ANALYSIS OF NBC SEGMENT 3 BROADCAST REGARDING THE FEDERAL AVIATION ADMINISTRATION, AIRED NOV. 2-4, 1977

The American record of air safety is the finest in the world--that fact cannot be disputed. The credit belongs to a number of groups, including aircraft manufacturers, the airlines, trade associations and professional groups, consumer groups, labor organizations, the travelling public, the Congress, and the FAA. Each has contributed meaningfully to aviation safety and, at one time or another, has been right when others have been wrong. Through the dedication and persistence of all, and out of a mutually shared concern, the cause of aviation safety has been greatly advanced and continues to achieve even higher levels.

It is important that the American public's confidence in their air transportation system not be undermined. Aviation growth in the United States shows a present high level of confidence in the safety of the system--a confidence fully justified by the system's performance. Also important is the confidence of the American public in the government's concern for their welfare. Similarly, we believe it important that unjustified charges given wide distribution not result in political solutions to technological problems. Last, it is important that the reputations of the men and women who are the FAA should not be scarred by an inaccurate portrayal of their capabilities and by allegations which call into question their sincerity and devotion to the advancement of air safety. For these reasons, the FAA would like to provide information not included in the NBC News presentation of November 2-4, 1977 that we believe far more accurately documents the current state of aviation safety.

Objective journalism is a valuable tool for ensuring effective government and the FAA encourages constructive criticism. The FAA is fully cognizant that significant gains in aviation safety have emanated from constructive criticism offered by concerned observers. The FAA recognizes, however, that errors can occur in even the most conscientious news reporting. This is particularly true when the subject is as technologically complex as aviation safety. In fact, the FAA believes it is not realistic to attempt to deal with as many phases of aviation safety, as were recently addressed by NBC News, in the short period of time allotted. The resulting product, as the NBC telecast so aptly demonstrates, tends to be misleading, inaccurate, and incomplete.

To address the various representations made during the NBC News telecast, the FAA has separated the program into topical segments and set forth below the major points it would offer in rebuttal. The FAA notes that many of these points were made to the NBC News team during the period the show was being prepared but for reasons undisclosed to the FAA were deleted from the program. The FAA finds this deletion of relevant facts to be particularly disturbing because it made its facilities and personnel available to NBC News for the express purpose of giving NBC News the necessary insight to accurately report on this complex subject. Should any person or organization desire further information than is set forth below, the FAA is ready to provide it.

1. Statement: "You're going on a plane trip. Maybe you're worried the flight will be late, or the airline will lose your suitcase. Should

you be worried about a safe flight? Yes, you should." "[I]f you fly very often, you've nearly crashed more than once and never even knew it." (November 2; Ms. Ellerbee).

Response: On January 13, 1977, the Chairman of the National Transportation Safety Board, an independent government agency whose responsibility is to promote transportation safety, stated that United States civil aviation, including both air carriers and general aviation, achieved a generally excellent safety record in 1976. The Chairman further observed that air carriers recorded the lowest accident total in commercial aviation history and the fewest fatalities in more than 20 years. "Aviation's 1976 record is especially heartening because it represents further improvement on a good year in 1975. It also continues downward trends in several accident rates which suggests significant safety progress over a number of years." This statement and numerous supporting statistics are contained in an NTSB safety information press release dated January 13, 1977.

The domestic scheduled airlines are the safest mode of transportation today, and the FAA is continuing to develop and implement safety measures to make further gains in the future. NBC offered no statistical support for its bold allegation that if you fly very often you've nearly crashed more than once. Available statistics clearly refute the NBC statement. These statistics indicate not only the remarkable safety record for domestic scheduled air carriers but also the unlikely probability of a passenger on a domestic scheduled air carrier ever being involved in an accident. For example, the following table, from a January 13, 1977 press release by the National Transportation Safety Board, shows a progressive improvement in safety with respect to United States air carriers and illustrates the very low percentage of accidents and fatalities both per hours flown and per miles flown. For example, between 1966 and 1976, the total accident rate per 100,000 aircraft hours flown declined by almost seventy percent (1.469 versus 0.436) and the total accident rate per million aircraft miles flown declined by more than seventy-five percent (0.042 versus 0.010).

[Insert table which follows.]

A comparison between air transportation and other modes of transportation clearly indicates how safe travel by air carrier is.

Fatality Rates Per 100 Million Passenger Miles

Year	Domestic Scheduled Air Carriers	Railroad Passenger Trains	Buses	Passenger Automobiles and Taxis
1949-51	1.26	0.36	0.21	2.87
1959-61	0.67	.10	.18	2.20
1972-75	0.11	.19	.20	1.57

Fatality statistics for various modes of travel also depict that the scheduled airlines are among the smallest contributors to fatalities.

ACCIDENTS, ACCIDENT RATES, AND FATALITIES
U. S. AIR CARRIERS
(CERTIFICATED ROUTE, SUPPLEMENTAL, AND COMMERCIAL OPERATORS OF LARGE AIRCRAFT)
1966 - 1976

YEAR	ACCIDENTS		FATALITIES				HOURS FLOWN	MILES FLOWN (000)**	ACCIDENT RATES: PER 100,000 AIRCRAFT-HOURS FLOWN		ACCIDENT RATES: PER MILLION AIRCRAFT-MILES FLOWN	
	TOTAL	FATAL	PSG	CRW	OTH	TOT			TOTAL	FATAL	TOTAL	FATAL
1966	75	8	137	27	108	272	5,104,984	1,768,458	1.469	0.157	0.042	0.005
1967	70	12	229	39	18	286	5,868,842	2,179,739	1.193	0.204	0.032	0.006
1968	71	15*	306	37	6	349	6,404,260	2,498,848	1.109	0.203	0.028	0.005
1969	63	10*	132	22	4	158	6,740,199	2,736,596	0.935	0.134	0.023	0.003
1970	55	8	118	24	4	146	6,470,351	2,684,552	0.850	0.124	0.020	0.003
1971	48	8*	174	23	6	203	6,386,662	2,660,731	0.752	0.094	0.018	0.002
1972	50	8	160	17	13	190	6,302,160	2,619,043	0.793	0.127	0.019	0.003
1973	43	9	200	26	1	227	6,504,819	2,646,669	0.661	0.138	0.016	0.003
1974	47	9	421	46	0	467	5,978,480	2,464,295	0.769	0.134	0.019	0.003
1975#	45	3	113	11	0	124	6,040,841	2,477,764	0.745	0.050	0.018	0.001
1976PREL	28	4	39	6	0	45	6,130,000	2,536,000	0.457	0.065	0.011	0.002

* INCLUDES MIDAIR COLLISIONS NONFATAL TO AIR CARRIER OCCUPANTS. EXCLUDED IN FATAL ACCIDENT RATES (1968--2, 1969--1, 1971--2).

\# BEGINNING IN 1975, ACCIDENTS INVOLVING COMMERCIAL OPERATORS OF LARGE AIRCRAFT ARE INCLUDED.

** NONREVENUE MILES OF THE SUPPLEMENTAL AIR CARRIERS ARE NOT REPORTED.

NOTE--SABOTAGE ACCIDENT OCCURRING 9/8/74 IS INCLUDED IN ALL COMPUTATIONS EXCEPT RATES.

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D. C. 20594
JANUARY 3, 1977

12--2 & 14--2

Mode	Fatalities in 1975	Fatalities in 1976
U.S. Scheduled Air Carriers (All Occupants)	122	42
Commercial Buses (Occupants)	80	100
School Buses (Occupants)	50	60
Rail/Highway Grade Crossing	1,345	1,126
Water Transport Drownings	978	1,100
Motorcycle (Riders)	2,800	3,000
Collision with Pedacycle	1,000	900
Passenger Cars (Occupants)	27,000	27,400

Viewed from another perspective, the total number of fatalities for U.S. scheduled air carriers for the entire year of 1976 amounted to only 6% of the total number of motor vehicle deaths estimated by the National Safety Council to have resulted from the three days of the Labor Day Holiday.

It is also noteworthy that during the entire year of 1976, U.S. supplemental air carriers had no fatal accidents.

2. Statement: "Captain Power Waters' views are shared by many pilots, but because they fear reprisal, they are seldom willing to speak in front of a camera." (November 2; Ms. Ellerbee).

Response: If this statement is intended to imply that the FAA would seek reprisal against a pilot for criticizing the FAA, we could not disagree more. There is no basis for such an accusation either in fact or in theory. The FAA has not noted any reluctance on the part of individual pilots or such organizations as the Air Line Pilots Association to clearly enunciate their views, pro and con, concerning aviation safety. The FAA routinely receives comments from individual pilots and their associations in all rulemaking that impacts pilots. Similarly, the FAA reviews numerous letters from pilots and their associations dealing with suggestions for improving the system. The FAA encourages participation of its people at gatherings of pilots and we find that a frank exchange of views usually occurs. Simply stated, the FAA has never noticed any timidity on the part of pilots or their associations to publicly disagree with the FAA, nor do we believe they should feel constrained in expressing their views.

3. Statement: "The FAA's been criticized for not hiring enough air traffic controllers."

Response: NBC has not indicated who has criticized the FAA nor has it offered any data in support of the statement. There will always be individuals or organizations whose parochial interests are enhanced by alleging that more people are needed to do a job. The FAA is, however,

committed to employing only those numbers of individuals necessary to adequately fulfill its role; it is opposed to inefficient employment practices. For that reason, the FAA has conducted careful studies to ascertain proper staffing for different functions within the agency and has developed a staffing standard which enables it to objectively determine staffing needs throughout the air traffic system.

At the end of each fiscal year, every air traffic control field facility submits its source data for the 90th percentile day (37th busiest day) of the fiscal year just ended. The source data includes the number of aircraft handled each hour of the day for each center sector and terminal radar complex and the average flight time for each sector. The computerized staffing standard is applied to each facility's source data adjusted to the traffic forecasted for the budget year. The resultant printout is reviewed by the facility and the regional office, and any nonstandard staffing requirements are noted. The combined staffing requirements of facilities form the basis for the air traffic budget submission. The staffing requirements are reviewed, as part of the budget review process, by FAA top management, the Office of the Secretary of Transportation, the Office of Management and Budget, and the House and Senate Appropriations Committees.

Applying the FAA standard to FY 1977 activity levels yields a staffing requirement of 11,137 positions in the centers and 11,670 in the towers. (These figures include air traffic controllers and all professional support personnel). Our authorized staffing for FY 1977 was 11,348 positions for centers and 11,708 for towers. Actual on-board staffing is normally about 2% below the authorized. On-board staffing at the end of the year was 10,981 in the centers and 11,385 in the towers which is in line with the total numbers prescribed by our staffing standard.

Overall, in each of the fiscal years, 1975 - 1977, the employment levels of professional positions at the centers and towers combined have been at or between 97 and 98 percent of the levels authorized by Congress.

4. Statement: "O'Hare Airport is the busiest in the world, but the chance is one-in-two our plane is being handled by a controller who has not finished his training. At other airports, the chance of this situation occurring is one-in-four." (November 2; Ms. Ellerbee).

Response: The FAA never permits aircraft to be handled by unqualified controllers. Any controller that handles traffic has had hundreds of hours of simulated training before ever handling actual traffic. It is true that after the simulated training these controllers are permitted to handle actual traffic under the direct, on the spot, supervision of a — controller that has a substantial amount of actual experience at that particular facility. This raises an important fact; even if a controller has had years of actual experience, when that controller moves to a

different facility, the controller receives "training" as to the actual operations of the new facility.

FAA has a comprehensive training program for controllers which begins with approximately sixteen weeks of pass/fail academic training at the FAA Academy. If an individual successfully completes the Academy training, the individual is placed in a facility where that person receives both classroom and on-the-job training. The assignments are progressively responsible, and the individual receives direct "over the shoulder" supervision by a fully proficient controller until checked out and certified at performing a given function. Once the ability to perform a given function has been satisfactorily demonstrated and the individual so certified, that person is permitted to perform the function under more general supervision.

For example, prior to even entering the radar training phase, the controller must correctly perform live control duties as part of an operational team for approximately one or two years. The assignment to radar training is an acknowledgement by the supervisor that the demonstrated control proficiency of the controller is satisfactory, and that normal progression to full journeyman status can be achieved.

When radar training is finally authorized, the Air Traffic Training Handbook provides very specific instructions which must be complied with by the instructor controller. The instructor must be properly qualified for the type of control to be exercised; he is not permitted to perform collateral duties which might infringe upon exercising close and alert supervision during this training period. The instructor must also ensure that the complexity of the traffic situations encountered during the testing phase is compatible with the specialist's ability. Our entire work force has been trained in this manner, and the FAA can attest to the safest air traffic control system in the world.

The "journeyman" level for a controller is the highest grade level which a non-supervisory controller can attain in a facility. Any controller below the journeyman level is a "developmental" controller. The fact that a controller is not a journeyman does not in any way mean that he is an inexperienced employee. For example, a controller may be a journeyman controller at a low level facility and may have controlled traffic for many years. But if that controller is reassigned to a higher level facility, he then becomes a "developmental" controller, notwithstanding his many years of experience, until he is "checked out" on all positions and equipment at the new facility and promoted to the journeyman level for that facility. Even if a controller has been checked out on all positions and equipment, and has demonstrated full capabilities in all phases of air traffic control, he is still "developmental" until promoted to the journeyman level.

In short, a controller's training is over a period of years before he is eligible for journeyman status. The average training time before an en route controller is checked out and certified on all positions and equipment is 4.34 years; for terminal controllers it is 2.9 years. With

regard to finishing their training, as with pilots and many other professions, journeyman controllers continually undergo recurrent training within their facilities.

5. Statement: "At many U.S. airports, those in Los Angeles, Boston, New York and Washington, to name a few, once the plane gets up enough speed to get off the ground, the pilot will have to make the plane quiet for the people who live near the airport. He does it be reducing power after take-off. It may be dangerous, but local laws require pilots to fly this way, and the FAA allows it." (November 2; Ms. Ellerbee). "You pull the power back until the airplane almost falls out of the sky, and climbs on a hot day with a full load, like about maybe 600 feet a minute, where normally its 1500 to 2000 feet a minute. But you got to pull the power back so you don't bother the neighbors around the airport." (Captain Waters). "The agency, FAA, apparently has more concern, in some instances for--for the local concern on noise abatement than they do about the safety of the airplane." (Mr. Leyden).

The FAA's primary role is aviation safety. The FAA's concern with noise abatement is substantial but always necessarily secondary to safety. As FAA Administrator Bond stated, in a portion of his interview with NBC which the network omitted from its presentation, "[o]ur first priority is always safety, and if there is a compromise between noise and safety, we must always choose safety, which is not only safety of passengers in flight, of course, but on the ground as well."

Noise abatement procedures are safe. The noise abatement departure procedures in use today call for a reduction in power only after reaching a safe airspeed configuration, and a safe altitude, approximately 1000 feet above the ground. This power reduction provides a climb gradient with more than adequate safety margins built into it. The transition from a rate of climb of 1500 to 2000 feet per minute to the 600 feet per minute rate of climb is fully within the pilot's control. A 600 feet per minute rate of climb is not unsafe.

The air carriers and the Air Transport Association have worked with the FAA's expert personnel to develop takeoff noise abatement procedures. The individual air carriers place these procedures in their company manuals and at this point they are reviewed by the FAA to ensure that they are safe. The procedures are sufficiently flexible as to allow the pilots to adjust for abnormal operating conditions. When individual airports propose noise abatement procedures, these are likewise reviewed by the FAA from the standpoint of safety. The FAA is unaware of any noise abatement procedure in effect today which is unsafe.

One interesting note on this subject is that in a May 1977 Executive Board Committee Recommendation of the Air Line Pilots Association, which recommended adoption of a standardized takeoff procedure similar to but

different from the ATA version, the view was expressed that ". . . the guidelines provided by the ATA to airlines have not been sufficiently clear to allow the airlines to achieve maximum economic benefit and maximum noise relief to those exposed to aircraft noise . . . ." (Emphasis supplied). Hence, ALPA's decision to propose a substitute standard noise abatement procedure was not generated by a perceived safety deficiency but out of expressed concern for maximizing economic benefit and noise relief.

6. Statement: "Now our pilot can worry about hitting another airplane. Every year there are more than 2,000 reported near misses, and every year 10,000 planes are added to the system. What is the pilot supposed to do?" (November 2; Ms. Ellerbee) "The FAA says, a concept that came out some 40 years ago, that you will see and be seen. And if you look out the window you will not run into another plane, you just will not do this." (Mr. Leyden)

Response: The FAA is unaware of the basis for NBC's statistics of over 2000 reported near misses a year. The information available to FAA contradicts this statement. But, no matter how low the number might be, the FAA is attempting to cut it further.

Anyone (pilots, safety inspectors, passengers, etc.) may initiate a request for an evaluation by the FAA of a suspected near mid-air collision incident. During the four year period from January 1, 1973, to June 30, 1977, on the average 301 near mid-air collisions were reported and investigated by the FAA's Flight Standard Service annually. Each report is investigated by a Flight Standards inspector who gathers and reviews all material information concerning the alleged incident from witnesses or other sources. To give some idea of the relationship of these statistics to the total system, focus on the fact that in 1976, FAA air traffic control towers handled 97,200,000 IFR and VFR operations and FAA air traffic control centers handled 25,300,000 IFR aircraft.

Of the 301 average annual reports, the FAA's investigation disclosed that 68 posed no hazard. In a "no hazard" finding, a determination is made that the direction and altitude of the aircraft would have made a mid-air collision improbable regardless of whether evasive action was taken. Insufficient information was available to determine whether a hazard may have been present in 12 of the remaining cases.

Of the remaining 221 incidents, 171 were classified as potential near mid-air collisions which means that an incident would probably have resulted in a collision if no action had been taken by either pilot. As to the other 50, these were classified as critical which means that collision avoidance was due to chance rather than an act on the part of the pilot.

During the 12 month period from July 1, 1976, to June 30, 1977, 1,624 near mid-air collision reports were received by NASA under the FAA/NASA Aviation Safety Reporting System (ASRS). The ASRS reports

furnished to FAA are anonymous and cannot be investigated by FAA. As a result, they may or may not represent reliable data upon which to form conclusions as to the number of near misses that have actually occurred. Moreover, the FAA does have the sense that some of these reports are duplicative of those filed with the FAA.

The concept of "see and avoid" referenced by NBC news is only one of the system's requirements used to avoid mid-air collisions. It requires that vigilance shall be maintained by each person operating an aircraft so as to see and avoid other aircraft. To enhance the ability to see and avoid, aircraft may not operate at a rate of speed greater than 250 knots below 10,000 feet. This restriction on speed, coupled with the requirement that appropriate weather conditions exist before Visual Flight Rule (VFR) aircraft are permitted to operate, helps assure that the "see and avoid" concept works. Additionally, above 3,000 feet, special rules govern VFR aircraft operations. The purpose of these rules is to provide altitude separation between uncontrolled aircraft as well as between Instrument Flight Rules (IFR) aircraft and uncontrolled aircraft. More specifically, depending upon the direction of flight, different flight levels are prescribed.

To operate above 12,500 feet, with rare exceptions, all aircraft must have an altitude encoding transponder which apprises the en route controller of aircraft position and altitude thereby enabling him to provide traffic advisories and vector aircraft as necessary. Above 18,000 feet, all aircraft are under positive control.

The FAA has also established Terminal Control Areas at 21 of the large hub airports. All aircraft operating within a TCA are provided separation by air traffic control. At more than 100 other airports, the FAA has established Terminal Radar Service Areas (TRSA) in which a VFR aircraft pilot is provided separation from other participating VFR aircraft and all IFR aircraft unless he specifically does not desire the service. VFR aircraft are urged to avail themselves of this service and over 90% of arriving VFR aircraft and over 80% of departing VFR aircraft do participate.

The FAA also has aggressive educational and briefing programs designed to impress upon pilots their responsibilities in the national airspace system and to encourage general aviation aircraft to avoid airspace occupied by high performance aircraft. TCAs, TRSAs and, where appropriate in the interest of safety, high performance aircraft arrival routes are published in the Airman Information Manual or on VFR navigational charts.

Thus, while it is true that the see and avoid concept is a basic element of the air traffic control system, the connotation in the telecast is misleading to those unfamiliar with other elements of the system.

Near mid-air collisions are a source of concern to the FAA and we have undertaken aggressive programs to minimize their posssibility

both through R&D projects to develop better instrumentation and hardware, and through air traffic control procedures. The FAA is at this time initiating the development of a Beacon-Based Collision Avoidance System (BCAS) which will provide reliable data on potential threats to the pilot within and without surveillance coverage, will be compatible with the existing and planned air traffic control system, and will use as a base equipment the existing ATCRBS transponders. A BCAS equipped aircraft will be able to identify and react to any aircraft equipped with an ATCRBS transponder and an altitude encoder. The BCAS development program has received the unanimous endorsement of the user community and is the result of a long arduous search for a viable solution to collision avoidance.

7. Statement: "Airliners are required to carry equipment that shows the ground rader controller where the plane is. But most small planes do not have this equipment, and the FAA does not require them to, even though they may be sharing airspace with a jet carrying 300 people." (November 2; Ms. Ellerbee).

Response: This statement is a good illustration of the kind of distortion that derives from inattention to detail. To comprehend the subject matter, it is necessary to understand the way in which the air traffic control system is structured. All aircraft, large and small, operating above 12,500 feet are required to possess an altitude encoding transponder. The majority of large passenger-carrying aircraft operate below 12,500 feet normally only during the takeoff and landing phases of their operation. Air carrier aircraft descent below a 12,500 foot level would generally take place within 30 miles of the primary airport; this is the normal control area of a terminal. This 30 mile distance is within the optimum performance capabilities of terminal radar systems which display both primary and secondary radar returns. Thus, within this 30 mile distance aircraft without transponders are identifiable by primary radar which permits the controller to provide traffic advisories when he notes a possible conflict.

Transponder equipped aircraft are automatically tracked by our present Automated Radar Terminal Systems (ARTS III) and non-transponder equipped aircraft are displayed. ARTS III A, an enhancement to ARTS III, planned for installation beginning next year, will provide automatic tracking for non-transponder equipped aircraft. Moreover, as noted in the response portion of item number 6, a whole system of air traffic procedures is designed to provide separation of aircraft whether controlled or not.

This is but a brief sketch of the rational basis upon which the FAA has based its decision not to require transponder equipment on all aircraft. More detail could be provided but perhaps it suffices to note that even the current level usage of transponders was vigorously opposed by the users of the system and that the lack of need for transponders in areas where they are not currently required was supported by many of the users. In this regard, we would quote from a summary of the

users' comments contained in the preamble to the rule requiring transponders.

> "Numerous comments of a general nature were received stating that the cost of the proposed rule changes could not be justified by the benefits therefrom. These general comments stated that requiring improved transponders and associated automatic pressure altitude reporting equipment in the specified airspace goes beyond the point of diminishing returns, is not justified by near midair collision statistics, conflicts unnecessarily with the FAA's statutory duty to encourage the development of aviation, and will be unnecessarily damaging to the less sophisticated segments of general aviation that now use positive control airspace, all without a corresponding significant benefit to air traffic control system safety or efficiency. While certain of these comments conceded that automatic altitude reporting had some value in heavily used airspace around airports, nearly all of these comments stated that the traffic volume in en route airspace, particularly in the western part of the United States, is far less than that needed to justify the required use of such equipment by all users of that airspace."
> (Amendment 91-16, 38 F.R. 14672, June 4, 1973)

8. Statement: "Instrument landing systems are navigation aids that guide a pilot to the ground in bad weather. But according to a survey by the Airline Pilots Association, 75% of all the runways used by scheduled airlines in this country have no instrument landing system and no approach lights. More than half the U.S. airports used by scheduled airlines have no radar and 40% don't even have a tower. But 100% have passengers and bad weather." (November 2; Ms. Ellerbee). "If the FAA was really interested in passengers getting from A to B safely, they wouldn't allow passengers to land at airports without an instrument landing system, or a control tower, or approach lights. FAA is there to keep things safe, they don't." (Mr. Leyden).

Response: Ms. Ellerbee stated that "Langhorne Bond, the head of the FAA says it is safe for airlines to use airports without that equipment." Part of Mr. Bond's response was then televised: "Because the record demonstrates that there is no safety risk involved in that. There is no such thing as perfectly assured safety. But the risk involved is very slight. We wouldn't permit it if we thought it were unsafe." However, NBC deemed it advisable to cut off Mr. Bond's reply at the very place where he indicated a further explanation was needed: "You must go on and say the rest of the story and that is, if the weather is bad or if the visual conditions are not perfect or even good for the airports of that condition, we won't permit it. Our rules shut down operations when conditions are marginal much more early than they do with airports that are equipped with instrument landing systems or approach lights or flashing lights or runway center line lighting, or whatever. We have a carefully graduated set of minimums that allow more and more weather and marginal flying conditions depending on the instrumentation of the airport. And obviously in a case that you cite where it's a small

airport and there are very few movements per day, we'd only allow operation if weather is relatively good, when visual assurance is a good substitute for the use of instruments."

Equally important, although the FAA does not necessarily dispute the statistics quoted, they can be misleading. There are 488 airports served by the scheduled airlines 321 of which are served by a total of 461 full ILS systems. These 321 airports enplane 98 percent of all scheduled airline passengers. A total of 554 ILS systems are presently installed and commissioned in the U.S. An additional 16 ILS systems will be commissioned by the end of this fiscal year. Another 84 full ILS's are in various stages of the procurement/production cycle.

It is not essential that each runway be ILS-equipped. The visibility minima for non-ILS runways are higher than those established for ILS runways. If the visibility is such that a non-ILS runway cannot be used, then flights are assigned to the ILS runway (available at the great majority of airports) or the flight is directed to an alternate airport. It also must be noted that all runways cannot accept an ILS for various reasons such as obstructions or operating restrictions.

With respect to control towers, those air carrier airports not served by tower are low activity airports. Nevertheless, the airlines are required by FAA to provide each flight operating to or from a non-tower airport with traffic information by means of radio communications. In addition, although an airport may not have an air traffic control tower, it may have a flight service station which may provide various services to aircraft, including traffic advisories.

As to the discussion concerning approach lights, more than 90% of the ILS runways are equipped with approach light systems and many non-ILS systems are also so equipped. If the non-ILS runways do not have approach light systems, then higher visibility minima are established. The practice of authorizing lower minima based on improved ground navigation aids, lighting aids, and airborne equipment is sound and establishes an equivalent level of safety between ILS and non-ILS instrument approach procedures.

Regarding the statement concerning the lack of radar at many U.S. airports, it should be noted that more than 96% of all scheduled airlines depart and arrive under terminal radar coverage. The remaining 3.8% operate into low activity airports averaging about 3 air carrier flights per day. Separation of aircraft is provided by use of manual air traffic control procedures which utilize distance and altitude. Manual procedures are the basic form of air traffic control and are safe.

Any evaluation of the statistics cited by Ms. Ellerbee must take into account the fact that the FAA is continually upgrading and adding to the equipment already in use throughout the national airspace system. Moreover, consideration must be given not only to the amount of time necessary to upgrade or install equipment but also to the cost involved. For example, to install and maintain an ILS system on all those runways which do not currently have them, would cost nearly $3 billion over the 15 year life of an ILS system.

It should be stressed that aircraft procedures are tailored to the specific circumstance. Requirements differ if landing aids are not present at an airport; those differing requirements are prescribed by the FAA to assure that safety is maintained. By way of analogy, consider the case of a paved versus an unpaved road. Almost without question, there would be a substantial difference in safety for an automobile to be driven 55 miles per hour down both roads. However, the speed limit on the unpaved road would, in all likelihood, be significantly less, thereby providing the requisite degree of safety through the use of a procedure tailored to a particular need. In simple terms, this is what the FAA does when requiring different procedures for airports without certain aids than for other airports.

9. Statement: "But is the FAA responsible for this good [safety] record? Many aviation experts say flying is as safe as it is because most airlines have safety rules tougher than the FAA's. Because most controllers and pilots do their jobs well, even in adverse situations. Because most planes are sound mechanically, and kept that way. And these critics think the U.S. has built a safe record not because of, but inspite of the Federal Aviation Administration." (November 2,)

Response: Most of the airline safety regulations that have been adopted by the FAA emanated within the FAA and were not as a result of recommendations from external sectors. A great many of these were adopted over the strenuous objections of various segments of the aviation industry. We believe the FAA, while it cannot take nor does it seek complete credit for the existing airline safety record, nevertheless has played a major role in compiling this enviable airline safety record. For example, when jet transports were first introduced into airline service in late 1958, the FAA imposed additional operational restrictions, required extensive flight crew training programs, and demanded more precise piloting performance than was previously required. From the first day of jet transport operations, FAA inspectors have certificated every single airline pilot in the operation of jet airplanes. The above requirements were made over strenuous opposition by both the airline industry and the pilots.

The FAA's safety rules provide for stringent standards that airlines must follow which recognize, pursuant to section 601(b) of the Federal Aviation Act of 1958, "the duty resting upon air carriers to perform their services with the highest possible degree of safety. . . ." FAA prescribes high safety standards which the airlines must meet; standards which when complied with result in a safe operation. If, as stated, most of the airlines "have safety rules tougher than the FAA's," one would logically have to question the need for the FAA's aggressive enforcement program.

The FAA agrees that the controllers and pilots "do their jobs well." To suggest that controllers perform well but not the FAA is incredulous since controllers are an essential part of the FAA. FAA controllers perform well because the intense training program which they undergo progressively screens out those individuals, as described in our response to statement 4, who are not fully capable of advancing to the journeyman controller level. Also, our training system not only provides comprehensive skills and knowledge to those who are progressing toward the journeyman level but requires journeyman controllers to undertake continuous refresher training.

With respect to U.S. airline pilots, each must meet, on a continuing basis, stringent medical qualifications prescribed by the FAA. They must hold a pilot certificate from the FAA which requires extensive aeronautical knowledge and flight experience. Their proficiency in performing various flight maneuvers is assured by FAA imposed requirements. Their airline's training program for pilots is approved and monitored by the FAA. And, the FAA through enroute inspections monitors cockpit discipline and adherence to FAA regulations.

The FAA strongly disagrees with the implication that the FAA has nothing to do with the sound mechanical condition of the U.S. fleet. All aircraft used by the scheduled airlines are certificated by the FAA which means that they meet high design and performance standards prescribed by the FAA. If unanticipated problems with the aircraft later become apparent, the FAA requires their correction by Airworthiness Directives. The FAA also requires the airlines to have comprehensive maintenance programs to assure that aircraft are kept in good condition, and we continually monitor those programs. The airline mechanics who work on aircraft are licensed by the FAA and the airline's training programs to assure their continuing proficiency are approved and monitored by the FAA.

There is a further telling point. U.S. certification of an aircraft by the FAA is considered of a high enough order by other nations that many seek to have their aircraft certificated by the FAA knowing it would aid substantially in selling those aircraft. Also, FAA technical assistance is requested by countries throughout the world, and foreign nationals are frequently trained by the FAA at their government's request. The respect given by foreign civil aviation organizations to FAA standards and the expertise of its employees demonstrates that the FAA is perceived, at least by them, as a highly proficient organization.

10. Statement: "March 1977. Tenerife, the Canary Islands. A Pan Am jumbo jet is struck by a Dutch jet. That happens on the runway. Sixty-seven people crawl out of the wreckage of the Pan Am plane. Could more people on that plane have survived? Ten years before Tenerife, the FAA was already working on ways to keep fuel from exploding in a crash, ways to inert the fuel. Three years before Tenerife, the FAA thought a system was ready and proposed a rule to require all the airlines to carry it. But the industry objected, saying it weighed too much and it cost to much. The FAA agreed, and put the system back in research and development

But could a fuel inerting system have been put in airplanes right then, three years before Tenerife? Robert Auburn was the head of that project at the FAA." (November 3; Ms. Elerbee).

"The system, at that time, had reached the stage of development and--and--we had enough information about its capabilities. Yes, I think it could have been adopted at that point, yes." (Mr. Auburn).

"Auburn thinks the system might have saved lives at Tenerife. So do experts at the Airline Pilots Association, the National Transportation Safety Board, and the Flight Safety Foundation. But it's a loose point. The FAA says the system is still not ready. It is still in research and development." (November 3; Ms. Ellerbee).

Response: The critical fact overlooked by NBC is that fuel inerting systems do not provide protection where the fuel tanks are ruptured. At Tenerife, because of the impact of the accident, the fuel tanks were ruptured. Therefore, there is no correlation between the availability of a fuel inerting system and the tragic loss of life at Tenerife. The reference that the FAA was working on "ways to keep the fuel from exploding in a crash, ways to inert the fuel" ten years before the Tenerife accident is misleading. With respect to preventing post crash fires, the FAA has been conducting research in three areas: jelled fuels, anti-misting and fuel inerting.

Ten years prior to the Tenerife accident, there had been a developmental effort in the area of jelled fuels. Those jelled fuels, it was anticipated, would provide protection when a fuel tank was ruptured by limiting fuel spillage and aeration. However, it was determined that aircraft and engine fuel systems were simply not compatible with jelled fuel and the project was concluded.

The knowledge gained during this development activity led to the development of a fuel additive in 1975 that would preclude a fine mist from forming when the fuel is released from ruptured fuel tanks. Preventing the forming of a fine mist may keep the large fireball from forming in a crash situation, thereby reducing the flash effect. Unfortunately, the same chemical action which prevents fuel misting from occurring when tanks are ruptured also greatly inhibits the vaporization needed for combustion in the aircraft engines. The anti-misting technique has been tested using relatively small quantities of modified fuels in simulated crashes and shows promise of success. Large-scale testing is now being planned and the development of techniques to remove the additive prior to delivery to the engines is being undertaken. We expect completion of this engine compatibility study by the third quarter of 1979. A mechanical "shearing" device for the aircraft fuel system must be developed before widespread use of anti-misting additives is feasible. It is anticipated that when anti-misting is developed to its full potential, a major reduction in the fuel fire hazard will result. The cost of this program from prototype to completion from FY-78 to FY-80 will be in the vicinity of $3.5 million.

With respect to fuel inerting systems, the FAA, in April 1974, considered requiring a liquid nitrogen system on board aircraft to supply gaseous nitrogen in intact fuel tank and vent systems to replace the air and reduce the explosive risks due to sparks or lightning strikes. However the weight, cost, and logistics problems of the liquid system precluded its operational use. Subsequently, a project to develop an on-board nitrogen inerting system, using engine bleed air, was initiated, and testing of the initial engineering prototype has just been completed. The results are expected to be reported in January 1978.

Our comments here are simply intended to demonstrate the misleading nature of the allegation, and are not in any way intended to downplay or minimize the valid concern about the hazards of post-crash fires. We recognize the severity of the problem and are diligently working on a feasible solution. Unfortunately, pinpointing a problem is only part of the process in defining a solution. Consider, for example, medical research. No one will dispute the dedication of the thousands of medical experts who are striving to find solutions to health problems that have plagued mankind for years; but the answers to these problems are often elusive. The same problem often exists in trying to find technological solutions to complex aviation problems; the questions may be easy to ask but the answers are not easy to find. We understand the concern of those who wish that today's ideas could have been yesterday's realities. The FAA shares that wish. We only hope these same individuals will some day appreciate the limitations and obstacles to be overcome in turning such ideas into reality.

11. Statement: [Clip of a test crash] "That test crash was done by the FAA at its lab near Atlantic City, New Jersey. Critics of the FAA say this is the place where government scientists and engineers keep re-inventing the wheel. One aviation expert calls the research and development program a hobby shop." (November 3; Ms. Ellerbee).

Response: In this instance, it appears that NBC has allowed itself to substitute labels for substantive comment. NAFEC provides an operating environment to test the products FAA will require in the system. Concomitantly, NAFEC, allows the FAA to conduct the necessary tests and evaluations of all new systems, improvements, or modifications to existing systems; developing quick fixes to overcome specialized problems that arise in the field; and provide support for the automation capabilities in the Air Route Traffic Control Center and Terminal areas. Equally important is its role in carrying out the testing of aircraft safety and emission developments upon which regulatory actions can be based.

Examples of work performed at NAFEC include: assimilation, test and evaluation of all hardware and software for the implementation of the entire enroute automation system; the test and evaluation of all improvements to the enroute and terminal automation systems such as radar tracking, Minimum Safe Altitude Warning System, conflict alert; improved ATCRBS antennas; area navigation simulations and tests; Instrument Landing System improvements, notably in antenna configuration; and new airport lighting and marking configurations.

The facilities and capabilities available at NAFEC make it the principal civil aviation experimental center in the world. Its products assist FAA immeasurably in providing the safest and most efficient air traffic control system in the world. The FAA invites any interested party to visit NAFEC. We are confident that such a visit will readily dispel any thought that NAFEC is a "hobby shop."

12. Statement: "Management at the FAA says it doesn't know of a better airborne solution to the problem of mid-air collisions than B-CAS. [Beacon Collision Avoidance System] But other sources at the FAA say this system is a lot of trouble in congested areas, such as near an airport, where the chances for a mid-air collision are the greatest." (November 3; Ms. Ellerbee)

Response: The system NBC saw demonstrated was an active-BCAS. There is no dispute that performance of active-BCAS degrades in high traffic densities. What NBC failed to perceive is that the background material provided to it also included materials on a passive-BCAS under development by FAA that will provide for high performance levels in high density areas. This development effort was ignored in the presentation. Also totally ignored was the conflict alert capability which is operational in all Air Route Traffic Control Centers and is undergoing operational testing in the Houston terminal area. Conflict alert provides the controller with a visual and audio alarm when two or more aircraft are moving into positions which could result in a conflict. This capability will be provided in all ARTS III terminals early in 1978.

The FAA readily admits the solution to the mid-air collision problem is a complex one. The FAA continues to seek a viable and cost-effective solution. The FAA believes its current effort, which is in effect a combination of the passive and active-BCAS, is that solution.

13. Statement: "The FAA is also studying cabin fires. There are rules about how flame resistant cabin materials have to be, but even materials that won't flame may give off poisonous smoke and gas. People have been killed by this and it continues to happen. Last April a Southern Airways jet crashed in Georgia. NBC news has learned that autopsies showed some of the 70 people who died, died from smoke and gas from cabin materials. And some of the twenty-four survivors have told investigators stories about cabin materials melting and dripping on their heads. But the FAA has no rules regarding heat, smoke, or toxic gas. The agency has been working on making these rules since the early 70's and admits that it will be at least three or four more years before there are any rules." (November 3; Ms. Ellerbee)

Response: The FAA has a very active program to improve the safety of cabin materials under post crash fire conditions. The work includes development of testing methods and actual testing to permit the identification of acceptable materials and to provide a mathematical model in order to allow a designer to assess the orientation and usage of a candidate material. The FAA's goal is to develop a combined hazard index that will correlate fire, smoke, and toxicity standards. The difficulty in reaching a solution results from the interrelationship of fire, smoke, and toxicity; for example, a process intended to decrease flammability could increase levels of smoke and toxicity.

Additionally, two related notices of proposed rulemaking and one advanced notice of proposed rulemaking dealing with flammability, smoke and toxic gas, respectively have been issued. The comments received indicate these characteristics cannot be treated separately. The FAA agrees and issued, in July 1977, a notice of hearings to be held on compartment interior materials in transport category airplanes, from November 14-16, 1977, in Washington, D. C. There was extensive participation by both U.S. and foreign aviation specialists.

In early October the FAA awarded a contract to develop, during a two-year study, a method to rank, according to its combustion hazards, each material used in airliners. The new method would compare the flammability, smoke and toxic gas characteristics of a burning material with physiological tolerances and establish a combined hazard index that could be used in aircraft cabin design.

The FAA also has full-scale fire testing of a wide-body jet fuselage underway at NAFEC. The test is being conducted in three phases and is part of our continuing program to improve passenger survival in aircraft accidents involving fire. The first phase is intended to measure heat, smoke, and gases within the cabin under varying degrees of fire and wind velocities. The second phase is devoted to evaluating interior emergency lighting systems, and the third will involve testing cabin materials for flammability, smoke and toxic gas emissions.

The melting and dripping of plastic materials are intrinsic to the properties of these materials when they are exposed to intense heat. NASA has been experimenting with advanced cabin structural type materials which char when exposed to intense heat or fire. When these materials are developed and approved for installation in aircraft, this particular problem should be resolved.

In view of the complex interrelationships involved, three to four years of additional research is a reasonable estimate of the time it will take to complete a practical, cost effective standard that provides a significant improvement in reducing flammability, smoke and toxicity of interior cabin materials.

14. Statement: "Many pilots, controllers, and airport managers say the best way to get the agency to move is to have a crash. They say the FAA substitutes bandaids for preventive action. And, they say, the bigger the crash, the bigger the bandaid." (November 3; Ms. Ellerbee).

Response: Such comments reflect a lack of comprehension of the FAA's ongoing safety program designed to prevent accidents. Certainly however, it is true that while the FAA is continually seeking ways to prevent accidents, in many cases, previously unknown circumstances only become apparent during an accident investigation which then provides clues for the problem's resolution.

Comments such as those chosen for airing by NBC ignore the great gains that have been made in accident prevention since they are not as spectacular or "news worthy" as showing burning aircraft or discussing mid-air collisions. To say that the best way to get FAA action is to have a crash ignores, for example, the significant improvements made in modern generation aircraft designs and operating capabilities which substantially enhance aviation safety by preventing accidents.

15. Statement: "The Ground Proximity Warning Device was available before the crash near Dulles [on December 1, 1974]. But it was not the result of FAA research and development. The device was developed by private industry in only four years at a cost of only $250 thousand dollars. But it took 93 deaths, and congressional pressure before the FAA made the device required equipment in all airliners." (November 3; Ms. Ellerbee).

Response: On November 2, 1977, a United States District Court issued its findings in a lawsuit brought by the widows of the deceased pilot and co-pilot of the aircraft involved in the crash at Dulles to which NBC refers. The court clearly recognized what NBC ignored. The United States District Court found the pilots involved to be negligent and stated: "The transcript further reveals that at 1108.21, a full minute prior to impact, the altitude alert horn sounded. This was an indication that the aircraft was 500 feet above terrain. It sounded again at 1108.57 and 1109.14. Apparently it was ignored by the entire crew. Nor did any member of the crew, as required by TWA training procedures, verbally notice the sounding." The equipment necessary to prevent this accident was already required and on-board the TWA aircraft that crashed at Dulles.

Long before the Dulles accident, the FAA on April 18, 1973, issued an advanced notice of proposed rulemaking that would have required a Ground Proximity Warning System (GPWS) to be installed on airline aircraft. After reviewing the comments received and after further monitoring of the development of the equipment, FAA issued another notice on September 12, 1974, which proposed more specific requirements for installation of GPWS. Although the Ground Proximity Warning Device referred to was not a product of FAA research and development efforts, it was one of several candidate systems which FAA was evaluating

at the time of the Dulles crash. Thus, it is clear that the GPWS was contemplated as being part of the FAA regulatory plan long before the TWA crash.

The device had not been required prior to the crash due to problems associated with its use. The most notable problem was that of false alarms. The device was susceptible to "sounding off" under conditions other than close proximity to the ground, which was disconcerting to pilots. As a result there was significant objection among pilots to its implementation.

On December 18, 1974, a final rule was adopted requiring the system to be installed by December 1, 1975. This date had to be extended to allow even further refinement of the system as the large number of false warnings threatened to destroy pilot confidence. Unless equipment has the confidence of the user, it will be of little value. If equipment is required before it can be carefully determined that it will be reliable, the resulting loss of confidence due to failure may not even be overcome by correction of the equipment's deficiencies. Equally important, to imply that the simple addition of equipment would prevent an accident ignores the need to use and rely on that equipment.

In this respect, it must also be noted that, while the rulemaking efforts for GPWS were underway, the FAA, in March 1973, urged all airlines to modify their radar altimeters to provide an automatic aural warning that would alert pilots when an aircraft was within 500 feet of the ground. The TWA airplane involved in the Dulles accident had this equipment installed and the aural warning sounded at 500 feet above the terrain at least twice before the impact and, as the Court found, in sufficient time for the pilot to have taken corrective actions.

16. Statement: "Rod Dennis is an inventor, an engineer and a pilot. In 1967, Dennis developed a theory about what caused two airline crashes in Cincinnati. Dennis linked the crashes to an instrument called the barometric altimeter. The control tower takes the barometric readings, and by radio gives it to the pilot to help him compute his altitude. But, if the tower is in a dry mass of air and the plane, a few miles away, is in wet air, it can cause the barometric altimeter in the cockpit to be inaccurate. Because of that, said Dennis, the pilot may think he is higher off the ground than he really is, and he may keep on thinking so until he crashes." (November 4; Ms. Ellerbee)

Response: Mr. Dennis' interview implied that a barometric setting given by a facility could be the barometric pressure of dry air when in fact the aircraft is traversing a moist air environment some distance from the facility. He concludes that the moist/dry air difference could cause sufficient altimeter error for the aircraft to descend into the terrain. Mr. Dennis is correct in the conclusion that moist (wet) air weighs less than dry air. However, he grossly exaggerated the effect of humidity on density altitude; i.e., at an altitude of 1000 feet, dry air pressure would indicate on an altimeter less than 20 feet lower

than the moist (wet) air pressure indication. The terminal area procedures have a sufficient safe altitude margin to compensate for a non-standard atmosphere. In addition, all airline turbine-powered airplanes are equipped with radar altimeters which measure precise heights above the ground.

17. Statement: "They told me--now this is going to be sort of like a wrench in the work, see-- don't tell anybody about it, let us find you, we don't want to disturb the status quo of the accidents of the past that we caused by this, because it would be a can of worms for us." (November 4; Mr. Dennis)

"We asked Dennis what he thought that meant." (Ms. Ellerbee)

"That enterprising attorneys would jump out, reopen the cases, and come back with suits against the government for giving wrong information to the pilot causing the accident." (Mr. Dennis).

"The FAA agrees with Dennis' theory that the barometric altimeter can cause problems, but denies telling him to be quiet because of potential lawsuits. And the FAA still has no solution to the problems with the barometric altimeter. Critics of the FAA say Rod Dennis' story is not an isolated example, but part of a pattern of an agency that makes mistakes, then tries to ignore them or cover up." (Ms. Ellerbee)

Response: The allegations of a cover up are absurd on their face. Mr. Dennis himself states in the telecast that "They sent--immediately sent wires to all the weather bureaus throughout the nation in which they told them to be care--be aware of the phenomena of moisture on approach with a dry tower, which would cause the altimeter problem to exist." It is totally inconsistent for Mr. Dennis to state in the first instance that the FAA immediately sent out telegrams while alleging that the FAA attempted to keep this matter quiet. Additionally, the FAA employee with whom Mr. Dennis met, states that not only did he not ask Mr. Dennis to "be quiet because of potential lawsuits," but that he referred Mr. Dennis to another agency, the Civil Aeronautics Board, whose responsibility it was, at that time, to analyze any pertinent data relative to aircraft accidents and to determine probable cause. An agency attempting to cover up a problem and keep it quiet would certainly not refer the matter to another agency which would be responsible for determining if that problem had caused an accident.

18. Statement: "[c]ritics point to the FAA actions in the international search for a new landing system, microwave equipment that would enable planes to make controlled instrument landings in all conditions. Only one system will be chosen and it is intended to be used worldwide. Millions of dollars have and will be spent, and the choices come down to the system designed by the FAA, shown here, or the system designed by the British. It is supposed to be a friendly, scientific search for the safest possible system. But the British say the FAA has cheated." (November 4; Ms. Ellerbee).

"But what are the ramifications of these errors? Lincoln Laboratories says its integrity is in question because of the FAA. In London, British aviation authorities are extremely upset. A source who was looking into the situation for the White House is concerned relations with a friendly country have been damaged. And a group of congressmen is challenging the FAA actions in this matter." (Ms. Ellerbee).

Response: While we will not dispute that FAA errors have occurred in the context of the MLS program, we nevertheless believe that the allegation that "the FAA has cheated" lacks foundation. As the Honorable Dale Milford, Chairman, House Subcommittee on Transportation, Aviation and Weather, stated at a Congressional Hearing on September 27, 1977: "I believe I was the first Congressman to begin examining, in detail, the Doppler - TRSB argument. And over the past two years I have looked at it longer and harder perhaps than any other member of Congress. During this period of time I have found no evidence of foul play by either the FAA technicians or scientists nor those from Great Britain."

The following letter from Chairman Milford to the Honorable Olin E. Teague, Chairman, Committee on Science and Technology, provides additional insight concerning the MLS problem.

COMMITTEE ON SCIENCE AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES
SUITE 2321 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, D.C. 20515

November 3, 1977

Hon. Olin E. Teague
2311 Rayburn House Office Bldg.
Washington, DC 20515

Dear Mr. Chairman:

As you know, the microwave landing system (MLS) controversy has been the subject of considerable interest to the Subcommittee over the past year.

During that period of time, the Subcommittee has been very reluctant to officially speak out on the issue for fear of upsetting the international decision-making process.

Unfortunately, some persons have sought to take advantage of this situation by attempting to drive a wedge between the Subcommittee Members. By making certain blatant and false statements about the U.S. MLS program and MIT's Lincoln Laboratory, these persons hoped to create confusion in the Subcommittee and delay in the international process. Heretofore, their success has been premised on the fact that little or no response to their allegations would be forthcoming because of the complexity of the issues and delicacy of international negotiations.

I believe that we can no longer countenance such activities. It is time for the Subcommittee to unite and to respond to these false allegations directed toward American programs and institutions. I would therefore call to your attention the enclosed letter which I have just received from the MIT Lincoln Laboratory.

This letter is a response to allegations being circulated by a U.K. commercial firm lobbyist -- allegations which have been intended to discredit the AWOP decision and the work of Lincoln Labs.

In short, Lincoln indicates that there has always been an open invitation for any interested party to visit the laboratory and use the programs, that in fact the U.K. availed themselves of this opportunity on at least two occasions, that twenty-two reports describing the simulation techniques and results have been distributed to the U.K., and that the entire TRSB computer tape and documentation was given to the CAA in September, 1977.

I think it is necessary to bear in mind that Lincoln was requested to perform the MLS simulations because of its highly regarded expertise and integrity and that AWOP considered the work of the laboratory to be reliable and extremely helpful.

The Massachusetts Institute of Technology and the Lincoln Laboratory have enjoyed a long history of world respect for their contribution to aviation electronics.

It is a travesty to allow their reputation to be wrongfully and viciously slandered.

The Subcommittee, as a responsible agent of Congress, should do everything in its power to ensure that this situation is rectified.

I strongly urge that you devote your attention to this matter and to the enclosed document.

Sincerely,

Dale

DALE MILFORD, Chairman
Subcommittee on Transportation,
Aviation and Weather

Enc.

The following statement, extracted from the "Aviation Daily" (November 8, 1977, page 45), sheds additional light on the NBC statements: "A new FAA attitude towards cooperation with the U.K. on selection of an international microwave landing system has drawn praise from the U.K. Civil Aviation Authority. 'It would not be good if the International Civil Aviation Organization does not select a standard system at the world meeting in April,' M.F. Whitney, CAA representative to the ICAO panel that studies MLS choices, told The DAILY. 'But Langhorne Bond's statements to a congressional subcommittee in late September on his willingness for FAA to perform comparative field tests of the two MLS systems and freely exchange information leads me to believe there is chance of an agreement between FAA and the CAA on the better system before the world meeting' he said."

In sum, the development of an MLS is a complex undertaking involving thousands of details. Human errors do occur; however, the FAA has never knowingly attempted to mislead anyone as to the viability of the TRSB MLS program. The FAA has taken the lead in attempting to achieve an international agreement on the version of the MLS to be employed worldwide thereby contributing to a higher level of aviation safety for all air travelers.

19. Statement: "This is the wreckage of an Eastern Airlines plane that crashed in New York in 1975. An FAA source says the Agency took money from other safety programs in order to develop microwave equipment. He says one of the projects dropped was the study of windshear, the sudden change in speed and direction of the wind. And, he says, that money was not put back until after 113 people died in this crash caused by windshear."

Response: This statement is incorrect. The FAA has continuously funded the development of a wind and windshear detection system since 1972--well before the June 1975 accident at JFK Airport. No funds were diverted from the windshear program to the MLS program.

An initial windshear system has been developed and is currently being used at Dulles International Airport to study low-level windshear conditions and their causes in an active airport environment.