

National Aeronautics and  
Space Administration  
**Office of the Administrator**  
Washington, DC 20546-0001



April 21, 2016

Vice Admiral Joseph W. Dyer, USN (Ret.)  
Chair  
NASA Aerospace Safety Advisory Panel  
Washington, DC 20546

Dear Admiral Dyer:

Enclosed is NASA's response to the Human Space Flight Mishap Response Procedures recommendation from the Aerospace Safety Advisory Panel (ASAP) public teleconference meeting held on December 14, 2015. Please do not hesitate to contact me if you or the Panel would like further background on the response.

I look forward to receiving continued advice from the ASAP that results from your important Quarterly and Insight fact-finding meetings.

Sincerely,

A handwritten signature in black ink that reads "CF Bolden Jr." with a stylized flourish at the end.

Charles F. Bolden, Jr.  
Administrator

Enclosure:  
2015-05-02 Human Space Flight Mishap Response Procedures

## **NASA Aerospace Safety Advisory Panel Recommendation**

### **Human Space Flight Mishap Response Procedures 2015-05-02**

#### **Finding:**

The Commercial Crew Program is now developing a formal plan for how it will respond in the event of a major malfunction or mishap. In addition to optimizing what can be learned by proper investigation of malfunctions or mishaps, this plan must comply with specific language in the NASA Authorization Act of 2005 concerning Human Space Flight Independent Investigations. NASA has tentatively identified the entities that would investigate various types of mishaps during the five mission phases. Under the current Authorization language, a Presidential Commission would be required in all cases involving loss of the flight crew as well as in all cases involving loss of the vehicle, even if the flight crew is not injured. Use of a Presidential Commission in the latter cases appears excessive.

#### **Recommendation:**

The Authorization language should be reviewed with today's systems in mind. Also, more details appear appropriate for the NASA implementation document. These details would include the level of vehicle damage requiring investigation, the temporal issues of when mission phases begin and end, and NASA's oversight role in mishap investigations conducted by its providers, as well as when the need for outside oversight is required. The mishap response procedures should be thought through, documented, and in place well before any actual flights.

#### **Rationale:**

The requirement for a Presidential Commission was logical for International Space Station or Space Shuttle missions, because they were reusable national assets. It would, however, appear excessive in some cases for commercially provided vehicles or other vehicles not planned for reuse. One example would be the sinking of a non-reusable vehicle after the flight crew had been safely recovered and were on their way home.

#### **NASA Response:**

NASA concurs with the recommendation to review the Authorization language with today's systems in mind. A team led by NASA's Human Exploration and Operations Mission Directorate is working with other NASA offices, including the Office of Safety and Mission Assurance, to identify and evaluate potential Presidential Commission requirement strategy options. NASA plans to reach out informally to the Federal Aviation Administration (FAA) and National Transportation Safety Board (NTSB) to jointly develop viable options. Given the evolving roles and responsibilities of FAA and NTSB within Human Spaceflight mishaps, forward work is needed by all organizations involved. NASA plans to provide results of our assessment in approximately six months.