Safety News

U.K. CAA Alters Policy for Emergency Flights Over Cities

The U.K. Civil Aviation Authority (CAA) is revising its policy for the handling of aircraft by air traffic services in emergency situations in which the intended flight path passes over densely populated areas. CAA said that the action was required because of safety issues identified in recent incidents, including an April 24, 2004, incident in which the flight crew of an Evergreen International Airlines Boeing 747-100 was directed to fly the disabled cargo airplane over some of the most congested neighborhoods in London (see *Airport Operations*, January–February 2006).

The revised policy — an amendment to the *Manual of Air Traffic Services* Part 1 (Civil Aviation Publication 493) — says, "It is desirable that aircraft in emergency should not be routed over densely populated areas, particularly if there is reason to believe that the aircraft's ability to remain in controlled flight is compromised or that parts of the aircraft could detach in flight. If this is inconsistent with providing the most appropriate service to the aircraft, for example, when any extended routing could *further* jeopardize the safety of the aircraft, the most expeditious route is the one that should be given."

In the April 2004 incident, after the failure of one engine, crewmembers told air traffic control (ATC) that they had observed anomalies in indications for the three operative engines. They conducted an emergency approach and landing at London Heathrow Airport.

During the emergency, ATC personnel discussed the possibility that the aircraft's cargo might include dangerous goods being shipped by the U.S. military; Heathrow Airport is not considered suitable for diversion of an aircraft that requires special ATC handling while carrying dangerous goods. No one was injured in the incident, and the airplane was not damaged; nevertheless, in its final report on the incident, the U.K. Air Accidents Investigation Branch recommended a CAA review to determine whether ATC training prepared controllers to handle such emergencies and "whether sufficient guidance is provided on the avoidance of built-up areas when vectoring aircraft in emergency."

NTSB Identifies Risks in EMS Operations

The U.S. National Transportation Safety Board (NTSB) has recommended improved training and equipment requirements for emergency medical services (EMS) operations. The recommendations resulted from an investigation of 55 accidents involving EMS aircraft during a three-year period (see *Flight Safety Digest*, April–May 2001).

In its *Special Investigation Report on Emergency Medical Services Operations*, NTSB criticized the U.S. Federal Aviation Administration's (FAA's) use of less stringent requirements for EMS operations without patients on board than for patient-transport flights, the lack of flight-risk evaluation programs and consistent and comprehensive flight-dispatch procedures, and the absence of requirements for technology such as terrain awareness and warning systems (TAWS) to improve safety.

NTSB expressed concern that "without requirements, some EMS operators will continue to operate in an unsafe manner, which could lead to further accidents. Although [NTSB] recognizes that the nature of EMS operations involves some risks, operators should be required to provide the best available tools to minimize those risks and help medical personnel, flight crews and patients arrive at their destinations safely."

NTSB's safety recommendations called for more stringent requirements for all flights with medical personnel in the aircraft; development of flight risk-evaluation programs; use of formal dispatch and flight-following procedures with up-to-date weather information and help in flight risk-assessment decisions; and installation of TAWS on EMS aircraft and adequate training in their use.

The 55 accidents, including 24 fatal accidents, reviewed during the investigation resulted in 54 fatalities and 18 serious injuries. The investigation found that, as the number of flight hours per year flown by EMS helicopter operations increased from 162,000 in 1991 to 300,000 in 2005, the accident rate also increased. The report said that the average accident rate during the 10-year period from 1992 through 2001 was 3.53 accidents per 100,000 flight hours, but the rate during the last five years of that period, from 1997 through 2001, was 4.56 accidents per 100,000 flight hours.

No 'Common Causes'

Fatal airline accidents have become so rare in developed countries that "common causes" no longer exist, said Nicholas A. Sabatini, U.S. Federal Aviation Administration associate administrator for aviation safety.

Sabatini told a meeting of the International Society of Air Safety Investigators that the accident rate for passenger jets in developed countries is about 0.004 per 100,000 departures.

"How do you explain how safe point zero-zero-four is?" he asked. "Here's one way: You must fly every day for 43,000 years to get to an even chance of being killed in an airline accident."

Without common causes of accidents, the new era of aviation safety depends on a "prognostic" — or predictive — approach of gathering more data, discerning trends, identifying accident precursors and sharing information, he said.

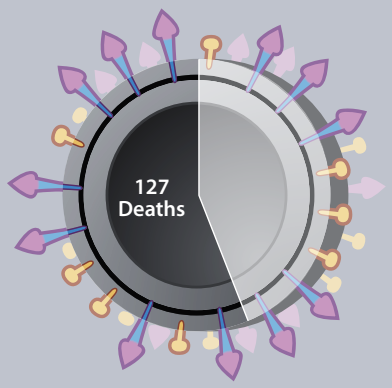
Guidelines Issued for Bird-Strike Cleanups

Public health specialists and representatives of the aviation industry have developed guidelines for maintenance personnel responsible for cleaning up after bird strikes (see *Human Factors & Aviation Medicine*, November–December 2005).

The International Air Transport Association (IATA) said that discussions with biosafety specialists at the United Nations World Health Organization (WHO) resulted in recommendations calling for those involved in cleanup activities to wear disposable gloves and, "if body contact [with bird remains] is unavoidable while cleaning the engine, … a disposable coverall."

Other recommendations included avoiding use of pressurized air or pressurized water to clean any part of the aircraft hit by a bird; removing the bird remains and placing them in a plastic bag; ensuring that the gloves touch no part of the face; removing the gloves and disposable coveralls and placing them in the same plastic bag, and then sealing the bag and disposing of it along with normal garbage; and washing hands thoroughly with soap and water.

In late May 2006, WHO said that 224 confirmed human cases of avian flu had been reported worldwide. Of those, 127 people had died. Public health specialists are concerned about the possibility that avian flu — now relatively rare in humans — might evolve into a highly contagious human disease with the potential to kill many of those who become infected.



224 Cases of Avian Flu in Humans
Late May 2006

Study Rejects Use of Infant 'Slings' for Child Restraint

Infant carriers, also called slings, are not capable of restraining infants in an aviation accident, according to a study conducted for the Australian Transport Safety Bureau (ATSB). Turbulence tests performed as part of the study found that with a 9 g pulse — a force equivalent to nine times standard gravitational acceleration — infant dummies were ejected from the slings; in some instances, they were crushed between the front row seat back and the body of the adult dummy that had held them.

In their report — *Child Restraint in Australian Commercial Aircraft* — the researchers who conducted the study said that children younger than 24 months are safer if they are placed in automotive child restraint systems instead of being held on an adult's lap or restrained by standard aircraft lap belts. Nevertheless, 14 of the 20 models of child restraint systems that were tested could not be adequately installed in an airplane seat or were difficult to fit within the available space.

The study recommended encouraging the use of child restraint systems — either systems designed specifically for aircraft use or compatible automotive systems. Other recommendations included calls for tests of automotive child restraint systems that incorporated an upper tether strap, and installation of "lap sash or harness-type" seat belts for adults holding infants.

Icing Accident Prompts Call for New Training Aids

Photo courtesy of NTSB

Pilots should use touch to detect small ice particles, NTSB said.

The U.S. National Transportation Safety Board (NTSB) has recommended changes in pilot training to aid in identification of upper wing surface contamination. The recommendations were issued as a result of the investigation of a Nov. 28, 2004, accident in Montrose, Colorado, U.S., in which the flight crew of a Canadair CL-600-2A12 failed to ensure that the airplane's wings were free of ice and snow before takeoff.

The safety recommendation said that the U.S. Federal Aviation Administration should "develop visual and tactile training aids to accurately depict small amounts of upper wing surface contamination" and "require all commercial airplane operators to incorporate these training aids into their initial and recurrent training."

The CL-600 struck the ground during takeoff from Montrose Regional Airport. The captain, flight attendant and one passenger were killed, and the first officer and two passengers received serious injuries in the accident, in which the airplane was destroyed. The NTSB accident investigation found that the airplane was parked for 40 to 45 minutes during freezing precipitation and was not deiced before takeoff.

"The flight crewmembers would have seen the contamination if they had carefully visually examined the airplane's upper wing surfaces," an NTSB statement said.

The investigation also resulted in a safety recommendation that the U.S. Department of Transportation require that passengers on air taxi flights conducted in accordance with Federal Aviation Regulations Part 135 be told "the name of the company with operational control of the flight, including any 'doing business as' names contained in the operations specifications, the aircraft owner and the name(s) of any brokers involved in arranging the flight."

In Other News …

The JAL Group, parent company of Japan Airlines, has opened a Safety Promotion Center in the maintenance area of Haneda Airport in Tokyo to promote awareness of aviation safety among its employees. The safety center features exhibits from a JAL Boeing 747 that broke up during a domestic flight in Japan in August 1985.

Eurocontrol says that the second phase of its programs for the mandatory installation of the traffic-alert and collision avoidance system (TCAS II, also known as the airborne collision avoidance system) has been completed. John Law of Eurocontrol said completion of phase 1, which involved large civil aircraft, and phase 2, which involved smaller aircraft of more than 5,700 kilograms/12,500 pounds or 19 passenger seats, means that the European air traffic system can "take maximum benefit from this important safety net."

The U.S. Federal Aviation Administration has installed a prototype of a new light emitting diode taxiway light system at Prescott (Arizona, U.S.) Municipal Airport. The technology is designed to help pilots see when they are approaching runway hold lines and thereby reduce the risk of runway incursions.

The European Regions Airline Association has recommended establishment of an independent, centralized European Transportation Safety Board in place of national investigation authorities as part of the harmonization of European accident investigation procedures.

Chile Adopts Safety Audit Standards

Chile has become the first country to announce plans to incorporate the International Air Transport Association's (IATA's) operational safety audit (IOSA) into its airline certification process. IOSA standards, developed by IATA in cooperation with the International Civil Aviation Organization (ICAO) and industry regulators, are considered a global benchmark for safety. About 150 airlines — responsible for 70 percent of scheduled international air traffic — are either undergoing the audits or have completed the audit process.

Compiled and edited by Linda Werfelman.