

**Committee on Science
U.S. House of Representatives
Hearing Charter**

The Columbia Accident Investigation Board Report

Thursday, September 4, 2003
10:00 a.m.
2318 Rayburn House Office Building

1. Purpose

On Thursday, September 4th at 10:00 a.m., the Science Committee will hold a full committee hearing on the findings and recommendations of the Columbia Accident Investigation Board (CAIB). The Committee will receive testimony from retired Navy Admiral Harold Gehman, Chairman of the 13 member board, along with three members of the board.

2. Background

This is the first in a series of hearings the Science Committee will hold this fall on the Space Shuttle accident and related problems highlighted in the CAIB report. This hearing provides an opportunity for Admiral Gehman to present the report to the committee and will set the stage for the follow-up hearings. The overall goal this fall is to fully understand the risks, costs, and benefits of the human space flight program, including the Space Shuttle, and to determine what actions need to be taken to reform NASA.

While the CAIB has said it intends the report to help NASA in safely getting back to human space flight, the report is hard hitting. It describes in detail the specific physical causes of the Shuttle Columbia's demise and documents the failures of NASA's organization in recognizing and dealing with the dangers the Shuttle faced. The CAIB makes a number of recommendations to remedy both problems, some that NASA must meet before the Shuttle returns to flight, and others that the report suggests will take longer to implement. It is likely that Congress will ultimately be responsible for ensuring those recommendations are met.

The CAIB report also cites as contributions to the Shuttle accident NASA's reluctance to realistically assess its ability to conduct human space flight missions on a constrained budget and the lack of a national commitment to an ambitious and probably expensive vision for human space flight. The report sets the stage for a thorough public policy debate regarding the future of human space flight, the prospects for a shuttle replacement, the appropriate balance of human and robotic missions, future priorities in space exploration, and the level of resources that should be allocated for such activities. The Committee's findings will, among other things, form the basis of a NASA reauthorization bill next year.

3. Witnesses

Admiral Harold Gehman (retired), Chairman, Columbia Accident Investigation Board. Formerly Co-Chairman of the Department of Defense review of the attack on the U.S.S. Cole. Before retiring, Gehman served as the NATO Supreme Allied Commander, Atlantic, Commander in Chief of the U.S. Joint Forces Command, and Vice Chief of Naval Operations for the U.S. Navy. Gehman

earned a B.S. in Industrial Engineering from Penn State University and is a retired four star Admiral.

James Hallock, Ph.D., Manager, Aviation Safety Division, Volpe National Transportation Systems Center, Massachusetts. Dr. Hallock contributed to Group III of the CAIB, which focused on engineering and technical analysis of the accident and resulting debris. He has worked in the Apollo Optics Group of the MIT Instrumentation Lab and was a physicist at the NASA Electronics Research Center, where he developed a spacecraft attitude determining system. He joined the DOT Transportation Systems Center (now the Volpe Center) in 1970. Hallock received B.S., M.S. and Ph.D. degrees in Physics from the Massachusetts Institute of Technology (MIT). He is an expert in aircraft wake vortex behavior and has conducted safety analyses on air traffic control procedures, aircraft certification, and separation standards, as well as developed aviation-information and decision-support.

Major General Kenneth W. Hess, Commander, Air Force Safety Center, Kirtland Air Force Base, New Mexico, and Chief of Safety, United States Air Force, Headquarters U.S. Air Force, Washington, D.C. Major General Hess contributed to Group II of the CAIB, which scrutinized NASA training, operations, and the in-flight performance of ground crews and the Shuttle crew. Hess entered the Air Force in 1969 and has flown operationally in seven aircraft types. He has commanded three Air Force wings - the 47th Flying Training Wing, 374th Airlift Wing, and 319th Air Refueling Wing - and commanded the U.S. 3rd Air Force, RAF Mildenhall, England. Hess also has extensive staff experience at the Joint Staff and U.S. Pacific Command. He holds a B.B.A. from Texas A&M University and a M.S. in Human Relations and Management from Webster College.

Sheila E. Widnall, Ph.D., Institute Professor and Professor of Aeronautics and Astronautics and Engineering Systems, Massachusetts Institute of Technology (MIT), Massachusetts. Dr. Widnall also contributed to Group III of the CAIB, which focused on engineering and technical analysis of the accident and resulting debris. Widnall has served as Associate Provost, MIT, and as Secretary of the Air Force. She is currently Co-Chairman of the Lean Aero-space Initiative. A leading expert in fluid dynamics, Widnall received her B.S., M.S., and Ph.D. in Aeronautics and Astronautics from MIT.

3. Attachments:

- Executive Summary, Columbia Accident Investigation Report.
- Chapter 11, Recommendations, Columbia Accident Investigation Report.
- CRS Report, NASA's Space Shuttle Columbia, Synopsis of the CAIB Report (RS21606).
- Excerpts from the CAIB Report