

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



June 5, 2009

Vice Admiral Joseph W. Dyer, USN (Ret.)
Chairman
Aerospace Safety Advisory Panel
National Aeronautics and Space Administration
Washington, DC 20546

Dear Admiral Dyer:

Enclosed are NASA's responses to three recommendations from the 2008 Fourth Quarterly Meetings of the Aerospace Safety Advisory Panel (ASAP). Please do not hesitate to contact me if the Panel would like further background on the information provided in the enclosures.

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

Sincerely,

A handwritten signature in black ink that reads "C. J. Scolese".

Christopher J. Scolese
Acting Administrator

Enclosures

Tracking Number 2008-04-02
Independent Panel Assessment of Human-Rating Requirements

Recommendation

The ASAP recommends that NASA obtain greater validation that the new Human-Rating Requirements Standard meets the safety requirements of a broad range of future human spaceflight programs by scheduling an external review by an independent “gray-beard” assessment panel.

NASA Response

NASA concurs. When writing the current version of NASA Procedural Requirements 8705.2B, Human-Rating Requirements for Space Systems, NASA sought and received the input of aerospace veterans and former employees of NASA. NASA will assemble a team to benchmark, with other Government agencies and knowledgeable organizations, the implementation of any requirement that might parallel the objectives of NASA’s human-rating requirements. This benchmarking will examine all human-rating-related requirements but will focus on the concerns that the ASAP has highlighted in previous meetings (these concerns include failure tolerance, human-error tolerance, software reliability, and integrated safety and design analysis). By the summer of 2009, NASA will convene and task this team to provide its findings to the Associate Administrator, the Chief, Safety and Mission Assurance, the ASAP, and appropriate NASA senior leadership. Any compelling findings will certainly be considered as potential changes to the current Human-Rating Requirements for space systems.

Tracking Number 2008-04-03
Human-Rating Guidelines, Tools, and Training

Recommendation

After the Human-Rating Requirements Standard is reviewed and validated, the ASAP recommends that NASA develop specific guidelines and tools, widely available training courses, and implementation evaluation criteria that enable system safety and reliability personnel to effectively define and apply the new integrated design and safety analysis approach specified by the standard.

NASA Response

NASA concurs. NASA will evaluate the responses from the benchmarking performed in response to ASAP Recommendation 2008-04-02, additional research on human-rating applications in other NASA programs performed in response to ASAP Recommendation 2009-01-01a, as well as results from the ongoing Constellation Program's implementation of the NASA human-rating requirements. NASA will develop a Human-Rating Requirements Implementation Handbook to ensure standardized and effective implementation of NASA Procedural Requirements 8705.2B, Human-Rating Requirements for Space Systems. Upon completion of that handbook, NASA will determine what level of training is required to support the handbook and will prepare and deliver that training.

Tracking Number 2008-04-04
Designation of an Office of Primary Responsibility for Human-Rating Requirements Implementation

Recommendation

The ASAP recommends that NASA designate an office of prime responsibility that will serve as the champion of the Human-Rating Requirements Standard process to ensure that every program and relevant subject-matter expert uniformly, objectively, and aggressively implements the new NPR (NASA Procedural Requirement) 8705.2B standard.

NASA Response

The NASA Administrator designated the Office of Safety and Mission Assurance (OSMA) as the office having primary responsibility for human-rating requirements for space systems. This includes space systems developed and operated by NASA that are under the scope of NPR 8705.2, Human-Rating Requirements for Space Systems as well as commercial space systems that are developed or operated outside NASA operational control that are under the scope of NPR 8715.3, NASA General Safety Program Requirements. This office has lead policy authority for requirements and, through the NASA Safety Center in Cleveland, Ohio, will audit and assess the programs developing human-rated systems or acquiring commercial human space flight services to ensure uniform, timely, and objective compliance with these requirements. OSMA will continue to champion the human-rating process. The NASA Safety Center is also responsible for preparing the necessary training for NASA employees needing the safety and reliability competencies for the associated risk that will support the human-rating process.