

## The Singapore Airlines Crash: Implications for Emergency Managers

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“S\*\*t, something there.” – pilot of Singapore Airlines Flight 006, one second before impact.

On October 31, 2000, at approximately 11 p.m., a Singapore Airlines Boeing 747 bound for Los Angeles, California, crashed at Chiang Kai-Shek Airport, Taipei, Taiwan. While attempting to take off at a speed of 160 mph, the jumbo jet collided with construction equipment, broke into three sections and burst into flames. Eight-two of the 179 people on board died. Many of the survivors sustained severe injuries.

Is this accident of any importance for local emergency managers? Nearly 70 percent of U.S. residents live within 20 miles of a major airport. No airport, including Chicago O’ Hare, Los Angeles International, Atlanta Hartsfield and JFK, has enough fire/rescue and medical resources to handle a major airplane crash.

The Federal Aviation Administration requires only a minimum of three firefighters – even for the busiest and largest U.S. airports. Therefore, additional manpower, equipment and facilities for fire/rescue/EMS and aftermath/recovery operations must be brought in from surrounding communities.

Despite darkness and bad weather at Chiang Kai-Shek Airport, fire units should have been onsite in three minutes or less to extinguish up to 50,000 gallons of burning jet fuel. Occupants trapped in the wreckage needed to be extricated and rescued. More than 80 persons needed to be triaged, treated and transported to proper medical facilities, preferably within the “golden hour” following the crash.

Some passengers on Singapore Airlines Flight 006 claimed that “it

seemed like the emergency crews took forever to get there.” They waited for more than an hour before being jammed – “six or eight of us...into this emergency vehicle, and the guy was a maniac...he was driving like a fool.”

Later, 81 bodies needed to be found and recovered, transported to a morgue, examined by forensic specialists and returned to the families in a dignified and timely manner. Body parts needed to be collected and identified, the accident site and wreckage needed to be secured, and evidence needed to be preserved. The list of tasks demanding expeditious handling goes on and on.

Even your local emergency management office could be challenged to provide and coordinate logistical support and resources to effectively meet challenges such as these.

Every major airplane crash can cause at least 100 casualties, stretching the capabilities of emergency responders, hospitals, coroners’ offices and other departments to their limits. Hundreds, if not thousands, of family members and friends of those aboard, airline personnel, Red Cross volunteers, media representatives, investigators and aviation experts will show up, need to be accommodated, and require timely and accurate information.

Does your emergency plan cover those scenarios; and if so, have you trained and exercised the procedures with the different entities involved? Do you know which agency is responsible for what and when? Does your plan describe the rules, responsibilities and demands of the airport, the air carrier, the ARC, the NTSB, the FBI, the local coroner, law enforcement, the governor’s office, etc.? Are you prepared to deal

with numerous governmental jurisdictions, an aggressive national and international news media, and the often high-profile, multi-national aspects of an airplane incident?

In addition to the logistical nightmare, airplane crashes exact a tremendous emotional impact on local communities. Non-survivable incidents, such as the September 1998 Swissair MD 11 crash off the shore of Nova Scotia and the January 2000 Alaska Airlines Flight 261 crash off the shore of Ventura County, CA, traumatize emergency, recovery, investigative workers and local residents – as well as the loved ones of the victims. Does your plan cover critical stress debriefing resources, professional counseling and memorial organization – including transportation arrangements for hundreds of family members to a private area?

Could your community handle a crash such as Singapore Airlines Flight 006 with its 179 victims? Would all life-saving emergency and recovery operations be done in a timely, coordinated and professional manner?

Airplane accidents can happen anywhere, and are often the result of a combination of failures in the aviation system, ranging from human factors to maintenance deficiencies. As an example, Flight 006 was cleared to take off from the Chiang Kai-Shek Airport’s active runway 05L, but departed from the parallel runway, 05R, which was partially closed due to maintenance work. The mid-section of the runway was obstructed by concrete barriers and heavy machinery. Other parts of runway 05R, which were not affected by the construction, were being used as taxiways and were well-lit at night.

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It might be that the runway lighting was confusing even for the experienced cockpit crew. Were the edge lights blue, as in the case of a taxiway, or were they lit white, as a runway would be? Were the center lights white as on a runway, or were they lit green, as on a taxiway? On a rainy night with limited visibility, how did the crew see these small lights - white-bluish or blue-whitish? Why were the air traffic controllers unaware that the Boeing 747 was taking off from the wrong runway?

At 23.17.12, the jumbo jet had passed V1, the speed necessary to complete a takeoff, and the voice recorder taped the pilot saying, "S\*\*t, something there." One second later, at 23.17.13, the sounds of impact were recorded, and at 23.17.18, the tape ended.