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Statement  
of  
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United States Senate

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Mr. Chairman and Members of the Committee, I appreciate the opportunity to appear before you here today with Admiral Gehman, who along with the other members of the Columbia Accident Investigation Board (CAIB) has selflessly performed a valuable and patriotic public service these past seven months.

Shortly after the tragic loss of the Space Shuttle and its heroic crew, I made a solemn pledge to the families of Columbia's crew that we will find out what caused the loss of the Space Shuttle Columbia and its crew, correct what problems we find, and safely continue with the important work in space that motivates our astronauts and inspire millions throughout the world. Thanks to the CAIB's thorough report, we now definitively know what caused the accident. It was a combination of hardware, process and human failures. We also have a more complete understanding of the problems that must be fixed at NASA to ensure that Space Shuttle operations are conducted as safely as humanly possible on behalf of our Nation's space exploration and research agenda.

Indeed, the CAIB has provided NASA with a very helpful roadmap for returning to safe flight activities, one that we intend to faithfully follow. I can assure you, that we will not only implement the CAIB's recommendations to the best of our ability, but we are also seeking ways to go beyond their recommendations.

Today's focus is on the hard lessons we've learned from the Columbia accident and about the hard work that lies ahead before we are ready to launch the Space Shuttle Atlantis for the STS-114 mission. I want to emphasize, as we undertake this work, we will be ever mindful of and appreciative of the people who have helped NASA and our entire country recover from that terrible first day of February.

First and foremost, we owe enormous gratitude to the brave families of the Columbia crew. Through their steadfast courage and dignity they have provided inspiration to the Nation. A fitting memorial for the crew will be constructed at Arlington National Cemetery. We thank the members of this Committee for your strong support of the Columbia Orbiter Memorial Act, which President Bush signed into law on April 16, 2003.

One month ago, the family members demonstrated an incredible spirit of exploration and discovery in their own right as they joined astronaut Scott Parazynski in climbing to the top of the recently named Columbia Point, a prominent vista on Colorado's Kit Carson Mountain that now honors the memory of the Columbia STS-107 crew.

We are also indebted to the over 14,000 people from the Environmental Protection Agency, Federal Emergency Management Agency, the Federal Bureau of Investigation, Defense Department, U.S. Forest Service, Texas and Louisiana National Guards and many state and local law enforcement and emergency service units who contributed to the recovery of Columbia's debris. As a result of this unprecedented interagency and intergovernmental cooperative effort, an area in eastern Texas and western Louisiana about the size of Rhode Island was carefully searched, resulting in the recovery of thirty-eight percent of the dry weight of the orbiter, including several key parts from the left wing, the part of the Orbiter damaged by a foam strike during liftoff, and the critical Orbiter Experimental Recorder—the data recorder that verified an validated much of what was learned about the accident from NASA's Mission Control during Columbia's reentry. We are deeply saddened to note that one of the helicopters searching for debris from the Shuttle Columbia crashed in the Angelina National Forest in east Texas on March 27 killing the pilot and a Forest Service Ranger. Our thoughts and prayers go out to the families of the helicopter crew members killed in the accident.

In support of this unprecedented operation, we received tremendous hospitality and support from the Texas communities of Lufkin, Hemphill, Nagadoches, Palestine and Corsicana, as well as the Louisiana communities of Shreveport and Leesville, particularly in support of activities at Barksdale AFB and Fort Polk. NASA vows not to forget the many kindnesses bestowed upon our people and the other recovery workers. We will use the resources and people of our Education Enterprise to help nurture the spirit of discovery and exploration in the young people who grow up in the region, just as we are working to help inspire and motivate school children throughout the country as they embark on their studies this fall.

Finally, we are grateful for the diligent work of the Columbia Accident Investigation Board members and staff. As many of you know, the Board has worked non-stop since

they were given this important responsibility. Admiral Gehman has performed many tremendous acts of public service throughout his distinguished career, and I'm certain that the history books will regard his work on this report as among his most significant contributions to his country.

We accept the findings of the Board and will comply with their recommendations. The Columbia Accident Investigation Board's report recommendations will be our benchmark for return to flight. Using the Board's recommendations as NASA's organizing principles for emerging from the Columbia accident as a safer, stronger and smarter organization, we are in the process of completing a preliminary return to flight Implementation Plan which will detail the Agency's evolving blueprint for returning to flight safely and reliably. This Implementation Plan will be a living plan and will be updated on a regular and frequent basis, with input from across our entire Agency. The plan will lay out how NASA will implement the recommendations of the CAIB, as well as a comprehensive set of self-initiated corrective actions.

Following the logic of the Board's report, our implementation plan strategy focuses on making improvements in the following key areas:

- **Technical excellence** – Making specific technical engineering changes that will enhance our overall technical capabilities. Among these changes is the establishment of our new NASA Engineering and Safety Center at the Langley Research Center in Hampton, Virginia that will draw upon talent throughout our Agency to take a no holds barred approach to mission safety. If people in the center spot a problem or potential problem during their engineering and safety assessments of all our programs, they will be empowered to get the entire Agency, if necessary, focused on finding and implementing solutions.
- **Management** -- Putting in place more effective management procedures, safeguards, and decision-making processes.
- **Organizational Culture** -- NASA recognizes that prior to the Columbia, mission cultural traits and organizational practices within the Agency detrimental to safety were allowed to develop. We will now work diligently to develop an organizational culture that reflects the best characteristics of a learning organization, one based on clear and open communications throughout our Mission Teams, with a management culture that empowers both dialogue and achievement.

At the same time the CAIB was developing its report, NASA pursued an intensive, Agency-wide effort to identify additional actions that will further improve the Space Shuttle Program. We took a fresh look at all aspects of the Program, from technical requirements to management processes, and developed a set of internally generated actions that complement and go beyond the CAIB recommendations. For example, some of the types of activities we are focusing on include rudder speed brake actuator inspections and re-evaluation of catastrophic hazard analysis, to name a few.

Our implementation plan integrates both the CAIB recommendations and our self-initiated actions. It is the first installment in a living document that will be periodically updated to reflect our progress toward safe return to flight and faithful implementation of the CAIB recommendations.

We are now determined to move forward with a careful, milestone driven return to spaceflight activities, to do so with the utmost concern for safety, incorporating all the lessons learned from the tragic events of February 1<sup>st</sup>. That's exactly what we will do.

Our Return to Flight effort will involve a team of spaceflight professionals, led at NASA headquarters by Dr. Michael Greenfield, our Associate Deputy Administrator for Technical Programs and astronaut veteran Bill Readdy, our Associate Administrator for Space Flight.

Another astronaut veteran, Jim Halsell, who has flown on five Shuttle missions, will oversee the day-to-day work required for our return to flight. As the commander of an upcoming Shuttle Mission, STS-120, Jim has a very personal interest in ensuring we get Return to Flight done right. I can assure you we will also rely on the advice and judgment of all members of the astronaut corps, the men and women who have the most vested interest in safe operations of the Shuttle program.

We will also have the benefit of the wisdom and guidance of a seasoned Return to Flight Task Group, led by two veteran astronauts, Apollo commander Thomas Stafford and Space Shuttle commander Richard Covey. Members of the Stafford-Covey Task Group were chosen from among leading industry, academia and government experts. Members have knowledge and expertise in fields relevant to safety and space flight, as well as experience in leadership and management of complex programs. The diverse membership of the Task Group will carefully evaluate and publicly report on the progress of our response to implement the CAIB's recommendations.

There is another body that NASA will greatly rely on in the Return to Flight process: this committee, and the other Members of Congress who have a vital interest in how NASA performs our work on behalf of the American public. We very much respect and value your oversight responsibility, and I personally look forward to working with you in the weeks and months ahead to ensure that we do our job right.

Building upon work already underway to address issues previously identified by the CAIB, the upcoming release of our preliminary Implementation Plan will mark an important step in our efforts to address and fix the problems that led to the Columbia accident. We are about to begin a new chapter in NASA history, one that will be marked by a renewed commitment to excellence in all aspects of our work, a strengthening of a safety ethos throughout our culture and an enhancement of our technical capabilities.

No doubt as we proceed along this path, all of us will be challenged. I am absolutely certain that the dedicated men and women of NASA are up to this challenge and we will not let the families of the Columbia astronauts and the American people down.

Finally, I believe it is important that all 13 CAIB members arrived at and agreed to the final conclusion of their report: “The United States should continue with a Human Space Flight Program consistent with the resolve voiced by President George W. Bush on February 1, 2003: ‘Mankind is led into darkness beyond our world by the inspiration of discovery and the longing to understand. Our journey into space will go on.’”

Thank you again for the opportunity to appear before the Committee.