

Report No. 46 of the Director of Audit — Chapter 9

TAI PO WATER TREATMENT WORKS PROJECT: CONTRACT ADMINISTRATION

Summary

1. Between 1994 and 1996, the Finance Committee of the Legislative Council approved funding for carrying out the Tai Po Water Treatment Works Project by the Water Supplies Department (WSD). The Project included the construction of: (a) two aqueducts for carrying raw water and treated water between Tai Po and the Butterfly Valley in Lai Chi Kok under **Contract A**; (b) a primary service reservoir at the Butterfly Valley under **Contract B**; and (c) water treatment works and a treated water pumping station in Tai Po under **Contract C**. The WSD employed a consultant (the Consultant) to carry out the design and supervision of the works for the Project. The Consultant was the Supervising Officer of Contract A (a design-and-build contract) and also the Engineer of Contract B for supervising the works. This review did not cover Contract C as there were outstanding claims to be resolved.

Administration of a claim under Contract A

2. In May 1997, Contract A was awarded. In April 2000, the Contractor submitted a claim for additional costs relating to the measures taken to deal with excessive ground water inflows during the construction of the treated-water aqueduct. In December 2000, the Supervising Officer submitted his assessment of the claim to the WSD. He recommended that a variation order should be granted. In February 2001, the WSD considered that it might not be valid to issue a variation order. In March 2003, subsequent to further discussions with the WSD, the Supervising Officer rejected the Contractor's claim. In April 2003, the Contractor disputed the Supervising Officer's rejection of his claim. Between July and August 2003, the WSD carried out negotiations with the Contractor. In September 2003, the WSD agreed with the Contractor to pay him a sum for settling the dispute.

3. *Need for clear guidelines for disclosing information to contractors.* Under the consultancy agreement with the WSD, the Supervising Officer had a contractual obligation to seek the WSD's views before he reached a decision on a claim. Audit's examination revealed that the Contractor had been provided with the claim-assessment information (including claim analysis and evaluation) before the WSD gave its views on the assessment in February 2001.

Audit notes that, in March 2000, the then Works Bureau set out guidelines to the effect that documents/correspondences related to the Engineer/Supervising Officer's assessments of claims (including claim analysis and evaluation) that were not going to be disclosed to the contractor, should be classified as confidential. *Audit has recommended that the Secretary for the Environment, Transport and Works should: (a) take action to remind works departments that their consultants should, before the works departments have given their views on claim assessments, refrain from disclosing the results of such assessments to contractors; and (b) provide elaboration of the guidelines on the classification of confidential documents with a view to avoiding inappropriate disclosure of information to contractors.*

Blasting assessments under Contract B

4. In April 1997, Contract B was awarded. The Contract included substantial excavation in rock involving the use of the blasting method. In May 1997, the Contractor commenced the works. In July and August 1997, three large-scale landslides (caused by severe rainfall) occurred at Ching Cheung Road below the works site. In September 1997 and January 1998, the Contractor applied to the Geotechnical Engineering Office (GEO) of the Civil Engineering and Development Department for blasting permits for the site formation works and the outlet tunnel excavation works respectively. Due to the landslides, the GEO required the Contractor to submit blasting assessment reports for processing the blasting permit applications. The GEO granted the blasting permits 13 months after the applications.

5. The Contractor submitted extension of time (EOT) and prolongation cost claims due to the need for conducting blasting assessments after the commencement of the works. The Contractor also submitted a claim for payment for excavation in rock by mechanical means prior to obtaining the blasting permits. The Engineer granted an EOT of 296 days to the Contractor due to the blasting assessment requirements, and the WSD paid a sum of prolongation cost to the Contractor. The WSD also paid the Contractor a sum for excavation in rock using mechanical means.

6. *Need to promptly promulgate new works requirements.* Under GEO Circular No. 14/92 of November 1992, the GEO should, at the project planning stage, remind project offices that if there was any blasting proposal which could cause slope or retaining wall instability affecting the public, a blasting assessment should be submitted to the GEO for checking. Under GEO Circular No. 1/94 of February 1994, if it was apparent from the geotechnical assessments that blasting (with significant effects outside the site) was likely to be carried out, a blasting assessment had to be submitted for approval at the site formation submission stage. The Consultant did not produce a blasting assessment. He said that he was not aware of the blasting assessment requirement under GEO Circular Nos. 14/92 and 1/94

during the design stage of the works. *Audit has recommended that the Director of Civil Engineering and Development should provide works departments with new GEO works requirements as soon as possible.*

7. ***Need to expedite the processing of blasting permit application.*** The GEO granted the blasting permits 13 months after the Contractor's applications. The Contract B works were delayed. Audit considers that where blasting assessments are required after the commencement of the works of a contract, the GEO and the department concerned need to make a concerted effort to finalise the blasting assessments within the shortest possible time to help minimise delays and additional costs. *Audit has recommended that the Director of Civil Engineering and Development should take action to ensure that GEO staff expedite the processing of blasting permit applications, if the works departments and/or contractors concerned have substantiated that there is urgency in commencing the blasting works. Audit has also recommended that the Director of Water Supplies should, if it is envisaged that the processing of a blasting permit application will take time, make a special request to the GEO that the processing of the application should be expedited.*

Toolbox training under Contract B

8. In 1993, the then Works Branch introduced the Construction Site Safety Manual for improving construction-site safety. In 1996, the Consultant prepared the Contract B tender documents and included in it the specifications on safety measures promulgated under Works Branch Technical Circular (WBTC) Nos. 11/95 and 4/96. One of the safety measures was the provision of toolbox training to workers (i.e. safety training on the use of facilities and equipment). The Consultant inserted a rate of \$1,700 in the Bills of Quantities (BQ) for payment for each number of toolbox training on site, with an estimated quantity of 150 numbers. Between June 1997 and December 1998, the Contractor and the Engineer had different views on the payment for toolbox training. The Engineer considered that the payment should be made on a "per person fully trained" basis (through attending a course of training sessions) rather than on a "per person per session" basis. After obtaining legal advice, in October 2000, the WSD agreed with the Contractor to pay him a lump sum for settling the dispute.

9. ***Need to comply with WBTC No. 4/96 in specifying toolbox training rate.*** In the sample BQ provided for guidance under WBTC No. 4/96, it was indicated that there should be 2,400 numbers of toolbox training at a unit rate of \$40. However, the Consultant did not make use of the sample BQ in preparing the toolbox training BQ item in Contract B. *Audit has recommended that the Director of Water Supplies should take action to ensure that, in drawing up future works contracts, WSD staff (and consultants) make reference to the sample BQ promulgated in government technical circulars.*

10. *Need for clear specification for toolbox training in WBTC Nos. 11/95 and 4/96.* Audit notes that the contract specifications on payment of toolbox training in Contract B, prepared in accordance with WBTC Nos. 11/95 and 4/96, contained inconsistencies. For example, some contract specifications stated a frequency of toolbox training of not less than once a month, while other parts stated a frequency of at least once every two weeks or once a week. *Audit has recommended that the Secretary for the Environment, Transport and Works should: (a) remind the staff concerned of the need to consult the relevant parties on draft technical circulars involving legal and contractual issues; and (b) take action to ensure that the new technical circulars are clear and precise.*

Response from the Administration

11. The Administration has accepted the audit recommendations.

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