



# National Transportation Safety Board

Washington, D.C. 20594

## Safety Recommendation

Log 2555A

Date: June 19, 1995

In reply refer to: A-95-58 through -65

Honorable David R. Hinson  
Administrator  
Federal Aviation Administration  
Washington, D.C. 20591

The National Transportation Safety Board recently conducted a special investigation of the U.S. air tour industry.<sup>1</sup> This investigation resulted from the Safety Board's longstanding concern about air tour accidents and incidents, 139 of which were investigated by the Board between October 1, 1988, and April 1, 1995. Although several safety enhancing actions have been taken, these actions have been site specific and only partially addressed the Safety Board's concerns.

The special investigation was initiated on July 14, 1994, after two accidents involving air tour operations occurred in Hawaii. While the Safety Board has determined that the probable causes of these accidents were mechanical and operational, respectively, investigation of the accidents revealed areas of concern applicable to the national air tour industry. Based on those findings, the history of accidents involving air tour operators, and the previous related safety recommendations, the Safety Board conducted public hearings during the week of October 10, 1994, in Phoenix, Arizona, and Honolulu, Hawaii, to obtain the views of those persons and organizations that directly participate in the air tour industry.

Both public hearings concentrated on safety issues affecting the air tour industry throughout the United States. Additionally, the public hearing in Hawaii focused on the investigations of the two air tour helicopter accidents that occurred on July 14, 1994. Specific areas addressed in the hearings were the adequacy of regulations pertaining to the air tour industry, the adequacy of past corrective actions, the use of emergency equipment, and the effectiveness of the oversight and certification of air tour operators by the FAA.

The evidence gathered during this special investigation, as well as the past history of air tour operations accidents, demonstrates that further improvements in FAA oversight and new regulations would enhance the safety of air tour operations nationwide.

<sup>1</sup>For more detailed information, read Special Investigation Report--"Safety of the Air Tour Industry in the United States" (NTSB/SIR/-95/01).

Existing regulations that specifically address air tour operations are SFAR 50-2, applicable in the Grand Canyon, and SFAR 71, applicable in Hawaii. The SFARs adequately address the unique aspects of air tour operations for these areas; however, as with any SFAR, the actions are temporary, requiring periodic renewal, and are applicable only to those specific areas. The Safety Board believes that the FAA needs to establish permanent regulations and develop national standards for air tour operators that incorporate specific provisions for unique operations and/or geographical characteristics. The problems exposed by the Board's investigations of air tour accidents in areas of the United States other than the Grand Canyon and Hawaii areas are similar to those experienced by the air tour operators in those areas.

The Safety Board believes that air tour operations are unique from the on-demand air taxi and scheduled commuter operations conducted under the provisions of 14 CFR Part 135. Therefore, the operations specifications of all air tour operators should contain requirements specific to the geographical area of certain operators, similar to those enacted for the Grand Canyon. The suggested wording of such provisions contained in Handbook 8400.10 Bulletin 92-01 is quite appropriate.<sup>2</sup> However, those provisions are not mandatory outside the area covered by SFAR 50-2 (Grand Canyon airspace). This special investigation revealed that these voluntary measures have not been applied on a widespread basis.

Bulletin 92-01 contains other nonmandatory guidance that urges FSDOs and POIs to encourage air tour operators, other than at the Grand Canyon, to include certain specific items in a chapter in the operations manual. The items listed in Bulletin 92-01 are appropriate measures to enhance the safety of air tour operations and should be made mandatory for all U.S. air tour operators. The guidance contained in Bulletin 92-01 also urges POIs to work with operators and local officials to identify scenic areas and to develop airspace usage practices, including special routes, altitudes, reporting points, etc. The Safety Board believes that this guidance should also be mandatory.

The Safety Board believes that the air tour industry and its customers would be best served by FAA oversight if all commercial air tour operations were subject to the provisions of 14 CFR Part 135, or equivalent requirements. A provision for certification needed to operate under 14 CFR Part 135 uses operations specifications as a means for standardizing overall requirements and defining special conditions unique to different locations. In its report of the Maui air tour accident, the Safety Board concluded that the FAA could enhance the safety level of air tour operations by expanding 14 CFR Part 135 or by creating a new regulation for these operations. While the FAA has since stated that it intends to issue rulemaking on this topic, the rulemaking action has not yet begun. The Safety Board believes that action on this issue should be undertaken immediately.

Another benefit in requiring all air tour operators to operate under the provisions of 14 CFR Part 135, or an equivalent regulatory requirement, would be to help the FAA identify

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<sup>2</sup> "Special Requirements: Note 1. Air tour/sightseeing operations are authorized to be conducted over list appropriate area, river, or prominent point of interest, in accordance with procedures outlined within the operations manual."

staffing needs to oversee the industry. This investigation revealed conflicting statements about the level of staffing necessary in the Honolulu FSDO to conduct effective surveillance of the air tour operators in that area. Although the staffing level is far below the authorized levels, managers stated that they were able to effectively oversee their assigned carriers. However, because those persons who conduct air tour operations under the provisions of 14 CFR Part 91 are not required to comply with special limitations that can be levied through operations specifications and operations manuals, the FAA has less leverage to control and surveil those operators.

Many air tour operations are conducted with helicopters. Helicopter stability when floating in rough seas or surf was addressed at the Hawaii hearing. Skid-mounted floats are designed to keep the helicopter upright in varying sea states and surf conditions. Although it is possible for the helicopter to roll inverted, that is still considered a better option than to sink, as persons may have more time to evacuate the helicopter. Nevertheless, the Safety Board believes that rough water conditions, including surf around Hawaii, make the combination of passengers wearing life preservers and the helicopter being equipped with flotation equipment an optimum situation. Therefore, the Safety Board urges the FAA to reconsider the provisions of SFAR 71 regarding the requirement for passengers to don life preservers when air tour helicopters are operated over water.

Flotation systems for helicopters are available with activation switches located either on the primary flight controls (cyclic or collective) or elsewhere in the cockpit. The location is dictated by manufacturer or customer preference. In a helicopter, float activation switches, which are not located on the primary controls, require pilots to remove their hands from the flight controls during the ditching maneuver. The Safety Board believes that the opportunity for a successful ditching is reduced if the pilot must interrupt maneuvering of the helicopter during the critical final phase of an emergency water landing. The problem can be resolved by requiring that helicopters operated over water with flotation equipment installed be equipped with activation systems located on primary flight controls.

Another concern of the Safety Board during this special investigation was the issue of minimum stand-off distances for helicopters during air tours. Section 6 of SFAR 71 prohibits flight below 1,500 feet above the ground, closer than 1,500 feet to any person or property, or below any altitude prescribed by other regulations. This restriction applies to both fixed and rotary-wing aircraft. Operators testifying at the Hawaii hearing were ardently against this restriction. The operators claim that this limitation will force what was once dispersed air tour traffic to converge at an altitude of 1,500 feet, flying fewer routes with sufficient terrain clearance. Flights that were previously spread out within canyons will now be forced to concentrate near the center to meet the altitude and standoff distance requirements.

The Safety Board believes that the air tour operators in Hawaii are in a position to make significant contributions to the improvement of their industry similar to the way in which their Arizona counterparts did when the FAA developed SFAR 50-2 for the Grand Canyon. Public hearing testimony indicated that air tour operators in Hawaii recognize that safety could be

improved with modifications to flightpaths and minimum altitudes. The Safety Board believes that the FAA needs to conduct further discussions with the interested parties in Hawaii to resolve the issue of optimum altitudes and routes for air tours. The FAA should also consider the negative effects of such restrictions that may result in unintended degradation of the existing level of safety.

Finally, as a result of investigations of the two air tour accidents in July of 1994, the Safety Board's attention was drawn to Kahului Heliport in Hawaii. Witnesses at the Hawaii public hearing described congested and uncontrolled conditions at the Kahului Heliport as a "potential accident waiting to happen." The Kahului Heliport receives Federal funding, thereby mandating compliance with the provisions of AC 150-5390-2A. The Safety Board believes that oversight by both the FAA and the Hawaii DOT is deficient and that a significant hazard to public safety is present as a result of the physical layout and operation of the facility. Therefore, the Safety Board believes that the FAA and State of Hawaii DOT need to coordinate their collective efforts to bring the airport into compliance with the AC.

Therefore, the National Transportation Safety Board recommends that the Federal Aviation Administration:

Develop and implement national standards by December 31, 1995, within 14 CFR Part 135, or equivalent regulations, for all air tour operations with powered airplanes and rotorcraft to bring them under one set of standards with operations specifications and eliminate the exception currently contained in 14 CFR Part 135.1. (Class II, Priority Action) (A-95-58)

Require special conditions within the operations specifications established by A-95-58 for all air tour operators, similar to the special conditions contained in SFAR 50-2, SFAR 71, and FAA Handbook 8400 10 Bulletin 92-01, to accommodate localized airspace restrictions and other unique conditions for such operations. (Class II, Priority Action) (A-95-59)

Develop and issue appropriate definitions for key terms such as "air tour," "air tour operator," and "suitable landing area." (Class II, Priority Action) (A-95-60)

Use the data for air tour operators as recommended in A-95-57 to the Department of Transportation, to provide adequate staffing at all FSDOs that have air tour operations within their geographic boundary. (Class II, Priority Action) (A-95-61)

Require all occupants of helicopter air tour flights to wear life preservers when the helicopter is operating over water, whether float equipped or not, unless it is operated at an altitude that allows it to reach a suitable landing area in the case of an engine failure. (Class II, Priority Action) (A-95-62)

Require that all helicopters equipped with inflatable flotation systems to have the

activation switch for those systems located on one of the primary flight controls (Class II, Priority Action) (A-95-63)

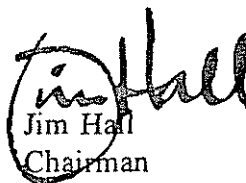
As soon as possible, conduct meetings with interested parties in Hawaii to resolve the issues of optimum flight altitudes and stand-off distances for air tour flights. These discussions should consider any positive or negative effects on safety of the current provisions of SFAR 71. (Class II, Priority Action) (A-95-64)

Coordinate with the Department of Transportation of the State of Hawaii to achieve compliance with AC 150-5390-2A for all helicopter facilities owned and/or operated by the State. (Class II, Priority Action) (A-95-65)

Also as a result of its investigation, the Safety Board issued Safety Recommendation A-95-57 to the Department of Transportation; Safety Recommendation A-95-66 to the Hawaii Department of Transportation; and Safety Recommendation A-95-67 to the Hawaii Helicopter Operators Association.

Chairman HALL, Vice Chairman FRANCIS, and Member HAMMERSCHMIDT concurred in these recommendations

By:



Jim Hall  
Chairman