

# **Report No. 44 of the Director of Audit — Chapter 7**

## **THE POSTAL MECHANISATION SYSTEM AT THE AIR MAIL CENTRE**

### **Summary**

1. In July 1993, the Post Office appointed a postal services Consultant to provide assistance in the design, procurement, testing and commissioning of the Postal Mechanisation System (POMS) at the Air Mail Centre (AMC). According to the design, the AMC would have sufficient capacity to handle the air mail traffic on peak days up to 2010-11. Human involvement in the operation of the POMS would be reduced to an absolute minimum. In April 1995, the Contract for the supply and installation of the POMS was signed between the Government and the Contractor. The POMS includes two integrated mail processors (IMPs), two packet sorting systems (Packet SSs), one parcel sorting system (Parcel SS) and a number of supporting systems. The total capital cost of the POMS is \$207.9 million. The POMS commenced operation in July 1998 concurrent with the opening of the new Hong Kong International Airport.

### **Acceptance tests of the Postal Mechanisation System**

2. The Contract stipulates that the POMS has to pass three types of acceptance tests (i.e. factory acceptance tests, site acceptance tests and confidence trial) before it is accepted and taken over by the Post Office. The Audit Commission (Audit) has found that: (a) both the factory acceptance tests and the site acceptance tests of the IMPs, the Packet SSs and the Parcel SS, and the confidence trial of the IMPs had not been properly carried out in accordance with the terms of the Contract; and (b) the Post Office could not provide Audit with the results of some acceptance tests. *Audit has recommended that the Postmaster General should: (a) ensure that in future, records relating to the results of the acceptance tests for all equipment are retained; (b) ensure that in future, acceptance tests for all equipment are conducted and acceptance certificates are issued strictly in accordance with the terms of contract; and (c) in future, seek the advice of the Department of Justice and the Director of Government Logistics in handling cases of deviation from and non-compliance with the conditions of contracts.*

### **Performance of the Postal Mechanisation System**

3. Audit has found that there are deficiencies in the performance of the IMPs, the Packet SSs and the Parcel SS. Audit has made a number of recommendations to address these issues.

4. **IMPs.** The minimum read rates (i.e. the percentages of letters recognised by the optical character recognition machine) specified in the Contract were 76% for inward mail, and 71% for outward mail. The read rates for the period from April 1999 to September 2004 for inward mail ranged from 28% to 40%, and they ranged from 37% to 49% for outward mail. In 1997, the Consultant advised the Post Office that the introduction of a postcode system in Hong Kong could improve the read rates of the optical character recognition machines and it recommended the Post Office to introduce a postcode system with seven digits. In July 2003, in response to a Legislative Council question, the Economic Development and Labour Bureau said that it was not suitable to introduce a postcode system in Hong Kong at that time. The maximum error rate (i.e. the percentage of letters sorted to the incorrect collection units) for inward mail and outward mail specified in the Contract was 0.8%. The error rate for inward mail for the period from April 1999 to September 2004 ranged from 2.6% to 7.5%. The error rate for outward mail for the period from March 2001 to September 2004 ranged from 0.9% to 2.2%. During the period from April 1999 to September 2004, the overall overflow rate (i.e. the percentage of letters not sorted to the destination collection units but sent to the bins for overflow items) ranged from 1.6% to 5.1%, whereas the maximum overflow rate specified in the Contract was 0.5%.

5. **Packet SSs.** During the period from April 1999 to September 2004, the hourly throughput ranged from 3,399 to 4,928 packets. This fell short of the minimum hourly throughput of 10,000 packets specified in the Contract. During the same period, the overall overflow rate ranged from 4.3% to 9.5% while the maximum overflow rate specified in the Contract was 0.5%.

6. **Parcel SS.** It is stated in the Contract that the Parcel SS shall reliably sort parcels at a maximum throughput rate of 5,500 per hour. During the period from April 1999 to September 2004, the hourly throughput ranged from 1,393 to 2,085 parcels. This fell substantially short of the capacity specified in the Contract.

7. *Audit has recommended that the Postmaster General should: (a) continue to explore ways to further improve the performance of the POMS; (b) consider introducing a postcode system to improve the performance of the POMS; (c) in consultation with the Department of Justice, critically examine whether there are breaches of the contractual terms and ascertain the remedies available; and (d) ensure that in future, in purchasing equipment: (i) the justification for the purchase is based on realistic and achievable performance; (ii) only realistic and attainable requirements are specified in the contract; (iii) the performance requirements applicable to actual operation are explicitly stated in the contract; and (iv) the performance of the equipment fully complies with the contractual requirements.*

## **Utilisation of the Postal Mechanisation System**

8. In the early 1990s, in planning the construction of the AMC, the Post Office expected that upon the commissioning of the POMS, human involvement in its operation would be reduced to an absolute minimum. According to the design of the POMS, almost all mail including letters, packets and parcels processed at the AMC would be sorted by the

POMS. The bases used by the Consultant in the cost-benefit analysis for the POMS were that only 0.1 % of the letters and 1 % of the packets required manual sorting. During the years from 1999-2000 to 2003-04, the percentage of letters sorted by the IMPs ranged from 47 % to 66 % and the percentage of packets sorted by the Packets SSs ranged from 20 % to 49 %. Each IMP operated, on average, 3.9 hours to 4.8 hours per day in sorting letters and the average daily operating hours of each Packet SS ranged from 2.6 hours to 7.2 hours. During the same period, all outward parcels and large size Speedpost items were sorted by the Parcel SS and the average daily operating hours of the Parcel SS ranged from 9.9 hours to 13.9 hours. Regarding the supporting systems, Audit has found that: (a) Unit D of the conveyor system is used only occasionally, and a major part of Unit E and a major part of Unit F of the conveyor system are left idle; (b) the container storage and retrieval system has never been used to store mail; and (c) the vacuum lifting devices, the unit load device transfer system and the mail segregation system have been left idle.

9. *Audit has recommended that the Postmaster General should: (a) modify and tune the IMPs and the Packet SSs so that the systems would process the majority of the mail items; (b) explore ways to put the supporting systems into beneficial use; (c) take into account the spare capacity of the POMS when planning the replacement of the mail processing systems at the General Post Office and the International Mail Centre; (d) consider mothballing the idle equipment which cannot be put into beneficial use; and (e) in future procurement of equipment, determine the expected utilisation rates and make use of the utilisation rates in evaluating the costs and benefits of the equipment.*

### **Payments for the Postal Mechanisation System**

10. According to the Contract, the Post Office is entitled to discounts on payments for the POMS. In January 2001, Audit found that the Post Office had paid the Contractor \$129.8 million for which the discounts allowed in the Contract had not been deducted. Audit requested the Post Office to review all its payments to the Contractor. The Post Office, after checking its payment records, found that there were overpayments of \$7.1 million to the Contractor. The Post Office also found that 15 payments had not been made to the Contractor within one month of receipt of the invoices in order to obtain the special discounts of \$0.2 million. In mid-2001, Audit requested the Postmaster General to take prompt action to recover the total overpayments and the related interest from the Contractor. In February 2002, the Post Office recovered \$8 million from the Contractor. *Audit has recommended that the Postmaster General should strengthen the payment checking procedures.*

### **Response from the Administration**

11. The Administration generally agrees with the audit recommendations.

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