REMARKS FOR ADMIRAL JAMES B. BUSEY
ADMINISTRATOR, FAA
SOCIETY OF ENGINEERS AND SCIENTISTS
NAVAL AIR TEST CENTER
PATUXENT RIVER, MARYLAND
JANUARY 9, 1990

THANK YOU VERY MUCH. IT'S GREAT TO BE WITH YOU.

I'VE SPENT MOST OF MY CAREER IN AVIATION, AND THAT MEANS I'VE BEEN ON THE OTHER END OF THE PRODUCT PIPELINE THAT STARTS WITH ENGINEERS WORKING ON NEW AND BETTER PRODUCTS. AND, OF COURSE, IN MY PRESENT JOB I'M WORKING WITH ENGINEERS WHO ARE PLAYING A MAJOR ROLE IN OUR MULTI-BILLION DOLLAR PROGRAM TO MODERNIZE THE NATION'S AIR TRAFFIC CONTROL SYSTEM.

SO, AS YOU MIGHT EXPECT, I HAVE A FEW IDEAS ABOUT THE ROLE OF ENGINEERS IN AVIATION, AND THAT'S WHAT I WANT TO TALK ABOUT TODAY.

I'M SURE ALL OF YOU REALIZE THAT, IN THE PAST COUPLE OF DECADES, THE WORK OF THE ENGINEER HAS UNDERGONE A PROFOUND TRANSFORMATION. THIS IS ESPECIALLY TRUE IN AVIATION.

FOR ONE THING, ADVANCES IN COMPUTERS AND SOFTWARE HAVE GIVEN ENGINEERS TOOLS FOR ANALYSIS, SIMULATION, AND RAPID PROTOTYPING THAT WERE ONLY DREAMED OF 20 YEARS AGO. TO PUT IT QUITE SIMPLY, ENGINEERS CAN <u>DO</u> MORE TODAY THAN THEY COULD A SHORT TIME AGO.

SECONDLY, TODAY'S ENGINEERS FACE ENTIRELY DIFFERENT PROBLEMS. TWENTY YEARS AGO THEY WERE CONSTRAINED BY THE LIMITS OF TECHNOLOGY, ESPECIALLY IN ELECTRONICS, WHICH STILL NEEDED CONSIDERABLE DEVELOPMENT. IN ORDER TO MAKE SIGNIFICANT ADVANCES IN AVIATION, THEY HAD TO FOCUS ON IMPROVING THE TECHNOLOGY.

BUT THINGS ARE DIFFERENT TODAY. AVIATION ENGINEERS NO LONGER NEED TO PUSH TECHNOLOGY TO ITS LIMITS. THE CHALLENGE YOU FACE TODAY IS HOW TO USE THE TECHNOLOGY THAT'S ALREADY AVAILABLE. LET ME GIVE YOU THREE EXAMPLES:

* HOW CAN WE REPLACE MECHANICAL AND HYDRAULIC CONTROLS WITH ELECTRICAL, FLY-BY-WIRE SYSTEMS? THE TECHNOLOGY IS AVAILABLE, BUT WE'VE GOT TO MAKE SURE WE CAN PREVENT ELECTROMAGNETIC INTERFERENCE.

* HOW CAN WE ENSURE THE RELIABILITY OF COMPUTERS THAT ARE USED IN FLIGHT-CRITICAL SYSTEMS THAT HAVE A SIGNIFICANT ROLE IN FLYING THE AIRCRAFT? COMPUTERS IN THESE APPLICATIONS MUST WORK WITH TOTAL RELIABILITY.

* HOW CAN WE USE NIGHT VISION SENSORS, USING MILLIMETER WAVE IMAGING, IN CIVIL AVIATION? WE NEED TO KNOW HOW THIS TECHNOLOGY WILL AFFECT PILOT PERFORMANCE.

I COULD CITE MANY EXAMPLES OF HOW ENGINEERS TODAY ARE LESS CONCERNED WITH DEVELOPING NEW TECHNOLOGY AND MORE CONCERNED WITH HOW BEST TO USE TECHNOLOGY THAT'S ALREADY HERE.

AS SOME OF YOU MAY KNOW FROM EXPERIENCE, ENGINEERS ARE BEING ASKED QUESTIONS THAT ARE UNLIKE ANY THEY'VE EVER HAD TO DEAL WITH IN THE PAST.

HOW CAN WE AUTOMATE FUNCTIONS SO THAT A SYSTEM AND THE OPERATOR CAN WORK TOGETHER EFFECTIVELY? HOW MUCH AUTOMATION DO WE NEED?

ARE WE IN DANGER OF OVER-AUTOMATING? ARE WE LEAVING OUR PILOTS WITH TOO LITTLE TO DO, WHICH COULD LEAD TO BOREDOM AND PILOT ERROR?

WE NEED ANSWERS TO QUESTIONS LIKE THESE -- AND IN MY VIEW, THE ONLY WAY TO GET THEM WILL BE TO GET THE PRODUCT USER MORE INVOLVED WITH THE ENGINEERS IN THE DESIGN AND DEVELOPMENT PROCESS.

TO DESIGN AND DEVELOP PRODUCTS THAT WILL REALLY DO THE JOB RIGHT, ENGINEERS MUST UNDERSTAND THE USERS' PROBLEMS AND NEEDS. SURE, THEY'VE GOT TO BE TECHNICALLY COMPETENT. BUT THEY'VE ALSO GOT TO BE ABLE TO COMMUNICATE WITH THE PEOPLE WHO WILL USE THEIR PRODUCTS.

THIS NEED FOR ENGINEERS TO COMMUNICATE IS FAR MORE URGENT TODAY, BECAUSE WE'RE USING HIGHLY SOPHISTICATED AUTOMATED SYSTEMS IN PARTNERSHIP WITH THE OPERATOR -- THE PILOT, THE CONTROLLER, OR THE MAINTENANCE TECHNICIAN.

IN MY VIEW, THE REALLY TOP-FLIGHT ENGINEERS OF THE FUTURE WILL BE THE ONES WHO KNOW HOW TO BRIDGE THE GULF BETWEEN THE WORLD OF OPERATIONS, WHERE THE PRODUCT IS USED, AND THE WORLD OF ENGINEERING, WHICH NORMALLY IS FOCUSED ALMOST EXCLUSIVELY ON ENGINEERING PROBLEMS.

THAT'S A KEY ROLE FOR THE ENGINEER WHEREVER HE OR SHE MAY WORK -- IN INDUSTRY, IN THE FAA, IN GOVERNMENT, WHEREVER.

ALL TOO OFTEN, IN THE PAST, THE ENGINEER OVERLOOKED OR DIDN'T UNDERSTAND THE NEEDS OF THE GUY WHO WOULD BE USING HIS PRODUCT OR HIS DESIGN. THE RESULT WAS THAT, ALL TOO OFTEN, THE DESIGN FAILED TO DO THE REAL JOB THAT HAD TO BE DONE.

THAT WAS ONE OF OUR CONSTANT PROBLEMS DURING THE EARLY STAGES OF THE VIETNAM WAR. WE HAD NEW TECHNOLOGY AND WEAPONS OUT THERE THAT IN MANY CASES DIDN'T WORK BECAUSE THERE HADN'T BEEN A GOOD INTERFACE BETWEEN THE OPERATORS AND THE ENGINEERS.

THE USE AND APPLICATION OF A PARTICULAR NEW-TECHNOLOGY WEAPON AND THE WAY IT WAS DESIGNED -- THE CHECK PROCEDURES, THE RELEASE PROCEDURES THAT ONE HAD TO GO THROUGH -- JUST DIDN'T ENSURE THAT THE USERS' NEEDS WERE CONSIDERED ENOUGH IN THE DESIGN AND DEVELOPMENT PROCESS.

BELIEVE ME, THAT TAUGHT A LOT OF US, REAL FAST, THAT AS OPERATORS WE COULDN'T RELY TOTALLY ON THE ENGINEERING COMMUNITY TO SOLVE A REQUIREMENT FOR US.

WE LEARNED THAT WE HAD TO DETAIL OUR NEEDS -- WE HAD TO DEFINE THE RESTRAINTS, THE RESTRICTIONS, AND THE PROTECTIVE MECHANISMS THAT WE WANTED BUILT-IN. OTHERWISE, WE HAD NO WAY OF GETTING WHAT WE NEEDED.

AND, OF COURSE, I WAS ABLE TO CARRY THAT LESSON WITH ME LATER ON INTO NAVAIR AND CHANGE SOME OF THE RELATIONSHIPS BETWEEN OPERATIONS AND THE ENGINEERING PROFESSIONS.

YOU'RE LUCKY. HERE AT PATUXENT YOU'VE GOT THE RIGHT WORKING ENVIRONMENT TO DO THAT, BECAUSE YOU'RE DIRECTLY INTERFACING WITH THE OPERATIONAL SIDE OF THE NAVY. YOU'RE IN AN ENVIRONMENT WHERE THAT RELATIONSHIP IS PART AND PARCEL OF THE WHOLE OPERATION.

YOU'RE IN AN ITERATIVE PROCESS. YOUR CONTROL ALGORITHMS, FOR EXAMPLE, ARE TAKEN OUT AND TESTED BY THE TEST PILOTS. AND IF THEY DON'T WORK RIGHT, THOSE PILOTS COME RIGHT BACK TO TELL YOU WHAT WAS WRONG AND WHAT THE RIGHT RESPONSE SHOULD BE. AND THEN YOU FOLKS GO BACK AND TWEEK THE ALGORITHMS THROUGH THE ITERATIVE PROCESS.

BUT, LIKE I'VE SAID, YOU'VE GOT TO KNOW HOW TO COMMUNICATE TO BE ABLE TO ENGINEER IT RIGHT.

TO REALLY UNDERSTAND THE VALUE OF SUCH A PROCESS, YOU NEED TO BE AWARE OF THE RESULTS OF THE ENGINEERING THAT WAS DONE BEFORE, WITHOUT THAT KIND OF A GIVE AND TAKE.

AND I HOPE YOU'LL REMEMBER THE VALUE OF THAT KIND OF RELATIONSHIP, WHEREVER YOU GO IN YOUR CAREERS.

LET ME GIVE YOU AN EXAMPLE FROM THE FAA OF THE KIND OF OPERATOR-ENGINEER COOPERATION THAT IS SO ESSENTIAL TO ENGINEERING SUCCESS IN THIS AGE OF HIGH TECHNOLOGY.

WE'RE NOW GEARING UP FOR THE INSTALLATION OF WHAT WILL EVENTUALLY BE THE LARGEST REAL-TIME, COMPUTER-CONTROLLED SYSTEM EVER DEVELOPED. THIS WILL BE OUR ADVANCED AUTOMATION SYSTEM, WHICH WILL INTEGRATE AND AUTOMATE ALL OF OUR PRIMARY TRAFFIC CONTROL FACILITIES, NATIONWIDE.

WITH THE SPEED, CAPACITY, AND AUTOMATION PROVIDED BY THIS SYSTEM, WE'RE GOING TO REVOLUTIONIZE THE JOB OF OUR AIR TRAFFIC CONTROLLERS. WE'RE GOING TO TURN THEM INTO AIRSPACE MANAGERS -- WITH THE COMPUTER DOING WHAT IT DOES BEST AND LEAVING THE CONTROLLER FREE TO MONITOR THE OPERATION AND USE HIS OR HER EXPERIENCE AND JUDGEMENT TO THE BEST ADVANTAGE.

EVENTUALLY, ALONG ABOUT THE TURN OF THE CENTURY, WE MAY USE THIS SYSTEM FOR THE NEARLY COMPLETE COMPUTERIZATION OF AIR TRAFFIC CONTROL. COMPUTERS WILL DETECT AND RESOLVE FLIGHT CONTROL PROBLEMS, MAKE DECISIONS, AND OFFER CLEARANCES DIRECTLY TO AIRCRAFT WITHOUT HUMAN INTERVENTION. BUT, OF COURSE, ALWAYS UNDER HUMAN DIRECTION.

SO, AS YOU CAN IMAGINE, WE'RE NOW IN THE MIDDLE OF AN INCREDIBLY COMPLEX DEVELOPMENT PROCESS, INVOLVING PEOPLE, COMPUTERS, SOFTWARE, AND SYSTEMS IN WAYS NEVER BEFORE IMAGINED.

AS I SAID, WE'RE GOING TO REVOLUTIONIZE AIR TRAFFIC CONTROL IN THIS COUNTRY. BUT THAT KIND OF REVOLUTION CAN'T BE DONE BY ENGINEERS WORKING IN ISOLATION.

IT'S ABSOLUTELY ESSENTIAL THAT OUR ENGINEERS AND THE USERS COMMUNICATE THEIR NEEDS TO EACH OTHER -- DURING THE DEVELOPMENT PROCESS AND NOT AFTER THE HARDWARE AND THE SYSTEMS ARE SET IN CONCRETE.

THE AIR TRAFFIC CONTROL SYSTEM IS FAR TOO COMPLEX TO CHANGE WITHOUT CONSIDERING THE HUMAN BEINGS WHO MUST RUN THE SYSTEM. IT MUST BE DESIGNED WITH THE USER IN MIND -- IN THIS CASE THE CONTROLLERS AND THE PILOTS AND TECHNICIANS IN THE SYSTEM.

SAFETY DATA COLLECTED OVER MANY YEARS BY NASA AND THE FAA SHOWS THAT MOST AVIATION ACCIDENTS ARE DUE TO SOME FORM OF BREAKDOWN OF THE MAN/MACHINE SYSTEM.

WHERE ACCIDENTS ARE ATTRIBUTED TO HUMAN ERROR, IN MANY CASES THE BASIC PROBLEM WAS THE WAY THE HUMAN BEING -- THE PILOT OR THE CONTROLLER -- INTERACTED WITH THE AUTOMATED SYSTEM.

SO WE WANT TO MAKE SURE THAT THE PEOPLE WHO WILL OPERATE OUR NEW ADVANCED AUTOMATION SYSTEM CAN INTERACT WITH IT SAFELY AND EFFECTIVELY -- FROM DAY ONE.

AND THAT'S WHY WE'VE HAD A TEAM OF 15 TO 20 AIR TRAFFIC CONTROLLERS ACTIVELY INVOLVED THROUGHOUT THE DESIGN AND DEVELOPMENT PROCESS. THEY ARE GIVING US A REALISTIC EVALUATION OF THE FEATURES OF THE NEW CONTROLLER WORKSTATIONS AND OF THE INTERACTION OF THE HUMAN BEING WITH THE COMPUTER SYSTEMS.

WE ALSO SET UP A SMALL MULTI-DISCIPLINARY TEAM OF ENGINEERS AND OTHER SPECIALISTS WHO ARE ACTING AS A LIAISON BETWEEN THE CONTROLLERS AND THE HUNDREDS OF TECHNICAL PEOPLE WORKING ON THE PROJECT.

WE ESTIMATE THAT THE CONTROLLER GROUP SO FAR HAS SPENT SOME 10,000 HOURS ON THIS PROCESS. AND THEY'RE GOING TO PLAY A MAJOR ROLE WHEN WE START HANDS-ON TESTING TO FINE-TUNE THE HUMAN/COMPUTER INTERFACE.

WE'RE ALSO USING A DEDICATED CONTROLLER TEAM TO WORK WITH OUR ENGINEERS ON THE MORE ADVANCED AUTOMATION SYSTEMS THAT WILL COME ALONG IN FUTURE YEARS.

AS I'VE SAID, THE WORK OF THE ENGINEER TODAY IS FAR DIFFERENT FROM WHAT IT WAS JUST A COUPLE OF DECADES AGO.

WE LIVE IN AN INCREASINGLY COMPETITIVE WORLD THAT WILL MAKE EVEN GREATER DEMANDS ON YOUR PROFESSION. WHAT HAPPENS TO OUR STANDARD OF LIVING HERE IN AMERICA WILL BE DETERMINED BY HOW WELL WE AMERICANS CAN COMPETE IN WORLD MARKETS. THE DAY OF THE ISOLATED NATIONAL MARKET IS GONE FOREVER.

AND WE'RE UP AGAINST SOME PRETTY TOUGH COMPETITORS. THEY WANT WHAT WE'VE GOT. THEY WANT OUR MARKETS. THEY WANT OUR STANDARD OF LIVING. AND THEY'RE WILLING TO WORK HARD TO GET THEM.

TO MEET THIS COMPETITIVE CHALLENGE, WE'VE GOT TO PUT EVEN MORE EMPHASIS ON INNOVATION, ON RESEARCH AND DEVELOPMENT, AND ON ENGINEERING EXPERTISE.

THAT MEANS THAT THE ENGINEER IS GOING TO BE EVEN MORE IMPORTANT. JUST LOOK AT WHAT'S GOING ON IN TRANSPORTATION, FOR EXAMPLE.

AMERICA HAS THE BEST TRANSPORTATION SYSTEM IN THE WORLD. IT'S THE MOST EFFICIENT. AND IT MOVES MORE RAW MATERIALS, PRODUCTS, AND PEOPLE THAN ANY OTHER SYSTEM ON EARTH.

BUT WE'VE GOT TO EXPAND ITS CAPACITY AND MAKE IT EVEN MORE EFFICIENT. AND THAT'S WHY WE'RE LOOKING AT SUCH THINGS AS MAGNETIC-LEVITATION RAIL TECHNOLOGY, THE HYPERSONIC AIR TRANSPORT, TILT-ROTORS, AND A LOT MORE.

IF WE'RE GOING TO MAINTAIN AMERICA'S TRANSPORTATION LEADERSHIP, THEN OUR TRANSPORTATION TECHNOLOGY AND OUR ENGINEERS HAVE TO BE THE BEST IN THE WORLD, TOO.

SO THERE'S A WORLD OUT THERE FOR YOU TO CONQUER. IT'S A WORLD THAT'S EAGER FOR TECHNOLOGY. IT'S A WORLD THAT'S EAGER FOR WHAT THE ENGINEER CAN DO.

I WOULD URGE YOU TO LEARN FROM THE PAST, BUT I WOULD ALSO WARN YOU NOT TO BE CONSTRAINED BY WHAT MIGHT BE CALLED THE "ACCEPTED KNOWLEDGE."

LET ME GIVE YOU AN EXAMPLE. WHEN MINIATURIZATION TECHNOLOGY BECAME AVAILABLE, SOME PEOPLE THOUGHT IT WOULD BE IMPOSSIBLE TO MAKE HAND-HELD CALCULATORS BECAUSE YOU JUST COULDN'T PUT 15 OR 20 FINGER-SIZED KEYS ON A MINIATURE CALCULATOR. THEY SAID "JUST LOOK AT A TYPEWRITER KEYBOARD."

THE BREAKTHROUGH CAME WHEN SOMEONE HAD THE BRIGHT IDEA THAT KEYS COULD BE A LOT SMALLER THAN FINGER-SIZED, THAT YOU JUST HAD TO LEAVE ENOUGH SPACE <u>BETWEEN</u> THE KEYS.

THAT'S HOW THE "ACCEPTED KNOWLEDGE" WAS OVERTHROWN. AND THAT'S A GOOD EXAMPLE OF THE KIND OF "STRETCHED" THINKING WE'RE GOING TO NEED TO KEEP AMERICAN TECHNOLOGY THE BEST IN THE WORLD.

BASED ON WHAT I'VE SEEN IN MY CAREER, I HAVE NO DOUBT THAT WE AMERICANS WILL, INDEED, CONTINUE TO LEAD THE WORLD IN THE ART AND SCIENCE OF AVIATION.

THANK YOU.

REMARKS PREPARED FOR DELIVERY BY
FAA ADMINISTRATOR JAMES B. BUSEY
FOR PRESENTATION OF
ADMINISTRATOR'S AWARD FOR EXCELLENCE
IN EQUAL EMPLOYMENT OPPORTUNITY
WASHINGTON, D.C.
JANUARY 10, 1990

IT'S A PLEASURE TO TAKE PART IN THIS CEREMONY TO HONOR THESE 20 FAA EMPLOYEES WHO HAVE DONE SUCH AN OUTSTANDING JOB OF PROMOTING EQUAL EMPLOYMENT OPPORTUNITY AT FAA.

LATER, AS WE PRESENT THE PLAQUES TO THESE RECIPIENTS, I WOULD ASK YOU TO LISTEN CLOSELY TO THE CITATIONS OUTLINING THEIR ACCOMPLISHMENTS. THEY SPEAK OF A CHARACTER AND COMMITMENT THAT SHOULD SERVE AS AN INSPIRATION AND EXAMPLE TO US ALL.

ONE OF MY FIRST ACTS AS THE NEW FAA ADMINISTRATOR WAS TO SIGN A CIVIL RIGHTS POLICY STATEMENT. I SUSPECT THIS IS ONE OF THE FIRST THINGS ALL NEW ADMINISTRATORS DO.

I CAN'T SPEAK FOR MY PREDECESSORS, BUT I CAN TELL YOU THIS WAS NOT A PERFUNCTORY TASK ON MY PART. IT REPRESENTS A STRONG, PERSONAL COMMITMENT TO SEE TO IT THAT ALL PERSONS HAVE THE OPPORTUNITY TO COMPETE ON A FAIR AND EQUAL BASIS FOR EMPLOYMENT AND ADVANCEMENT AT FAA.

IN FACT, ONE OF THE OBJECTIVES I HAVE SET FOR FAA IN FY 1990 IS TO INCREASE THE REPRESENTATION OF MINORITIES AND WOMEN AT ALL LEVELS OF THE AGENCY, WITH THE GOAL OF ATTAINING REPRESENTATION COMPARABLE TO THE CIVILIAN LABOR FORCE BY THE YEAR 2000.

ACTUALLY, I AM CONVINCED WE CAN DO IT A LOT FASTER THAN THAT, BUT THE BOTTOM LINE IS TO GET BEYOND THE RHETORIC AND DEVELOP STRONG, EFFECTIVE PROGRAMS THAT WILL HELP US ACHIEVE THIS COMMON GOAL AS QUICKLY AS POSSIBLE.

LET'S FACE IT -- WE'VE GOT OUR WORK CUT OUT FOR US. CURRENTLY, THE MINORITY POPULATION AT FAA IS RUNNING AT ABOUT 14 PERCENT COMPARED TO AN 18.4 PERCENT REPRESENTATION IN THE CIVILIAN LABOR FORCE NATIONWIDE. FOR WOMEN, THE PICTURE IS EVEN WORSE. ONLY 21 PERCENT OF THE FAA WORK FORCE ARE WOMEN, VERSUS 43 PERCENT IN THE CIVILIAN LABOR FORCE.

THIS IS CLEARLY NOT ACCEPTABLE -- PARTICULARLY IN LIGHT OF THE SLOW, INCREMENTAL PROGRESS THAT HAS BEEN MADE AT FAA OVER THE LAST FEW YEARS IN BOTH CATEGORIES. MINORITY REPRESENTATION HAS INCREASED ONLY ONE PERCENT IN THE LAST FIVE YEARS. AND, IN SOME MAJOR FAA EMPLOYMENT CATEGORIES, IT HAS ACTUALLY DECREASED. DURING THAT SAME TIME, THE PERCENTAGE OF WOMEN HAS

SO, AS MUCH AS WE APPLAUD THE EFFORTS OF THESE OUTSTANDING INDIVIDUALS WE ARE HONORING TODAY, WE RECOGNIZE AT THE SAME TIME THAT INSTITUTIONALLY, AS AN AGENCY, WE NEED TO DO A LOT BETTER.

TO SUPPORT OUR EFFORTS, I HAVE DIRECTED MY TOP MANAGEMENT TEAM TO DEVELOP A PARTICIPATIVE APPROACH THAT WILL GET FAA MANAGEMENT AT ALL LEVELS INVOLVED IN THIS AFFIRMATIVE ACTION PLAN.

IN MY JUDGMENT, STRONG, COMMITTED LEADERSHIP UP AND DOWN THE LINE IS ESSENTIAL TO THE PLAN'S SUCCESS. SO, WE WILL BE WORKING CLOSELY WITH INDIVIDUALS AT THE REGIONS, CENTERS, FACILITIES AND HEADQUARTERS TO TARGET SPECIFIC OCCUPATIONS WHERE WE ARE DEFICIENT AND CHART SPECIFIC ACTION PLANS TO HELP TURN THINGS AROUND.

MANAGERS MUST BE MADE ACCOUNTABLE FOR THE SUCCESS OF THIS PROGRAM, AND THEIR ACHIEVEMENTS WILL BE REFLECTED IN THEIR PERFORMANCE STANDARDS. THEORETICALLY, THIS HAS BEEN THE CASE SINCE THE PASSAGE OF THE CIVIL SERVICE REFORM ACT MORE THAN A DECADE AGO. NOW, WE WANT TO MAKE SURE THAT THIS IS MORE THAN THEORY AND THAT ACTUAL PERFORMANCE IN EEO IS EVALUATED JUST AS STRINGENTLY AS THE TECHNICAL ELEMENTS

MAKE NO MISTAKE -- WE ARE NOT TALKING HERE MERELY ABOUT ELEVATING THE NUMBERS, INCREASING THE PERCENTAGES, WITHOUT REGARD FOR QUALIFICATIONS. IT WOULD BE HIGHLY CYNICAL AS WELL AS GROSSLY IRRESPONSIBLE TO OUR SAFETY MANDATE IF WE WERE ONLY CONCERNED WITH COSMETIC IMPROVEMENTS. MINORITIES AND WOMEN ARE PARTICULARY SENSITIVE TO THIS CHARGE, AND THEY WANT NO PART OF BEING PROMOTED OR PUSHED AHEAD JUST TO MAKE THE FAA LOOK BETTER ON AN EEO CHART.

EVERYONE IN THE AGENCY SHOULD UNDERSTAND THAT WE ARE COMMITTED TO QUALITY RECRUITMENT AND HIRING -- FROM WITHIN THE AGENCY AND FROM WITHOUT. BUT, I WANT TO STRESS THAT WE ARE ALSO TALKING ABOUT ESSENTIAL FAIRNESS -- ABOUT EQUAL EMPLOYMENT OPPORTUNITIES, NOT GUARANTEES, ABOUT THE CHANCE TO COMPETE ON A LEVEL PLAYING FIELD, NOT AN ASSURANCE OF SUCCESS. AND THESE OPPORTUNITIES ARE PRECISELY WHAT HAVE BEEN DENIED MINORITIES AND WOMEN IN THE PAST AND WE ARE STILL TRYING TO PLAY CATCH UP.

I REALIZE THERE ARE HUNDREDS OF FAA MANAGERS AND EMPLOYEES WHO POSSESS THIS FUNDAMENTAL SENSE OF FAIRNESS AND WHO FULLY SUPPORT THE GOALS AND OBJECTIVES OF THE EEO PROGRAM. WHAT WE WANT TO DO IS TO MAKE SURE WE GIVE THEM THE TOOLS TO TRANSLATE THAT SENSE OF FAIRNESS AND COMPASSION INTO EFFECTIVE ACTION SO THAT IN THE NEAR FUTURE FAA CAN BE FAIRLY REPRESENTED BY ALL AMERICANS. I THINK WE WILL BE A STRONGER, MORE EFFECTIVE ORGANIZATION AS A RESULT.

SO, I ASK FOR YOUR SUPPORT AND COMMITMENT IN THIS COMMON TASK. AGAIN, I WANT TO OFFER THIS YEAR'S RECIPIENTS THE CONGRATULATIONS AND ADMIRATION ON BEHALF OF ALL THE FAA. ON A PERSONAL NOTE, YOU HAVE GIVEN ME ONE MORE REASON TO BE PROUD OF BEING A MEMBER OF THIS OUTSTANDING ORGANIZATION.

THANK YOU.