

## NTSB Recommendations

### To the FAA:

1. Develop in cooperation with the International Civil Aviation Organization a standardized glossary of definitions, terms, words, and phrases to be used that are clearly understandable to both pilots and air traffic controllers regarding minimum and emergency fuel communications. (A-91-33)
2. Conduct a comprehensive study of the Central Flow Control Facility and the Traffic Management System, by the Office of Safety/Quality Assurance, to determine the effectiveness and appropriateness of training, responsibilities, procedures, and methods of application for the Traffic Management System. (A-91-34)
3. Require that transport category airplane flight manuals include procedures specifying minimum fuel values for various phases of airline flights at which a landing should not be delayed and when emergency handling by ATC should be requested. The manual requirement and associated amendments to regulations and procedures should include criteria for when ATC must be notified that the airplane must be en route to its destination or alternate airport via routine handling, and when emergency handling is required. (A-91-35)
4. Incorporate into air route traffic control centers equipment to provide a recorded broadcast of traffic management information that can be monitored by all aircraft within each center's boundaries to provide pilots with early indications of potential delays en route. (A-91-36)
5. Immediately notify all domestic and foreign air carriers to emphasize that all pilots operating commercial air transport flights in the U.S. National Airspace System must be thoroughly knowledgeable of the flight operating and air traffic control rules and procedures, including standard phraseology, of operating in the U.S. NAS. (A-90-9)
6. Immediately disseminate the contents of the recommendation to all air carrier operators involved in commercial air transport operations in the U.S. NAS. (A-90-10)
7. Immediately issue a General Notice directing management of all air traffic control facilities to formally brief all air traffic controllers on the circumstances of the accident, and emphasize the need to request from flightcrews clarification of unclear or ambiguous transmissions that convey a possible emergency situation or need for additional ATC assistance. (A-90-11)

On June 22, 1990, the Safety Board classified Safety Recommendations A-90-9 through -11 as "Closed—Acceptable Action.

### To the Director, DAAC, Colombia:

1. Review policies, procedures, training, and oversight activity to ensure that adequate emphasis is being placed on the dual responsibility that flight dispatchers and flightcrews have in keeping each other informed of events and situations that differ from those mutually agreed upon in the dispatch release. (A-91-37)
2. Require that Avianca Airlines incorporate Cockpit Resource Management and Line Oriented Flight Training concepts into its flightcrew training program. (A-91-38)