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afety management systems (SMS), which for many years were referred to as Safety Programs by Flight Safety Foundation (FSF) and most other aviation safety organizations, were found lacking at some operations visited by the FSF Audit Team.

As stated in the International Standard for **Business Aircraft Operations Audit Procedures** Manual, "A Safety Management System is a process to explicitly identify, manage and measure the safety risks that inevitably occur in all aviation operations." U.S. Federal Aviation Administration Advisory Circular 120-92 describes an SMS as, "essentially a quality management approach to controlling risk." It also provides the organizational framework to support a sound safety culture. There is not much difference between the two organizations' descriptions of what an SMS should be and what it should do. For more than 25 years, FSF Audit Teams have promoted the concept of a safety program in all types and sizes of flight operations. Safety programs included the creation of an advocate position as an integral part of the leadership team, usually with the title safety manager or safety coordinator. With the advent of the SMS, the integration of risk management has elevated safety programs in flight operations to an even higher level of attention. An effective SMS should be an essential ingredient in all flight departments.

in 2004. In 12 of those audits, or 60 percent, the

The data for this study were compiled during the 20 audits FSF Audit Teams conducted

team found that aircraft "hands-on" emergency evacuation and equipment training was not provided for executive management personnel. In an ideal situation, a corporate operator provides "hands-on" training for key passengers in the use and operation of aircraft safety and emergency equipment and evacuation procedures. The audit team strongly recommends this practice, and a number of major corporations have been able to adopt such programs. This is particularly important for operators that do not assign flight attendants to their flight crews.

While hands-on training is very difficult to accomplish because of the busy schedules of the company executives, the audit teams recommend that operators strive to secure a commitment and direction from the CEO to support a hands-on familiarization and demonstration program for key executives and management passengers who are frequent travelers on company aircraft. A reasonable alternative for many corporations is to assign crewmembers to conduct a thorough emergency briefing hands-on, or as hands-on as practicable for each of the key passengers once each year.

Operators also should develop an intranetbased emergency procedures video that can be viewed on the company Web site by all passengers, particularly executive management. The management scheduling and passenger information data system can be utilized to track and monitor the completion of this emergency briefing annually, either face-to-face or via the intranet.

An effective safety management system should be an essential ingredient in all flight departments.

This article extends the discussion of the aviation department problems mostly frequently found by the FSF Audit Team, based on the final reports submitted to clients that contracted for operational safety audits during 2004, detailing the observations, findings and recommendations identified during the review (Aviation Safety World, Sept. 2006, page 46). Observations are documented policies, procedures and practices that exceed the industry best practices; findings identify areas in which the team advises the client to adopt better policies, procedures or practices to parallel industry best practices; and recommendations describe actions that could be taken by the client to meet industry best practices. The recommendations cited in this story are in response to the findings identified in the Administration and Organization topic area, and are the opinions of the FSF Audit Team.



In 10 of the audits — 50 percent of the total — no documented SMS was found. A documented SMS is essential for the implementation of an effective risk management program. A written program provides a "safety roadmap" for the organization, which each year identifies specific goals and tracks progress in attaining those goals.

A written SMS should be developed and incorporated in the flight operations manual or as a separate document that will establish a working relationship with the company safety, loss prevention and risk management personnel, as appropriate. An operator should integrate its corporate safety goals and objectives into the flight operations SMS.

When the SMS documentation is completed, all personnel should receive a safety indoctrination training session; a similar orientation session should become mandatory for all new personnel. Also in 10 audits it was found that the responsible party — the SMS manager, pilot or coordinator — lacked formal training. The audit team recommended that operators consider sending the responsible party for formal training in safety program management at the University of Southern California, George Washington University, Embry-Riddle Aeronautical University or other appropriate training institutions.

The best overall preparation course for a newly assigned safety manager is an aviation safety program management course, which typically is available at safety training institutions. The operator also should permit the safety manager, pilot or coordinator to attend the annual FSF Corporate Aviation Safety Seminar and the annual Bombardier/National Business Aviation Association Safety Standdown.

Ten audits found no system for keeping records of accidents, incidents or near-midair anomalies. To provide a meaningful file of safety-related reports and enable a follow-up of identified safety concerns, a system of organized reports and resultant mitigation actions must be identified. Without this documentation, factual data on previous safety issues fades with individual memories and the details are lost.

Every accident, incident or operational anomaly, no matter how insignificant, should be documented and investigated. Further, operators should establish an anomaly-reporting form with follow-up procedures, and include this information in the SMS documentation, and develop a permanent reference source for future safety managers and department personnel on accidents and incidents experienced with their aircraft and facilities.

Finally, operators should review industry data and publications to identify accidents, incidents or operational anomalies experienced by other operators that have similar equipment or operational practices and include those events in the internal documentation. The operator does not have to experience an accident or incident to benefit from the lessons learned.

The data used in this article have been de-identified. Questions about this article should be sent to Darol Holsman, manager, Aviation Safety Audits, Flight Safety Foundation at dvhjkh@sbcglobal.net or +1 618.345.7449 (office phone) or +1 202.258.2523 (cell phone).