

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

NASA's Response to the Columbia Report

**Wednesday, September 10, 2003
10:00 a.m.
2318 Rayburn House Office Building**

1. Purpose

On Wednesday, September 10th at 10:00 a.m., the Science Committee will hold a full Committee hearing on the National Aeronautics and Space Administration's (NASA) response to the Columbia Accident Investigation Board Report. The Committee will receive testimony from NASA Administrator Sean O'Keefe and retired Navy Admiral Harold Gehman, Chairman of the Columbia Accident Investigation Board (CAIB).

The hearing will examine NASA's just released plan, "NASA's Implementation Plan for Return to Flight and Beyond," which is NASA's response to the CAIB report. Issues for the hearing include whether the plan fully complies with the CAIB recommendations; the cost and schedule associated with implementing the plan; whether the task group (led by the two former astronauts Thomas Stafford and Richard Covey) that NASA has appointed to oversee return to flight provides the best mechanism to assess NASA's implementation; and the criteria used to determine when the Shuttle is ready to return to flight. The hearing will also review the impact a significant delay in return to flight might have on the International Space Station, the Hubble Space Telescope, and the proposed Orbital Space Plane.

2. Background

On Monday, September 8, 2003, NASA released its response to the CAIB report, "NASA's Implementation Plan for Return to Flight and Beyond." (See attachment.) In the plan, NASA states that it accepts the findings of the CAIB, will comply with the recommendations, and embraces the entire report. The plan outlines NASA's response to each recommendation made by the CAIB, along with the current status and a schedule of milestones. In addition to the CAIB recommendations, NASA has developed 10 additional corrective actions to address other areas of concern. Two of these actions (SSP-1 and SSP-2) coincide with "observations" in the CAIB report. (The CAIB labeled as "observations" several recommendations for changes at NASA that did not relate directly to the Columbia accident.)

NASA describes the implementation plan as a "living document" that will be periodically updated as plans are refined and progress is made in making technical, management, cultural, and safety changes. NASA Administrator O'Keefe has stated that the Shuttle will not return to flight until it is "fit to fly." However for planning purposes, NASA continues to work toward a March 11, 2004 date for return to flight.

NASA has a poor record of fully implementing recommendations from previous reports, particularly non-technical recommendations. Therefore, a key issue is whether NASA will fully satisfy the CAIB recommendations. The return-to-flight plan says little at this point about how NASA will implement the central organizational recommendations of the CAIB, such as creating an independent technical authority. NASA officials say they are still figuring out how to respond to those recommendations, and implementation plans for reorganization will be added to the return-to-flight plan later. (The CAIB required only that NASA have a detailed plan for reorganizing in place before flights resume; CAIB said the plan could be implemented after return to flight.)

Since the CAIB only laid out criteria for reorganization, rather than providing a detailed plan of its own, the Committee will have to review NASA's plans carefully against the CAIB criteria. For example, in July, NASA created a new safety center at the Langley Research Center in Virginia. NASA at first described the center as being in step with the CAIB recommendations, but reversed itself once the CAIB publicly disagreed with that description. NASA is now in the process of reviewing how the new safety center at Langley will operate.

Several months ago, NASA Administrator O'Keefe appointed a Return to Flight Task Group, headed by former astronauts Richard Covey and Tom Stafford and including 26 other members, to independently assess NASA's implementation of the CAIB recommendations, but only insofar as they relate to the readiness of the next Shuttle launch, STS-114. The Stafford-Covey Task Group was created under the auspices of the NASA Advisory Council and is subject to the Federal Advisory Committee Act. The Task Group will formally and publicly report its results. The Task Group is not to second-guess the CAIB recommendations, but is only to report on NASA's progress on meeting the intent of the CAIB.

This differs from the approach taken after the Challenger accident in 1986 when the National Academy of Sciences was tasked to form a special independent technical oversight team to evaluate NASA's return to flight actions. Unlike the Stafford-Covey Task Group, which apparently can only advise NASA, the Academy team had the authority to reject technical changes proposed by NASA. In fact, the Academy rejected the first two concepts proposed by NASA for fixing the "O-ring" joint of the Solid Rocket Booster. Earlier this year, the Academy offered to provide NASA a similar service, but NASA apparently rejected the offer. Administrator O'Keefe is reluctant to give "sign off" for return to flight to anyone outside the NASA structure for fear that doing so would cloud his message that NASA managers are responsible and accountable for flight safety.

NASA plans to review the more than 3,000 waivers that exist to the Shuttle's technical specifications – a move that goes even beyond the CAIB's recommendations, but a step that was taken after the Challenger explosion. Such waivers allowed the Shuttle to continue flying, for example, without NASA fixing the foam problem even though the design requirements stipulate that no foam debris be allowed to strike the Shuttle's delicate thermal insulation. The CAIB reported that more than a third of the Shuttle's waivers had not been reviewed in over 10 years.

NASA's plans to have the Shuttle program review the waivers by next January. (The CAIB did not mention reviewing the waivers explicitly, but assumed that the new, independent technical organization it recommended would review all specifications and waivers after return to flight.) NASA's plans raise questions about how such a review can be accomplished so quickly and about what process and structure NASA will use to carry out the review to ensure that it is independent and

thorough. Since the specifications and waivers were created by the Shuttle program; the CAIB was skeptical of the program's ability to take a hard look at them itself.

3. Witnesses

The Honorable Sean O'Keefe, Administrator, National Aeronautics and Space Administration. Mr. O'Keefe was sworn in as the 10th Administrator of NASA on December 21, 2001. Prior to NASA, O'Keefe served as the Deputy Director of the Office of Management and Budget. Prior to joining the Bush Administration, he was a Professor at the Syracuse University Maxwell School of Citizenship and Public Affairs and previously at Pennsylvania State University. O'Keefe has served as Secretary of the Navy and Comptroller and Chief Financial Officer of the Department of Defense during the first Bush Administration. Before joining the Defense Department, he served as Staff Director of the Senate Defense Appropriations Subcommittee. His public service began in 1978 upon selection as a Presidential Management Intern.

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.

4. Attachment:

- NASA's Implementation Plan for Return to Flight and Beyond, September 8, 2003