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STATEMENT OF

HENRY ESCHWEGE, DIRECTOR

COMMUNITY AND ECONOMIC DEVELOPMENT DIVISION

BEFORE THE

HOUSE SUBCOMMITTEE ON OVERSIGHT AND REVIEW
OF THE

COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

ON

[AVIATION SAFETY HAZARDS]

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE

WE WELCOME THE OPPORTUNITY TO DISCUSS OUR FEBRUARY 1980,
REPORT ENTITLED "HOW TO IMPROVE THE FEDERAL AVIATION ADMINIS-
TRATION'S ABILITY TO DEAL WITH SAFETY HAZARDS" (CED-80-66)
AND SPECIFICALLY THE ISSUES OF CABIN SAFETY AND AIRCRAFT SEAT
STRENGTH WHICH ARE THE FOCUS OF THESE HEARINGS.

WE REVIEWED FAA'S MANAGEMENT EFFORTS TO IDENTIFY, SET
PRIORITIES FOR, AND DEVELOP TIMELY SOLUTIONS TO SAFETY HAZARDS.
SAFETY HAZARDS INCLUDE PROBLEM AREAS SUCH AS MIDAIR COLLISIONS,
CABIN FIRES, AND SEAT DISLOCATIONS DURING CRASH IMPACTS. WE



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DID NOT ASSESS THE TECHNICAL SUFFICIENCY OR REASONABLENESS OF FAA'S APPROACHES AND ITS SOLUTIONS.

REVIEW RESULTS

TO PLACE OUR FINDINGS IN PROPER PERSPECTIVE, I DO WANT TO STRESS THAT WHEN COMPARED WITH OTHER TRANSPORTATION MODES, AVIATION HAS AN ADMIRABLE SAFETY RECORD. YET, FAA CAN ENHANCE AVIATION SAFETY BY FURTHER IMPROVING ITS PERFORMANCE.

THE FAA HAS NOT ALWAYS BEEN EFFECTIVE OR TIMELY IN DEALING WITH SAFETY HAZARDS AND ITS ACTIONS ARE OFTEN PERCEIVED TO BE REACTIVE INSTEAD OF ANTICIPATORY.

LET ME BRIEFLY DESCRIBE THE SEQUENCE IN WHICH SAFETY HAZARDS ARE ADDRESSED. AS A FIRST STEP, THERE MUST BE A SYSTEM FOR IDENTIFYING SAFETY HAZARDS. A COMPREHENSIVE PLANNING PROCESS MUST THEN BE DEVELOPED TO ADDRESS THE SAFETY ISSUES. NEXT, INDIVIDUAL SAFETY PROGRAMS SHOULD BE PLANNED AND APPROVED. CONTROLS MUST BE SYSTEMATICALLY ESTABLISHED TO ENSURE THAT PROGRAMS ARE SUCCESSFULLY IMPLEMENTED AND, ONCE IN PLACE, ARE SUFFICIENTLY EVALUATED AS TO THEIR EFFECTIVENESS.

SAFETY HAZARD IDENTIFICATION

FAA HAS NOT BEEN EFFECTIVE OR TIMELY IN DEVELOPING SYSTEMS TO IDENTIFY SAFETY HAZARDS. IT HAS NOT

--RECOGNIZED THE IMPORTANCE OF HAZARD IDENTIFICATION SYSTEMS,

--EMPHASIZED INFORMATION GATHERING AND ANALYSIS, OR
--UNDERTAKEN LONG-TERM PLANNING FOR COMPREHENSIVE
IDENTIFICATION SYSTEMS.

ORGANIZATIONAL PROBLEMS HAVE HAMPERED FAA'S EFFECTIVENESS. FOR EXAMPLE, NO SINGLE INDIVIDUAL OR OFFICE HAS BEEN RESPONSIBLE FOR HAZARD IDENTIFICATION, AND ORGANIZATIONAL CONFLICTS HAVE EXISTED BETWEEN FAA AND THE NATIONAL TRANSPORTATION SAFETY BOARD. TO BETTER UNDERSTAND HOW TO IDENTIFY HAZARDS CAUSED BY HUMAN BEHAVIOR, FAA CONDUCTS HUMAN FACTORS RESEARCH. HOWEVER, PEOPLE INSIDE AND OUTSIDE FAA QUESTION WHETHER THE AGENCY PAYS ENOUGH ATTENTION TO THIS KIND OF RESEARCH. REGARDLESS OF WHETHER SUCH PERCEPTIONS ARE ACCURATE, IT IS CLEAR THAT AN AGENCYWIDE APPROACH TO HAZARD IDENTIFICATION IS WARRANTED.

COMPREHENSIVE PLANNING PROCESS

FAA DOES NOT HAVE A COMPREHENSIVE PLANNING PROCESS FOR ADDRESSING AVIATION SAFETY ISSUES. SUCH A PROCESS IS NEEDED TO GIVE MANAGEMENT A FRAME OF REFERENCE FOR PLANNING, APPROVING, IMPLEMENTING, AND EVALUATING SPECIFIC SAFETY PROJECTS. TOP MANAGEMENT'S LACK OF ATTENTION TO PLANNING HAS CONTRIBUTED TO UNTIMELY OR INEFFECTIVE APPROACHES FOR ADDRESSING SOME SAFETY HAZARDS.

INDIVIDUAL SAFETY PROGRAM PLANS

FAA DOES NOT HAVE AN ADEQUATE SYSTEM FOR PREPARING, REVIEWING, AND APPROVING INDIVIDUAL AGENCYWIDE SAFETY

PROJECT PLANS. OUR REVIEW DISCLOSED THAT WITHOUT SUCH PLANS,

--PRIORITIES WERE NOT ASSIGNED AGENCYWIDE AND WERE NOT CONSISTENTLY APPLIED.

--REQUIREMENTS WERE NOT SPECIFICALLY DEFINED.

--COSTS AND BENEFITS WERE NOT CONSIDERED AT THE EARLIEST STAGES.

--INTERIM CORRECTIVE ACTIONS WERE NOT AGGRESSIVELY EXPLORED.

--COORDINATION WAS NOT ASSURED.

--STAFFING IMPLICATIONS WERE NOT PROPERLY ADDRESSED.

--ACCOUNTABILITY WAS NOT ADEQUATELY ESTABLISHED.

FOR EXAMPLE, FAA BEGAN A HIGH PRIORITY PROJECT IN OCTOBER 1973 TO DEVELOP A CHILD RESTRAINT DEVICE FOR AIRCRAFT USE. THE PROJECT WAS INITIATED BECAUSE INFANTS HAD BEEN INJURED DURING TURBULENCE, HARD LANDINGS, AND STOPPAGE OF AIRCRAFT. PRIORITY ON THIS PROJECT WAS LATER DOWNGRADED, AND IN MAY 1978 THE PROJECT WAS CANCELED. NOT UNTIL AFTER A DECEMBER 1978 AIR CARRIER ACCIDENT IN PORTLAND, OREGON, IN WHICH TWO INFANTS DIED, DID FAA ESTABLISH ANOTHER HIGH PRIORITY PROJECT TO DEVELOP A CHILD RESTRAINT DEVICE.

ANOTHER EXAMPLE WAS THE LACK OF INTERNAL COORDINATION AND THE DISAGREEMENTS OVER POLICY, APPROACH, AND DIRECTION TO DEAL WITH MIDAIR COLLISIONS. ONLY AFTER THE SEPTEMBER 1978

SAN DIEGO MIDAIR COLLISION DID FAA DEVELOP A COORDINATED AGENCYWIDE PLAN TO ADDRESS THIS HAZARD. THE FAA ADMINISTRATOR ACKNOWLEDGED IN DECEMBER 1978 THAT THE ACCIDENT CAUSED FAA TO FOCUS SYSTEMWIDE ON THE GENERAL THREAT OF MIDAIR COLLISIONS.

MANAGEMENT CONTROLS DURING IMPLEMENTATION

FAA DOES NOT HAVE AN ADEQUATE SYSTEM OF CONTROLS TO GOVERN THE IMPLEMENTATION PHASE OF SAFETY PROJECTS. THESE CONTROLS WOULD ASSIST FAA IN CONDUCTING ITS SAFETY WORK IN A MORE TIMELY AND EFFECTIVE MANNER AND HELP ASSURE THAT COMMITMENTS ON INDIVIDUAL SAFETY EFFORTS ARE MET.

IMPORTANT INFORMATION ABOUT FAA'S SAFETY PROJECTS HAS NOT BEEN ADEQUATELY OR CONSISTENTLY DOCUMENTED. ITEMS WHICH WERE EITHER NOT MAINTAINED IN AGENCY PROJECT FILES OR WERE MAINTAINED IN VARYING DEGRESS OF QUALITY INCLUDE

- PROJECT PLANNING DOCUMENTS (ORIGINALS AND ANNUAL UPDATED REVISIONS);
- MODIFICATIONS TO OR DEVIATIONS FROM THE PLAN RELATIVE TO PRIORITY, REQUIREMENTS, COST-BENEFIT ANALYSES, INTERIM CORRECTIVE ACTIONS, ACCOUNTABILITY, ETC.;
- PROGRESS REPORTS AND PROGRAM REVIEW RESULTS;
- EVIDENCE OF INTERNAL COORDINATION;
- SUMMATION OF STAFF TIME CHARGED TO THE PROJECT; AND
- DESCRIPTION OF ANY FACTORS AFFECTING THE TIMELINESS AND EFFECTIVENESS OF THE WORK.

BY DOCUMENTING RESULTS OF DECISIONMAKING, MANAGEMENT CAN ASSURE ITSELF THAT EVENTS AND THE CIRCUMSTANCES SURROUNDING THEM ARE ACCURATELY RECORDED AND UNDERSTOOD BY ALL AFFECTED PARTIES. DOCUMENTATION FACILITATES COORDINATION AND COMMUNICATION BECAUSE IT IS IN WRITTEN FORM. WITHOUT IT, THE RECONSTRUCTION OF PAST EVENTS OR AGREEMENTS RELIES COMPLETELY ON THE MEMORY OF KEY PARTICIPANTS THAT MAY OR MAY NOT BE AVAILABLE. LACK OF DOCUMENTATION, ESPECIALLY IN AN ENVIRONMENT WITH A RELATIVELY HIGH RATE OF STAFF TURNOVER, MAKES IT VERY DIFFICULT FOR NEW STAFF TO BE FULLY PRODUCTIVE.

ONCE A COMMITMENT TO SOLVE OR REDUCE A SAFETY HAZARD HAS BEEN MADE AND A PLAN HAS BEEN PREPARED, THE MONITORING OF ACTUAL PERFORMANCE WILL INDICATE THE PROGRESS BEING MADE. WITHOUT SUFFICIENT MONITORING, MANAGEMENT LACKS KNOWLEDGE ON WHICH TO EVALUATE PERFORMANCE.

EVALUATIONS

PROGRAM EVALUATION IS AN INTEGRAL PART OF EFFECTIVE MANAGEMENT. IT PROVIDES THE FEEDBACK WHICH AN AGENCY NEEDS TO MEASURE PERFORMANCE AGAINST OBJECTIVES AND, WHEN NECESSARY, TO REDEFINE THOSE OBJECTIVES. AN EFFECTIVE SYSTEM FOR OBJECTIVELY EVALUATING THE EFFECTS OF ITS PROGRAMS WOULD BE ESPECIALLY VALUABLE FOR AN AGENCY LIKE FAA WHICH IS RESPONSIBLE FOR REGULATING A DYNAMIC FIELD SUCH AS AVIATION.

IN RECENT YEARS EVALUATION HAS RECEIVED LITTLE PRIORITY AND HAS DIMINISHED IN USE. THOUGH ASSIGNED MAJOR

EVALUATIVE FUNCTIONS, THE OFFICE OF AVIATION SAFETY AND THE PROGRAM REVIEW STAFF, OFFICE OF THE ASSOCIATE ADMINISTRATOR FOR ADMINISTRATION, HAVE EITHER NOT CARRIED THEM OUT OR DID NOT PROVIDE FOR APPROPRIATE INDEPENDENCE IN PERFORMING SUCH FUNCTIONS. FURTHER, FAA HAS NOT ALWAYS EVALUATED THE EFFECTIVENESS OF NONREGULATORY ACTIONS THAT ADDRESSED SAFETY PROBLEMS AND DID NOT REQUIRE THAT SUCH EVALUATIONS BE MADE.

RECOMMENDATIONS

WE MADE NUMEROUS RECOMMENDATIONS TO THE SECRETARY OF TRANSPORTATION WHICH, IF IMPLEMENTED, SHOULD IMPROVE FAA'S PROCEDURES, PROCESSES AND CONTROLS AND WOULD ENABLE FAA TO RESPOND MORE QUICKLY AND EFFECTIVELY TO AVIATION SAFETY PROBLEM AREAS. ONE OF OUR RECOMMENDATIONS CALLED ON FAA TO ESTABLISH A TOP MANAGEMENT GROUP, WHICH MIGHT BE CALLED THE ADMINISTRATOR'S SAFETY ADVISORY GROUP, TO IDENTIFY OVERALL SAFETY PRIORITIES AND TO REVIEW AND APPROVE SPECIFIC AND DETAILED SAFETY PROJECT PLANS.

AGENCY REACTION AND OUR ASSESSMENT

THOUGH CONCURRING WITH MANY OF OUR FINDINGS AND OBSERVATIONS, THE AGENCY IN COMMENTING ON OUR DRAFT REPORT DID NOT CLEARLY ADDRESS, OR DID NOT ADDRESS AT ALL, MOST OF OUR SPECIFIC CONCLUSIONS AND RECOMMENDATIONS. THE DEPARTMENT OF TRANSPORTATION BELIEVED THAT RECENT ACTIONS TAKEN AND TO BE TAKEN WITHIN FAA WOULD ACCOMPLISH THE SAME RESULTS AS OUR RECOMMENDATIONS. THESE ACTIONS INCLUDE CHANGES TO THE

ORGANIZATIONAL STRUCTURE UNDER AN ASSOCIATE ADMINISTRATOR FOR AVIATION STANDARDS, INCLUDING THE ESTABLISHMENT OF A SAFETY ORIENTED ORGANIZATIONAL COMPONENT, AND CHANGES TO THE REGULATORY PROCESS.

WHILE THESE ACTIONS HAVE THE POTENTIAL FOR IMPROVING FAA'S OPERATIONS, THEY DO NOT INCLUDE THE SPECIFIC IMPROVEMENTS WE RECOMMENDED IN FAA'S PROCEDURES, PROCESSES, AND CONTROLS. WE ARE MORE ENCOURAGED, HOWEVER, BY THE DEPARTMENT'S MAY 2, 1980, RESPONSE TO OUR FINAL REPORT EVEN THOUGH IT DID NOT ADDRESS OUR SPECIFIC RECOMMENDATIONS. THE DEPARTMENT STATED THAT IT WAS TAKING ADDITIONAL ACTION WITH RESPECT TO THE FIVE AREAS CITED IN OUR REPORT REGARDING FAA-WIDE PLANNING, PRIORITIES, AND DECISIONMAKING IN ALL MAJOR MISSION AREAS. IT ALSO STATED THAT THE FAA ADMINISTRATOR HAD DIRECTED THAT A COMPREHENSIVE SET OF IMPROVEMENTS TO THE OVERALL PROCESS BE DEVELOPED. IN THIS REGARD, THE DEPARTMENT STATED THAT CAREFUL CONSIDERATION WOULD BE GIVEN TO THE GAO OBSERVATIONS. WE WILL PERIODICALLY CONDUCT FOLLOWUP WORK TO DETERMINE AND ASSESS ACTIONS TAKEN BY FAA IN RESPONSE TO OUR REPORT RECOMMENDATIONS.

CONTINUED VIGILANCE OVER AVIATION SAFETY IS IMPERATIVE. THE NATIONAL TRANSPORTATION SAFETY BOARD RECENTLY REPORTED THAT AIR CARRIERS IN 1979 HAD HIGHER ACCIDENT TOTALS AND ACCIDENT RATES. THERE WERE 33 ACCIDENTS INVOLVING THESE OPERATORS LAST YEAR COMPARED TO 24 SUCH ACCIDENTS IN 1978, THE FIRST RISE IN FIVE YEARS. AIR CARRIER ACCIDENTS RATES BASED ON MILES AND HOURS FLOWN ALSO INCREASED. GENERAL

AVIATION, ON THE OTHER HAND, REGISTERED LOWER TOTALS AND RATES ACROSS THE BOARD.

AS SAFE AS AIR CARRIER OPERATIONS HAVE BEEN IN THE PAST, THE FAA CANNOT RELAX IN ITS COMMITMENT TO AVIATION SAFETY.

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IN RESPONSE TO YOUR SPECIFIC REQUEST LET ME NOW HIGHLIGHT THE ISSUES OF CABIN SAFETY AND AIRCRAFT SEAT STRENGTH.

CABIN SAFETY

PROBLEMS IN FAA'S MANAGEMENT OF CABIN FIRE SAFETY FURTHER INDICATE THE NEED FOR IMPROVEMENTS WHICH I OUTLINED PREVIOUSLY.

FAA'S APPROACH TO ADDRESSING THE ISSUE OF CABIN FIRE SAFETY, THAT IS THE PROBLEM OF LOSS OF LIFE ATTRIBUTABLE TO SMOKE, TOXICITY, AND FIRE IN AIRCRAFT CABINS IN OTHERWISE SURVIVABLE ACCIDENTS, HAS NOT BEEN GUIDED BY AN INTEGRATED AGENCYWIDE CABIN SAFETY PROGRAM. THIS HAS RESULTED IN SHIFTING PRIORITIES FOR DEALING WITH THE PROBLEM, DEFINITIVE REQUIREMENTS NOT BEING ESTABLISHED, COST-BENEFIT ANALYSES NOT BEING CONDUCTED, INTERIM CORRECTIVE ACTIONS NOT BEING AGGRESSIVELY EXPLORED, AND INTERNAL COORDINATION PROBLEMS BETWEEN FAA ORGANIZATIONAL COMPONENTS.

FAA DOCUMENTATION ON RULEMAKING ACTIVITIES AND OUR DISCUSSIONS WITH COGNIZANT FAA OFFICIALS SHOW THAT THE PRIORITY ACCORDED THE CABIN SAFETY ISSUE HAS BEEN INCONSISTENT. WHILE CABIN MATERIALS WAS THE NUMBER ONE PRIORITY AREA IN THE SYSTEMS RESEARCH AND DEVELOPMENT SERVICE, THE

AGENCYWIDE PRIORITY FOR THIS ISSUE SHIFTED OVER TIME. IN FACT, THE VARIOUS ELEMENTS WITHIN THIS HAZARD AREA (FLAMMABILITY, SMOKE AND TOXICITY) INDIVIDUALLY SHIFTED IN PRIORITY IMPORTANCE. A SHIFTING OF PRIORITY CAN OCCUR BECAUSE OF AN ACCIDENT, OUTSIDE PRESSURE FROM INTEREST GROUPS, INDUSTRY PETITIONS FOR WAIVER, ETC.

FAA HAS BEEN UNTIMELY AND INEFFECTIVE IN ESTABLISHING REQUIREMENTS FOR CABIN MATERIALS. FAA HAS LONG RECOGNIZED THAT COMBUSTION FROM CABIN MATERIALS CAN INCAPACITATE CABIN OCCUPANTS DURING AN EMERGENCY EVACUATION. WHILE THE FAA HAS ESTABLISHED AIRCRAFT CABIN MATERIAL FLAMMABILITY STANDARDS, AS OF MAY 1980 NO STANDARDS HAD BEEN DEVELOPED FOR TOXIC FUME OR SMOKE EMISSIONS FROM BURNING CABIN MATERIALS. FAA ISSUED AN ADVANCE NOTICE OF PROPOSED RULEMAKING COVERING TOXIC GASES IN 1974, AND A NOTICE OF PROPOSED RULEMAKING COVERING SMOKE EMISSIONS IN 1975. PUBLIC COMMENTS TO THESE NOTICES WERE CRITICAL OF FAA'S PIECEMEAL APPROACH TO THE PROBLEM, AND STRESSED THE NEED TO CONSIDER THE INTERRELATIONSHIPS OF FIRE, SMOKE, AND TOXIC FUMES. AN ANALYSIS OF THESE COMMENTS POINTED OUT THAT THE PROBLEMS OF FLAMMABILITY, SMOKE, AND TOXIC GAS WERE CLOSELY INTERRELATED. ALSO, THE TRADEOFFS INVOLVED IN INCREASING BURN RESISTANCE OF A MATERIAL VERSUS REDUCING SMOKE AND TOXIC GAS EMISSIONS SHOULD BE MORE THOROUGHLY UNDERSTOOD BEFORE NEW COMPREHENSIVE MATERIALS STANDARDS ARE DEVELOPED.

THE FAA ADMINISTRATOR, IN TESTIMONY BEFORE THIS SUBCOMMITTEE IN APRIL 1979, RECOGNIZED THAT FAA WAS SEEKING THE WRONG SOLUTION TO CABIN MATERIALS WHEN IT ATTEMPTED TO INDEPENDENTLY ASSESS THE CHARACTERISTICS OF MATERIALS WITHOUT USING AN INTEGRATED APPROACH TO THE PROBLEM.

FAA HAS GENERALLY WAITED UNTIL THE LATTER STAGES OF THE SOLUTION PROCESS TO ATTEMPT TO QUANTIFY COSTS AND BENEFITS. ON CABIN SAFETY, FAA PREPARED A STUDY OF COSTS AND BENEFITS IN 1974 ON THE CABIN MATERIAL SMOKE STANDARDS. HOWEVER, A FLIGHT STANDARDS SERVICE STAFF ENGINEER WITH RESPONSIBILITY FOR THIS ISSUE STATED HE KNEW OF NO COST-BENEFIT ANALYSES REGARDING FLAMMABILITY OR TOXICITY OF CABIN MATERIALS, AND COULD NOT EXPLAIN WHY SUCH ANALYSES HAD NOT BEEN PERFORMED.

VARIOUS INTERIM CABIN SAFETY CORRECTIVE ACTIONS INCLUDING SMOKE HOODS (A BAG-SHAPED HOOD, WORN OVER THE HEAD, TO PROTECT PASSENGERS FROM SMOKE AND FUMES DURING EMERGENCY EVACUATIONS) AND STANDARDS ON TOXIC GAS AND SMOKE EMISSIONS OF CABIN MATERIALS HAVE BEEN CONSIDERED OVER THE YEARS BUT NO SUBSTANTIVE RULEMAKING ACTIONS HAVE OCCURRED. FAA HAS SEEMED TO STRIVE FOR ULTIMATE SOLUTIONS, AND NOT EFFECT INTERIM SOLUTIONS THAT WOULD PARTIALLY ALLEVIATE THE SAFETY CONDITION.

THE FAA ADMINISTRATOR HAS RECOGNIZED IN TESTIMONY BEFORE THIS SUBCOMMITTEE IN APRIL 1979 THAT THE PROGRAMS TO IMPROVE CABIN SAFETY WERE SPLINTERED. HE SAID THAT WHILE ALL PROGRAMS PURSUED THE SAME GOAL OF IMPROVING SAFETY, THERE WAS LACKING

A COHESIVENESS OF EFFORT TO COMPREHENSIVELY DEAL WITH THE PROBLEM. HE FURTHER STATED THAT THE AGENCY HAD IN PLACE, AT THAT TIME, A CENTRAL FOCAL POINT AND A TOTAL CABIN SAFETY PROGRAM. WHAT WAS PROVIDED IN SUPPORT OF THIS POSITION RESEMBLED A CONCEPTUAL APPROACH TO THE PROBLEM RATHER THAN A PLANNED PROGRAM. NO SUCH PROGRAM INCLUDING A FORMAL PLAN WAS IN PLACE WHEN OUR REVIEW WAS COMPLETED. FAA HAS RECOGNIZED THAT A PROGRAM PLAN IS NEEDED AND HAS INITIATED WORK TO PREPARE ONE. THE FAA OFFICIAL RESPONSIBLE FOR DEVELOPMENT OF THE OVERALL CABIN SAFETY PROGRAM ADVISED US THAT THE PROGRAM WAS STILL BEING DEVELOPED AS OF MID-MAY 1980, ONE YEAR AFTER THE ADMINISTRATOR HAD INDICATED THAT SUCH A PROGRAM WAS IN EFFECT.

AIRCRAFT SEAT STRENGTH

LET ME DISCUSS BRIEFLY FAA'S EFFORTS TO DEVELOP MORE STRINGENT TRANSPORT AIRCRAFT SEAT STRENGTH STANDARDS. THE RELATIONSHIP BETWEEN SEAT STRENGTH AND INJURIES AND DEATHS IN OTHERWISE SURVIVABLE ACCIDENTS IS AN ISSUE THAT HAS BEEN DISCUSSED AND STUDIED BY FAA AND OTHERS FOR YEARS. THE NATIONAL TRANSPORTATION SAFETY BOARD, AS RECENTLY AS JANUARY 1980, NOTED IN A LETTER TO THE FAA ADMINISTRATOR THAT ACCIDENT REPORTS DETAIL THE INJURIOUS CONSEQUENCES OF FAILING SEAT SYSTEMS. THE BOARD RECOMMENDED THAT FAA GIVE ITS HIGHEST PRIORITY TO IMPROVING STANDARDS FOR SEAT SYSTEMS.

THE MAJOR PROBLEM ASSOCIATED WITH FAA'S APPROACH TO THE SEAT STRENGTH PROBLEM RELATES TO THE LACK OF COST-BENEFIT ANALYSES. MORE SPECIFICALLY, FAA, ALTHOUGH INVESTING YEARS IN SEAT STRENGTH RESEARCH, HAS NEVER CLEARLY ESTABLISHED WHETHER OR NOT STRONGER SEATS ARE NECESSARY.

AS EARLY AS THE MID 1960'S, INDIVIDUALS, INTEREST GROUPS, AND THE NATIONAL TRANSPORTATION SAFETY BOARD HAVE STRESSED THE NEED FOR MORE STRINGENT SEAT STRENGTH STANDARDS. EXISTING SEAT STANDARDS DATE BACK TO THE 1950'S.

TO BETTER INSURE AN OPEN RULEMAKING PROCESS, FAA HAS PROPOSED RULES ON THE BASIS OF PETITIONS FOR RULEMAKING FROM GROUPS AND INDIVIDUALS EXTERNAL TO FAA. THIS OCCURRED ON AT LEAST TWO OCCASIONS RELATIVE TO SEAT STRENGTH STANDARDS.

A JULY 1966 NOTICE OF PROPOSED RULEMAKING INCLUDED A PETITIONER'S SUGGESTION TO IMPROVE SEAT STRENGTH STANDARDS, BUT FAA STATED IN THIS NOTICE THAT THERE WAS NOT SUFFICIENT EVIDENCE TO ESTABLISH THAT EXISTING REQUIREMENTS WERE INADEQUATE.

AN AUGUST 1969 NOTICE OF PROPOSED RULEMAKING AGAIN INCLUDED A PETITIONER'S PROPOSAL FOR MORE STRINGENT SEAT STRENGTH STANDARDS. FAA LATER WITHDREW THE PROPOSAL, CITING NEGATIVE PUBLIC COMMENTS AS THE REASON FOR THE WITHDRAWAL. FAA PROMISED FURTHER STUDY AND CONSIDERATION IN SUBSEQUENT RULEMAKING. OUR REVIEW OF THE PUBLIC DOCKET SHOWED THAT PUBLIC COMMENTS WERE RELATED MORE TO FAA'S FAILURE TO

SHOW A NEED FOR IMPROVED STANDARDS; MANY OF THE COMMENTS IN FACT SUPPORTED MORE STRINGENT STANDARDS.

FAA DOCUMENTS INDICATE THAT INTERNAL FAA RESEARCH COMPLETED IN THE LATE 1960'S SHOWED THAT SEAT FAILURES HAD OCCURRED IN SURVIVABLE TRANSPORT ACCIDENTS. REACTING TO THESE RESEARCH RESULTS, FAA INITIATED ADDITIONAL RESEARCH IN 1970 TO DEVELOP STRONGER, MORE ENERGY-ABSORBING AIRCRAFT SEATS. A PROPOSED STANDARD WAS DEVELOPED BY THE RESEARCHERS IN OCTOBER 1978; HOWEVER, FAA HAS NOT TAKEN RULEMAKING ACTION ON THE NEW STANDARD. FAA OFFICIALS TOLD US THAT THERE WAS NO EVIDENCE THAT THE STANDARDS BEING USED WERE INADEQUATE. WE NOTED THAT NO ANALYSIS HAD BEEN MADE OF BOTH THE COSTS AND BENEFITS OF INCREASING SEAT STRENGTH STANDARDS.

EACH TIME PROPOSALS TO INCREASE SEAT STRENGTH STANDARDS HAVE COME TO A DECISION POINT, FAA HAS CLAIMED THERE WAS NO EVIDENCE TO JUSTIFY THE NEED. FAA HAS NOT COLLECTED ENOUGH CRASHWORTHINESS DATA TO DETERMINE THE NUMBER OF INJURIES OR FATALITIES THAT HAVE BEEN CAUSED BY SEAT FAILURES. ALSO, FAA AND THE NATIONAL TRANSPORTATION SAFETY BOARD HAVE OFTEN DISAGREED OVER WHETHER IN SPECIFIC ACCIDENTS LIVES COULD HAVE BEEN SAVED BY STRONGER SEATS. SOME COST INFORMATION ON INCREASING SEAT STRENGTH HAS BEEN SOLICITED FROM INDUSTRY SOURCES, BUT THE FAA PROJECT ENGINEER BELIEVED THE DATA SUPPLIED WAS TECHNICALLY UNFOUNDED AND THAT THE INDUSTRY COST ESTIMATES WERE INFLATED. WE BELIEVE THAT, WITHOUT AT

LEAST AN ESTIMATE OF THE COSTS AND BENEFITS, FAA IS IN A WEAK POSITION TO MAKE SOUND DECISIONS ON ESTABLISHING REQUIREMENTS, INITIATING RESEARCH, CONTINUING RESEARCH OR USING THE RESULTS OF SUCH RESEARCH.

IN MAY 1980 FAA WAS CONTINUING TO CONDUCT OR SPONSOR RESEARCH IN THE SEAT STRENGTH AREA. AN FAA PLANNING OFFICIAL TOLD US THAT THE NEED TO GATHER BETTER DATA ON PAST SEAT FAILURES AND USE SUCH DATA IN SUBSEQUENT COST-BENEFIT ANALYSES HAS BEEN RECOGNIZED AND WILL BE ADDRESSED IN FAA'S NEW PLAN FOR CABIN SAFETY.

MISTER CHAIRMAN, THIS CONCLUDES MY STATEMENT. WE WILL BE GLAD TO RESPOND TO YOUR QUESTIONS.