STATEMENT OF THE HONORABLE LANGHORNE M. BOND, ADMINISTRATOR OF THE FEDERAL AVIATION ADMINISTRATION, BEFORE THE BLUE RIBBON PANEL ON AIRCRAFT CERTIFICATION. JANUARY 21, 1980. WASHINGTON, D.C.

Mr. Chairman, Members of the Panel, Ladies and Gentlemen:

I welcome the opportunity to participate today in the beginning stages of your review of the FAA's aircraft certification processes. Your willingness to take on such a monumental task, and to give freely of your time in doing so, reflects in large part your dedication and commitment to improving aviation. I, as well as others in the aviation community, sincerely appreciate your having taken this job on, and look forward with anticipation to your final conclusions and recommendations on ways that our certification process can be improved.

I believe the importance of the work you are doing, and our interest in the end product of the Panel's deliberations, are underscored by the June target date for the completion of your work. The results of your work will not languish. Secretary Goldschmidt and I are committed to implementation of the valuable recommendations I am confident will be forthcoming from this Panel.

The FAA's certification process is a mainstay of our aviation system. No matter how good the air traffic control system is,

no matter how competent flight crews are, no matter how good the operating rules are, our excellent aviation safety record can only be maintained if the aircraft we use in our system are built to the highest standards of safety.

Aviation is a vital resource to Americans, and we can't afford to let anything diminish its value to us. In 1978, 529,000 people were employed in U.S. aircraft industries. Civil aircraft shipments totalled $6.5 billion; 244 of which were commercial transports, valued at $4.3 billion. The U.S. trade balance from exporting aerospace products in 1978 was over $9 billion. And the importance of aviation to Americans has not lessened. To the contrary, the backlog of transports on order from U.S. manufacturers increased from 465 in 1977, to 702 in 1978, to over 1,000 in 1979. At the same time, we have experienced a continuous growth in scheduled passenger service; from 58 million passengers in 1960 to 275 million passengers in 1978.

Any way you look at it, aviation is an important facet of our Nation's economy and lifestyle. I would suggest that one reason for this is the undeniable fact that aviation has proven to be not only an efficient but a safe mode of transportation.

And a substantial part of that safety record can be attributed to the well-built aircraft designed by American engineers and technicians, produced by American manufacturers, and certificated by the American government.

American aircraft and components are not important just to America, as the export figures I mentioned a moment ago clearly reflect. In 1978, the number of turbine-engine aircraft used worldwide in commercial service was slightly over 7,500. Over 68% of these aircraft were built by American manufacturers.

It is readily apparent that there exists throughout the world a healthy respect for U.S. aviation products. That respect is well founded. Our international posture in aviation has been aided in great measure by the safety of the aircraft we produce, guided by stringent safety standards which are held in high esteem by the world's aviation authorities.

Let me be clear on one point, though. Despite the fact that our safety standards have helped us become one of the world leaders in producing high quality aircraft, those standards can be improved. Moreover, the manner in which a standard is applied is always subject to question and scrutiny. I'm sure

the Panel's guidance in these areas will further our ability to retain our leadership role in international aviation. In fact, though there are some who might suggest that it is less than prudent to engage in such intense self-examination at a time when American leadership in aviation is being challenged by others, I believe it reflects a strength of our system. Our willingness to be critically introspective, as in the case of the DC-10, provides us with the opportunity for a positive learning experience which can only help in making further improvements in the safety of our system. Those improvements will contribute toward our strong future leadership.

I don't intend to go into detail about our certification process since it will be covered in substantial detail in presentations following mine. But I would like to mention some areas I believe it would be helpful for the Panel to focus on during its assessment of the certification process.

For one thing, I would like to receive your guidance on how we can stay current in state-of-the-art knowledge and techniques in our certification process. It is difficult to stay ahead of the power curve when you are dealing with a wide range of scientific and technical fields that experience continual advancements. Yet, I believe it is vitally important that the

FAA identify and take advantage of the best means available in certification, and that our methods keep up with the times. To the extent we can be at the forefront of advancing technology, our certification rules can reflect those advancements and guide the development of modern-technology aircraft.

In the same vein, I am concerned that our technical workforce be comprised of people possessing the needed mix of skills, and that we take all reasonable measures to assure that they remain up to date with scientific and technical advancements. As an adjunct to this issue, I would like the Panel's views concerning whether we avail ourselves to the extent that we should with the substantial body of technical expertise available outside the FAA. I welcome your perceptions and recommendations in these areas.

Another area of concern to me is whether the FAA has inserted itself far enough into the certification process and at the right times. The Panel is aware that we rely to a significant extent on Designated Engineering Representatives (DERs) in the certification of aircraft. Has the FAA relied too heavily upon DERs? Are there sufficient checks and balances in our DER system for us to gauge the performance of DERs? Are there

areas, beyond those already reserved by the FAA for FAA employees to make judgments, where the FAA should be calling the shots? Should there be some form of formal licensing for DERs, carrying with it legal obligations, the same as for certificated airmen, and the possibility of sanctions for abuse of authority?

I believe our reliance on DERs is an area which bears close scrutiny. It is an area which has engendered controversy, but at the same time I believe the DER system is a valuable asset if properly controlled.

Our current certification rules permit a manufacturer to continue producing an aircraft in accordance with the rules in effect at the time application is made for a certificate. Under this scheme, requirements which are subsequently prescribed are generally not imposed upon older model aircraft even though they are still in production years later. It seems to me that it may be desirable to establish a fixed period of time, perhaps 10 years, in which the certification basis for an aircraft would remain virtually untouched, after which newer certification requirements would govern the production of additional aircraft.

Another issue which warrants consideration is how well the FAA is equipped to deal with the certification and production of aircraft and components on a multi-national scale. This practice is becoming increasingly common, and there are clearly additional ramifications with which we must deal to assure a safe end product. A corollary to this concern is whether the FAA participates adequately in the technical review and assessment of foreign manufactured aircraft for which U.S. type certificates are sought.

It would also be helpful if the Panel would look at how well our certification rules take into account the relationship between design and maintenance. The structural integrity of our aircraft fleet cannot be assured merely by delivery of airworthy aircraft off the production line. It is clear that aircraft must be continuously maintained to keep them airworthy. It is also clear that the certification process should consider carefully the future maintenance of an aircraft which would be required as a result of its proposed design. I'm deeply interested in any improvements the Panel might consider possible in this critical area.

Your perceptions would also be desirable in another area. More specifically, I would be interested in knowing whether the

Panel believes that adequate emphasis has been placed on human factors in our certification of transport category aircraft. There has been substantial controversy in the aviation community over the required crew complement in aircraft undergoing certification. The FAA has undertaken studies regarding cockpit workload and crew complement. Those studies will be made available to the Panel for its review of this sensitive issue.

A significant issue which we have already moved to address concerns the standardization of our certification process. While our certification regulations are nationwide in application, those standards have not always been uniformly applied. For that reason, we have initiated a program called the "lead region" concept. That program will be discussed in greater detail later on today. The question I would pose to the Panel is whether the lead region concept goes far enough, or could certification be further improved through the establishment of a fewer number of line organizations having broader certification responsibilities?

A fundamental question which the Panel will be addressing concerns ways in which the certification process might be

changed to permit greater public participation. The FAA's aircraft certification regulations are developed with full public participation through the rulemaking process. It is in the area of deciding whether the manufacturer meets those regulations that there is pressure for greater public participation. At present, any person can make any relevant input to the type certification board. But the demands for greater participation that are being raised go far beyond this. I have spent considerable time pondering both the need for public participation beyond that already described and ways in which this might be accomplished. As to the latter, I have come up against two constraints.

The first concerns how to offer needed protection to a manufacturer's proprietary data which is made available to the FAA during the certification process. There is little doubt in my mind that making a manufacturer's proprietary data available to competing manufacturers, whether foreign or domestic, would be a potentially crippling blow to the American aviation industry. As you will learn in greater detail, release of this data to some, destroys the Freedom of Information Act exemption applicable to proprietary data. The second constraint with which I have had to contend concerns how outside participation

can be introduced into the process without setting the stage for undue delays. I don't want to turn the certification process into an adversary or adjudicatory proceeding, yet I'm sure the Panel members will see how extensive delays in aircraft certification could easily result once the Panel has had the opportunity to observe firsthand the amounts of data which are compiled during certification. It's clear to me that marketing of U.S. aircraft could be severely disrupted if the predictability of the timeframe for certification were altered by a process which permitted undue delays.

The Panel's guidance on ways in which broader participation could be allowed in certification would be of great interest to me. It may be, though, that the constraints which so far have kept me from coming up with a viable solution can only be dealt with by legislative protections and change.

By listing some of my personal concerns about the certification process, I don't want to suggest in any way that there are any limitations on areas the Panel may wish to explore. To the contrary, anything in the certification process is open for Panel review; indeed, I welcome the broadest possible look at the system we have in place.

There is one reservation I would like to share with the Panel, though, about future evolutions of the certification process. That concern is that the FAA not stifle the American aviation industry or displace its preeminence in the world community. As you know, the Federal Government historically has not dictated aircraft design. Our role has been to assure that high standards of safety are met. When new designs, not contemplated in our regulations, are proposed we have developed special conditions to assure that a comparably high level of safety is achieved. I continue to believe that the Federal Government should not dictate design or unduly constrain the imagination of the aviation industry since in doing so we would be inhibiting the creativity and innovativeness which, in the past, have brought about further advances in efficiency and safety. That, of course, suggests the FAA must keep up with the state-of-the-art and have available a mechanism that carefully assesses novel features of a proposed design.

In closing, I want to again express my appreciation to the Panel for its willingness to tackle a highly complex subject, and to assure you that you will receive the full cooperation of the FAA during every facet of your review. We look forward to your conclusions and recommendations, and stand ready to assist you in any way we can.