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NTSB Recommendations

Statement of
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Before the Subcommittee on Aviation
Senate Committee on Commerce, Science
and Transportation

Mr. Chairman and Members of the Subcommittee:

We appreciate this opportunity to comment on the National Transportation Safety Board's (NTSB) recommendation to the Federal Aviation Administration (FAA) to limit traffic at the Nation's busiest airports until it can implement an improved flow control program. Our recent recommendations to FAA are basically the same as NTSB's.

We reported in March 1986[1] that during 1985 we had surveyed the controller work force including supervisors and managers, and found that they thought they were being stretched too thin. They believed the situation could impair their ability to maintain the proper margin of safety. Also our consultant, the Flight Safety Foundation, concluded that the ATC system was not as safe at the time of our survey as it was before the 1981 strike. We concluded that FAA could not quickly increase the number of air traffic controllers or provide new equipment to reduce their work load, leaving it only two choices: continue to stretch the controllers or limit air traffic. We recommended limiting traffic, but did not specify where or how. We did not have in mind a general limitation on the total quantity of air traffic, but rather limits on the quantities of air traffic in FAA's busiest control sectors at their busiest times. In other words, we believed that FAA should do more to tailor air traffic to the capabilities of its air traffic controllers.

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[1]Aviation Safety: Serious Problems Concerning the Air Traffic Control Work Force (GAO/RCED-86-121, March 6, 1986).

In its response to our report and in hearings, FAA has stated that its existing traffic management system prevents controllers from having to control more traffic than they can safely handle and that the safety level of the ATC system is not being adversely affected. FAA also stated that, while controllers may perceive that they are overworked, the traffic management system includes a number of safeguards to preclude overload from happening.

In addition to its central flow control program, FAA identified the following safeguards: (1) recent improvements to the traffic management system to predict overload and alert flow control, (2) local traffic management units (TMUs) at each of the 20 air route traffic control centers in the continental United States[2] and at designated airport towers responsible for monitoring traffic flow and ensuring that safe levels of air traffic are not exceeded, (3) first-line supervisors responsible for monitoring individual sectors and adjusting traffic flows, and (4) the controllers, themselves, who are responsible for making individual judgments on how much traffic they can safely handle.

FAA believes that these safeguards, if properly implemented, should accomplish the "tailoring" of air traffic that we believe is needed. However, we recently looked into how well these safeguards were working in the Chicago area to respond to inquiries from the Subcommittee on Government Activities and Transportation, House Committee on Government Operations. We reported at the

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[2]Air route traffic control centers, referred to as "en route centers" control flights between airports.

Subcommitee's February 27, 1987, hearing, that none of the safeguards were fully implemented and were not reliable means for assuring that controllers are not faced with more traffic than they can safely handle.

First, the existing flow control program is designed to control aircraft departures and en route flows based primarily on weather conditions and capacity at arrival airports rather than controller work load at the centers. Moreover, FAA estimated at that time, that the en route sector loading program, intended to predict overloads in specific en route sectors and alert flow control, will not be fully operational for several more years because of limited computer capacity.

In addition to flow control, FAA says it looks to its traffic management coordinators, supervisors, and controllers to make judgments on how much traffic can be safely handled. But, the en route Chicago center traffic management unit was staffed with only four full-time coordinators, instead of FAA's goal of 21 and the Chicago tower did not have a traffic management unit at all. In our 1985 survey, supervisors at the Chicago center told us they typically spent 60 percent of their time working traffic, and over 60 percent of them said that this hindered their ability to coordinate airspace and perform other procedural or operational matters. Half of them also said that they did not believe that they had sufficient say in determining the volume and complexity of traffic the controllers they supervised were expected to handle.

We also found that the hourly traffic capacity acceptance rates FAA had determined for O'Hare Airport did not directly consider controller staffing levels or the performance limits or capabilities of the controllers who are actually on duty.

So FAA's "safeguards" to preclude ATC system overload around Chicago boiled down mainly to depending on controllers to make individual judgments about how much traffic they could safely handle on the basis of their own professional knowledge, experience, and skill. At the request of the Subcommittee on Transportation, Senate Committee on Appropriations, we later gathered FAA data similar to the data we gathered at Chicago for other FAA centers and major terminals which had experienced increased air traffic activity, to determine whether similar conditions existed elsewhere in the system. As is generally perceived, we found traffic substantially higher than pre-strike levels and experienced staffing levels lower than FAA goals. We also found FAA authorized traffic management unit staffing substantially below the levels called for by FAA's staffing goals in all 16 en route centers we checked, and actual full-time staffing below the FAA-authorized levels in 11. We found full-time staffing levels below FAA-authorized levels for TMU's in 8 of the 11 towers, when applicable. And finally, we found that first line supervisors control traffic at least 25 percent of their total time in six centers and three towers.

From these data, we concluded that the situation we found in Chicago was not unique and that there were other centers and towers

Based on our work we agree with NTSB's recommendation that FAA reduce air traffic density when and where the ATC system is operating at near saturation levels until a flow control program is developed which can meet the dynamic requirements of the system. We would add that an adequate flow control program must take into account not only the predicted quantities of air traffic but also controller staffing levels and performance limitations. Toward this end, NTSB recommended that FAA solicit controller views as well as analyzing pertinent data to identify critical sectors, establish criteria for maximum safe traffic density in critical sectors, and develop a means for predicting periods when traffic levels might approach or exceed safe limits. Again, we agree and offer our 1985 questionnaire as an example of a statistically valid way of obtaining reliable information from controllers and their supervisors.