



International Civil Aviation Organization
**Asia Pacific Regional Aviation Safety Team - Second Meeting of the
Accident Investigation Ad hoc Working Group (APRAST-AIG AWG/3)**
(Bangkok, Thailand, 11 – 12 March 2013)

Agenda Item 5: Review of the Action Plan to improve the accident/incident investigation capability in the APAC region

Development of a new Aircraft Accident Investigation Facility in Hong Kong

(Presented by Hong Kong, China)

SUMMARY

An Accident Investigation Office (AIO) was established under the management of the Hong Kong Civil Aviation Department (HKCAD) in 2012. This paper presents the facility development of the AIO and the role it could play in enhancing the aircraft investigation capability in the Asia Pacific region.

1. INTRODUCTION

1.1 Since the commissioning of the new Hong Kong Civil Aviation Department (HKCAD) Headquarters located in the Hong Kong International Airport in 2012, an Accident Investigation Office (AIO) was established under the management of the HKCAD. The AIO has its own investigation facilities, the Accident Investigation Center (AIC), located in the Facility Building of the HKCAD Headquarters. The AIC is also designed with provisions allowing further development and expansion for the future decades.

1.2 Equipped with the new investigation facilities, equipment and the commitments in continuously training up our aircraft accident investigators, it is not only the aircraft investigation capability in Hong Kong that has been significantly enhanced, but also for the Asia Pacific region through further exchanges and collaborations in the future.

2. DISCUSSION

2.1 Accident Investigation Office

2.1.1 The AIO is responsible for the investigation of aircraft accidents and serious incidents in accordance with the Hong Kong Civil Aviation (Investigation of Accidents) Regulations, which are independent from the regulatory regulations. It is managed in full-time by two Inspectors of Accidents who administer and in particular maintain the readiness

and preparedness of the Office on a daily basis. When an investigation is called upon, professionally trained Inspectors of Accidents from the offices of flights standards, airworthiness, air traffic management or other relevant parties will form an investigation team with an Investigator-in-charge assigned by the Chief Inspector of Accidents.

2.2 Accident Investigation Centre

2.2.1 The main features of the Accident Investigation Centre are the Command Center, Secured Hangar, Flight Recorder Centre, and six en suite Bedrooms. There are also interview rooms and numerous spaces for office accommodation and equipment storage.

2.2.2 Effective communications and co-ordinations are essential in conducting aircraft investigations, let alone major ones. The AIO Command Centre has been designed to serve the purposes. It is a 200-sq meter conference room, equipped with state-of-the-art audio-video (A/V) systems. The A/V systems consist of multiple input and displays units. There is a 4x4 42" LCD panel video wall system that has the capability of showing integrated or multiple images. The A/V systems can display information from various sources, enabling investigators to see things from different perspectives simultaneously. Also, a communication system is available to conduct real time video conference among the command center and other outside parties.

2.2.3 Preservation of evidence has always been a high priority for accident investigators. To this end, the AIO has a secure 200-sq meter Secured Hangar equipped with a 10-tonne rated overhead crane inside the 10-metre headroom space. The Secured Hangar is fully air-conditioned, equipped with racks and cabinets for the storage of wreckage, components and documentations. It is also equipped with various tools and benches for disassembling impounded components and performing detailed examinations on wreckage.

2.2.4 It is our initial step to develop the Flight Recorder Center (FRC) being capable of downloading and analysing undamaged solid states flight recorders. Further provisions are expected to cover damaged solid states flight recorders. The FRC is divided into three areas, namely the Downloading and Analysis Room (DAR), the Audio Room (AR), and the Workshop. The DAR has equipment to download data from flight data recorders and cockpit voice recorders. In addition, a video animation and analysis program enables investigators to visualise flight attitudes, profiles and performances. In the AR, cockpit voice recordings can be transcribed into CVR transcript via a CVR transcript system. Using a sound spectrum analysis program, investigators can also analyse any recorded sounds out of the voice recordings. Last but not least, the Workshop has the provisions for the cleaning and dissembling of retrieved flight recorders. For flight recorders recovered from under water, a vacuum assisted drying chamber is available to dry up soaked circuit panels.

2.2.5 The work nature of aircraft accident investigation may require investigators to stay at the accident site for a substantial period, especially during the initial stage of the investigation. Therefore, we have anticipated the needs for temporarily accommodating investigators should an accident happen in the Hong Kong International Airport. As such, the AIC houses six en suite Bedrooms. In peacetime, they could be doubled as the accommodation for HKCAD colleagues on standby duties.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the development of a new aircraft accident investigation facility in Hong Kong.
- b) note that with the new AIC established in its Headquarters, HKCAD could organise and host more aircraft accident investigation exchanges, seminars and training for the region in the future.

— END —