

NASA AEROSPACE SAFETY ADVISORY PANEL
National Aeronautics and Space Administration
Washington, DC 20546
VADM Joseph W. Dyer USN, (Ret.), Chair

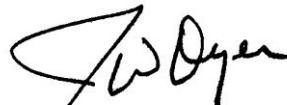
May 19, 2014

Mr. Charles F. Bolden, Jr.
Administrator
National Aeronautics and Space Administration
Washington, DC 20546

Dear Mr. Bolden:

The Aerospace Safety Advisory Panel (ASAP) has reviewed the nine open NASA responses to their recommendations. Of these nine recommendations, the ASAP has determined that recommendation 2012-04-01, Alignment of NASA's Office of Safety and Mission Assurance and the Office of Chief Engineer Budgets with Line Authority, can be closed. The enclosure provides a summary of the eight remaining open recommendations. The ASAP has reworded the following two recommendations: 2012-03-05, Five Year Roadmap for Continuous Improvement of the Agency's Mishap Investigation Process, and 2014-01-02, Knowledge Capture and Lessons Learned.

Sincerely,



VADM Joseph W. Dyer, USN (Ret.)
Chair

Enclosure

ASAP OPEN Recommendations

| <u>Rec. No.</u> | <u>Title</u> | <u>ASAP POC</u> | <u>ASAP Status</u> | <u>ASAP Evaluation of To-Date Responses</u> |
|-----------------|---|-----------------|--|---|
| 2012-01-02 | ISS Deorbit Capability: (1) To assess the urgency of this issue, NASA should develop an estimate of the risk to ground personnel in the event of uncontrolled ISS reentry. (2) NASA should then develop a timeline for development of a controlled reentry capability that can safely deorbit the ISS in the event of foreseeable anomalies. | Bagian | Open. Waiting implementation timeline and the final plan. Provide a timeline for when the detailed planning AND software for controlled ISS deorbit, in both the planned and unplanned conditions, will be finalized and in place. | |
| 2012-03-01 | Software Assurance and CMMI Requirements: All NASA internal safety-critical software development groups should achieve CMMI Level 3 (or an equivalent as established by external validation agent) by the end of FY 14. | Sanders | Open. Pending completion of CMMI ML 3 at KSC expected in Summer 2014. | |
| 2012-03-05 | Five Year Roadmap for Continuous Improvement of the Agency's Mishap Investigation Process: NASA should continue to report to the ASAP on the training of the MIT and the investigation Board Chairs in greater detail to include the method, consistency, and quality of training for MIT members and Board Chairs. | Conway | Open. Awaiting development and implementation of safety investigation training program. ASAP changed wording of the recommendation to delete "link status reports of the five year mishap investigations process plan with progress reports on the NASA drug and alcohol policy development" due to NASA's adequate response on this aspect of the recommendation. | |
| 2013-01-01 | Philosophy on the Certification Process: NASA should develop a philosophical approach to the certification process; specifically, when NASA certification is required and when it is not. | Frost | Open. Action assigned (7/12/13): come back in 6 months on what constitutes "NASA personnel." NASA anticipates being able to provide these responses to ASAP by the end of June 2014. | |

For detailed information on ASAP recommendations, visit:
<http://oiiir.hq.nasa.gov/asap/recommendations.html>

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| 2013-03-01 | <p>Technical Authority and Role of Center Director (a): Revise NPD 1000.0A, NASA Governance and Strategic Management Handbook, to reflect the Administrator's current governance model and specifically address the question about how non-concurrences are handled. (b): Make a clear distinction in the Technical Authority policy between the formal appeal process related to Technical Authority decisions and the dissent process related to non-authoritative differences of opinion on matters outside the TA's authority.</p> | O'Connor | Open. Pending release of NPD 1000.0. The ASAP is happy with the process and progress to date and like the direction. It remains open until final review and sign off. | |
| 2013-03-02 | <p>Firm Loss of Crew (LOC) Number for the Exploration System Development (ESD) Program: Establish a firm, Agency-level safety threshold and goal for LOC for ESD's first crewed mission as soon as possible.</p> | O'Connor | Open. The Agency has not been clear about the risk of current and future missions. What is the Agency's policy on safety threshold for various NASA missions? Given ESD is a capability driven program, this risk philosophy should be applied to capabilities. The Agency held a decision meeting on LOC thresholds in February. The ASAP is looking forward to seeing the signed Decision Memorandum to document the Administrator's approval on Agency-level safety thresholds for future human missions to Earth-Moon (E-M) cis-lunar space. | |
| 2014-01-01 | <p>Radiation Risk Decision on Deep Space Mission: The ASAP recommends that (1) NASA continue to seek mitigations for the radiation risk and (2) establish an appropriate decision milestone point by which to determine acceptability for this risk to inform the decision about a deep space mission. This risk choice should be made before NASA decides to go forward with the investment in a future long-term mission.</p> | Frost | Open. The IOM released a study called "Health Standards for Long Duration and Exploration Spaceflight: Ethics Principles, Responsibilities, and Decision Framework." The ASAP would like a briefing on the results of the study and NASA's path forward to implement the recommendations in the report. | |

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| 2014-01-02 | <p>Knowledge Capture and Lessons Learned: The ASAP strongly recommends a continuous and formal effort in knowledge capture and lessons learned that will make them highly visible and easily accessible. Modern tools exist to facilitate this and NASA should avail itself of them. NASA's Knowledge Management system should include risk-informed prioritization of lessons and a process to determine which lessons have generic (vs. local or project unique) potential. Further, it should be supplemented by formal incorporation into appropriate policies and technical standards of those lessons that are most important to safety and mission success. Rigor in this area is particularly critical as the experience in specific skills dissipates over time and as engineering talent is stretched across programs.</p> | Sanders | Open. Pending NASA implementing a policy that formally incorporates the lessons learned that are most important to safety and mission success into policies and technical standards. ASAP has updated the wording of this recommendation. | |