International Civil Aviation Organization

Seventh Meeting of CNS/MET Sub-Group of APANPIRG and Tenth Meeting of CNS/ATM IC Sub-Group of APANPIRG

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Agenda Item 11: Quality assurance in the MET field

IMPLEMENTATION OF THE ISO 9000 QUALITY MANAGEMENT SYSTEM IN HONG KONG, CHINA

(Presented by Hong Kong, China)

SUMMARY

This paper presents the Hong Kong Observatory's experience in obtaining ISO 9000 certification for the implementation of a quality management system (QMS) for its weather service in support of international air navigation.

1. Introduction

1.1 Amendment 72 to ICAO Annex 3 contains a new recommendation [2.2.2] in respect of the establishment and implementation of a quality system by the designated meteorological authority. The system should be in conformity with the ISO 9000 series of quality assurance standards and certified by an approved organization [recommendation 2.2.3].

1.2 Subsequent to the adoption of amendment 72 in 2001, the Hong Kong Observatory (HKO) as the designated meteorological authority of Hong Kong, China implemented a quality system for its aviation weather service in support of international air navigation. The system was certified in late 2002. This paper presents HKO's experience in the implementation of the ISO 9000 quality management system (QMS).

2. Implementation

2.1 The process began in late 2001 with the appointment of a certified ISO consultant, who first reviewed HKO's existing procedures and facilities for the provision of aviation weather service. The consultant identified areas requiring further work in order to obtain ISO 9000 certification. Following the review, the quality policy and objectives for the service provision were formulated and established for HKO.

2.2 The process leading to ISO 9000 certification can be roughly divided into 6 steps, namely, training and appointment of management representatives, establishment of quality documentation, implementation of the quality system, commissioning of certification body, internal audits and certification audits. These are described below.

2.3 With the consultant's assistance, ISO 9000 awareness training was provided to all relevant staff. The purpose of the training was to ensure the full understanding and commitment of all staff, not just the management. This was followed by the appointment of management representatives within HKO in early 2002 to lead the QMS implementation and certification process.

2.4 In respect of quality documentation, there are three layers – quality manual, quality system procedures, and records. Based on the earlier consultant review on procedures and facilities, the quality manual and quality system procedures were developed around the existing framework, in such a way as to ensure that all records are kept and could be easily retrieved in conformity with ISO requirements. This approach minimized the resources required for implementing QMS.

2.5 In drawing up the quality documentation, HKO made extensive use of ICAO and WMO regulatory and guidance material such as ICAO Annex 3 and WMO No. 8 Guide to Meteorological Instrumentation and Methods of Observation. Within the framework of the above guidance material, HKO also developed operational procedures to suit local circumstances. After establishing the documentation, the consultant conducted briefings to ensure that the staff understood their respective roles in QMS. Training was also provided in advance to prepare prospective auditors within HKO for internal audits later on.

2.6 The implementation of QMS, completed in March 2002, included data and product quality assurance and control processes. These processes drew on the following existing resources: day-to-day consistency checking systems for both data and products, and a forecast verification system developed in 2000 which gave for each forecast a score relative to the ICAO desirable accuracy for each of the weather elements. The QMS also included on-going review processes for continual improvement and for the provision of adequate resources to sustain the QMS.

2.7 Further, as important components of the QMS, customer needs assessment and satisfaction survey became an institutionalized part of the system. These interactions with customers were started some 10 years ago. Customer feedback, as well as staff suggestions, is integrated into HKO's regular process improvement process.

2.8 An accredited certification body was appointed in April 2002 to provide the certification audit service. About a month prior to the certification audit, an internal audit was carried out by HKO internal auditors to ensure full compliance with ISO requirements. This was followed by the certification audit with the participation of a meteorological expert outside of HKO. The auditing process was smooth and the award of certificate took place in November 2002.

2.9 In summary, since many of QMS components described above were already in place prior to its implementation, the QMS quickly gained the full understanding and commitment of all staff. This enabled the whole ISO certification process to be completed within the course of one year. The cost involved, including consultancy, certification and future maintenance cost, turned out to be acceptable.

3. Action

3.1 The meeting is invited to note the information contained in this document.

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