation of the tender documents for reticulation works and house connections which would be taken up in subsequent contracts would result not only in further delay to execute project but would also bear additional costs.

- The design report in respect of the 3,500 additional house connections has been submitted by the Consultant. WMA has now ended the Consultant’s services. The finalisation of these tender documents for a design and build contract would depend on the appointment of the Consultant for contract WW102X for supervision works.

Project Implementation

The overall implementation of the project was not satisfactory. The following has been observed:

- The inordinate delay for the implementation of this project was attributed to two main factors - staff constraints at WMA and the poor performance of the Consultant. This had a negative incidence on the progress of work and consequently, on the PWSP.

- The draft tender documents for the Trunk Sewer and Reticulation Works were submitted as far back as September 2001, but no review has been undertaken due to lack of staff.

- Much time has elapsed before recruiting Project Managers for the PWSP. Still, when the Project Manager for the Trunk Sewer was appointed in March 2003, priority was then given to the drafting and completion of tender documents for Consultancy Services and not for the Construction of the Trunk Sewer, which was ultimately awarded in April 2005, i.e. two years later.

- The Project Manager for Reticulation Works was appointed in August 2005, i.e. four years later and as at time of audit, in May 2006, the contract for Consultancy Services was yet to be awarded while tender for Construction of Reticulation Works including house connections was not yet launched.

- As of August 2006, the anticipated percentage sewerage coverage was still not known.

- Errors and omissions in design/tender documents would have serious implications during implementation of the PWSP.

- The completion of Contract WW67X was crucial for the setting off of the construction works under the PWSP. The long delay in finalising this contract has seriously hampered the implementation of the whole project itself.
Implication of delays

- The significant delays encountered on this project have consequently resulted in delay in awarding the construction works. It was only in April 2005, i.e. after four years, that the contract for the construction of the Trunk Sewer was awarded.

- These delays had a direct impact on the project cost of the construction works. The Plaines Wilhems Trunk Sewer project which was initially estimated at Rs 450 million, has been awarded for Rs 886.2 million, i.e. a two-fold increase.

- The St Martin Treatment Plant completed at a cost of Rs 1 billion since March 2005 was operating at 50 per cent of its capacity pending the construction of the new trunk sewer and reticulation networks. In addition, high operation and maintenance costs were being incurred (some Rs14.5 million for a period of three months).

- The environmental benefits are yet to be achieved.

- The financial benefits will only be obtained after the whole of the construction works have been completed, i.e. not before some six to seven years.

Ministry’s Reply

The PWSP is now scheduled for completion by 2012. The Ministry and the WMA will see to it that no further delays are encountered.

12.2 Cost Escalation - Montagne Jacquot Sewerage Project

Escalation formulae are normally relevant to long term contracts. They are based on certain defined inputs that have a large incidence on contract cost and are difficult or impractical to measure at each certification.

A formula for escalating contract cost was included in the agreement based on reference rates for labour, fuel and cement. The effect of rising (or decreasing) rates of previously defined inputs is passed on to the client. Hence, incremental contract costs have in the end to reflect, as accurately as possible, the weight those inputs had in the original cost structure of the overall works.

The contract for the Montagne Jacquot Sewerage Project contained a clause for adjusting contract cost based on the changing rates of certain inputs at the time of processing interim certificates. At March 2006 about a quarter of the contract had been fulfilled. Based on the assumption that fuel prices would remain at or near January 2006 levels up to completion, total fuel-linked escalation costs of some Rs 117 million were deemed to be payable under the contract, representing 23 per cent of the original contract sum.

I have informed the Authority that excessive weight had been allocated to the input fuel in the escalation formula of a basically civil works contract. It was noted that ongoing contract WW73F for the laying of some 26 km of sewer pipelines and replacement of 11 km of CWA water mains had a significantly heavier fuel component because of extensive machinery
usage in terms of excavators, pneumatic hammers, and backfill lorries. Based on similar assumptions, the balance of WW73F contract cost would have been inflated at a reduced 22.79 per cent instead of 30.38 per cent for the Montagne Jacquot contract.

The preparation of Montagne Jacquot’s tender documents had been left entirely to the Consultants. The Authority should review and give specific approval to key contract areas like inputs that should in all fairness be subject to escalation and the weighting of items constituting the formulae before the tender is actually floated. Particular attention has to be paid to petroleum products, known for their volatility in the world market.

**Ministry’s Reply**

- Given the nature of the civil engineering works required for the construction of the Wastewater Treatment Plant, the WMA had to resort to external expertise for the preparation of the tender documents which contained cost escalations provision.

- This Ministry and the WMA, based on past experience, have improved contractual issues in new contracts with a view to ensuring that value for money is obtained and that public institutions reckon with the need for “value accountability”.