

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

June 19, 2012

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 twenty open NASA responses to their recommendations. Of these 20 recommendations, the ASAP shows three recommendations as closed. They are: 2010-01-08, 2010-04-02a, and 2011-03-02. Enclosure 1 provides a summary of the 17 remaining open recommendations.

Sincerely,

A handwritten signature in black ink, appearing to read "J W Dyer". The signature is fluid and cursive, with a long, sweeping underline that extends to the left.

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>
2008-01-06 2007-04-02	<p>NASA Headquarters Mishap Investigation: ASAP Letter dated Nov 16, 2010 requested 2008-01-06 Follow-up. Requested that a briefing be provided at the 1st quarterly meeting at NASA Headquarters on February 3, 2011 relating to the changes and status of the NPR changes. Now that the immediate changes required to effect near-term process improvements have taken place, it is appropriate to begin a strategic review of the mishap investigation process. Request that NASA discuss their five year strategic plan to effect continuous improvement. <u>2008</u> - NASA should reevaluate its mishap investigative process, focusing on producing timely report results and using appropriate experts to determine root causes. NASA should consider a 30-day deadline for delivering at least a preliminary mishap report. <u>2007</u> - NASA Headquarters needs to provide for more timely completion, review and release of major mishap investigation reports, utilizing the support of the NASA Safety Center if needed. Such increased emphasis on expeditious handling of the investigation findings will ensure that the lessons learned from the investigation are disseminated throughout the agency as soon as possible, to correct unsafe conditions and help prevent a recurrence of the mishap.</p>	McErlean	Open for presentation of strategic plan for continuous improvement.	
2009-03-04	<p>Integration of Robotics: The Panel continues to be disappointed in what it sees as a lack of integration of robotics across NASA. Most Center have some robotic activity because they want to be "in the game". There appears to be a loss of momentum and opportunity in this area. The Agency needs to examine the benefits of developing a consolidated and integrated robotics research program to capitalize on the numerous independent programs that have been developed and more fully exploit robotics utilization throughout all missions.</p>	Dyer	Open for report of OCT assessment of current robotic activities to determine if there are efficiency and synergy opportunities.	
2010-01-03	<p>OSMA Analyze Changing Work and Skills Needed for the Future: NASA OSMA should take a leadership role in beginning to analyze how the SMA work is going to change and what kinds of skills are going to be needed in the future.</p>	Frost	Open for receipt of a cohesive plan addressing the transition to R&T developmental efforts and CCP.	
2010-01-04a	<p>Integration of Crew Requirements Into Design - Vibration Limits: Research should be initiated to establish and codify crew vibration limits for various phases of flight for future space vehicles.</p>	Bagian	Open pending receipt of schedule for incorporation of vibration safety requirements into NASA technical standard 3001.	

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2010-01-07	<p>Methodology for Performing an Integrated Abort Risk Analyses and Development of Supporting Tools: NASA should prescribe the methodology for performing an integrated abort risk analysis and develop the supporting tools as needed so that these types of analyses are performed uniformly across the industry.</p>	Frost	Open, pending linkage to abort analysis methodology is implemented in top level Agency human rating requirements for both traditional and Space Act Agreement acquisitions	
2010-01-08	<p>Leading Indicators for Industrial Safety: The MSFC SMA organization should spend some time looking at leading indicators that other industries and organizations are using.</p>	Frost	Closed. Expected implementation July 2012.	

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2010-02-02	<p>Mishap Investigation Process and Plan: Each of the Center Directors should exercise leadership to make sure other Centers get mishap information. (Related to 2008-01-06 regarding mishap investigation process improvements and 2010-02-03 regarding codification of lessons learned from recent mishap reports.)</p>	McErlean	Open pending closure on 2008-01-06 and 2010-02-03 and receipt of Commercial Mishap Investigation Plan pertaining to CCP providers.	
2010-02-03	<p>Taurus XL Mishap Documentation: ASAP recommends that NASA examine these eleven OCO findings and determine which of them can be codified in some way that can benefit other future programs. NASA should then expand the process used to do that and integrate it into mishap investigation procedures to ensure that there is a process for sharing the results of mishap investigations and corrective actions across all programs, both NASA and commercial.</p>	Frost	Open pending NASA's CE review on how recent Class A mishap recommendations have been codified so lessons learned will not be lost. [There is little evidence that the recommendation has been implemented in any specific way particularly relating to proprietary information.]	
2010-04-02a	<p>Commercial Transportation Documents - Expression of Loss of Crew (LOC) Limits: NASA should publish threshold limits, objective limits, and goal limits to let commercial providers know what the ultimate number is. The goal limit should be put into the contract documents and agreements. [ESMD Directorate LOC design certification requirements are 1/1000 for launch and 1/1000 for reentry with 1/270 for 120 day mission to ISS. For CCP, continuous improvement goal of 1/750 for combined ISS mission risk.]</p>	McErlean	Closed	

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2011-01-01 2010-04-03 2006-03-04	<p>NASA Alcohol Use and Testing Policy: 2011 - NASA should implement a post-mishap blood alcohol and drug testing program for all personnel in sensitive positions that are involved in Class A and B mishaps. That includes NASA contractors, civil servants, political appointees, and all affected visitors. This investigative tool will support key organizational learnings and is in line with many legal requirements in various jurisdictions in which NASA operates. It should be noted that this is NOT a recommendation for a random test program. It is a test for cause after a serious mishap has occurred. 2010 - The lead Headquarters organization responsible for developing the alcohol policy is requested to provide a formal briefing on the status of the policy (including a schedule showing a targeted completion and implementation date) at the ASAP's first quarterly meeting in 2011. 2006 -Random Drug and Alcohol Testing - Recent mishap investigation revelations indicate that there does not seem to be an Agency-wide requirement for random drug and alcohol testing among contractors. ASAP recommends that expanding both random pre-incident and targeted post-incident testing would be well advised for contractors as well as NASA civil servants.</p>	Bagian	Open pending receipt of a schedule showing a targeted completion and implementation date for 2011-01-01 recommendation.	
2011-01-02	<p>Safety and Mission Assurance Role Descriptions: NASA should begin to draft a role description as well as some key job requirements, such as educational background and experience., for the personnel who have to specify, manage, and assure the S&MA activities under the new program direction. NASA needs to articulate the skills needed as soon as possible. [Prime focus area is TRL of 4-6. NASA plan to have summary briefing at next qtrly briefing not met.]</p>	Dyer	Open, pending receipt of a briefing addressing the findings of the OSMA's Research and Technology Strategy Team Study.	
2011-01-03b	<p>IRIS Support: The ASAP would like to understand how the IRIS supports causal analysis and include the causations in the periodic reports together with their associated mitigation actions and schedules for completion to management. Steps should be taken to have the system do the analysis and reporting automatically.</p>	Bagian	Open pending modifications being implemented for automated reporting	
2011-02-04	<p>SMA Software Assurance: The Office of Safety and Mission Assurance (OSMA) should do an analysis on what the impact is to NASA's critical programs by not doing 100 percent IV&V for software assurance. [NASA concurred with current approach as determined using the current risk assessment and associated classification schemas approach adequate to provide acceptable level of risk for the Agency.]</p>	McErlean	Open for a briefing showing how the process has been and is being applied to programs such as CCIDC and SLS.	

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2011-03-02	<p>Partner Integration Team Rotation: The Panel recommends that the CCP develop a written policy specifying team rotation schedules based on tour of duty, milestones, or other appropriate criteria, to ensure a fresh set of eyes are always protecting the government's interest for the insight portion of the acquisition strategy. [NASA letter concurred however after discussion at Oct 20, 2011 meeting, Brent Jett agreed to document a policy or procedures involving current practices, e.g. TIL meetings, supervision, SME involvement, by which objectivity is assured.]</p>	Frost	Closed with Monitoring	
2011-04-01	<p>Chief Knowledge Officer Positions: To ensure the identification and capture of critical NASA implicit and explicit knowledge, the ASAP recommends NASA establish a single focal point (a Chief Knowledge Officer) within the Agency to develop the policy and requirements necessary to integrate knowledge capture across programs, projects, and Centers. Additionally, the ASAP recommends that NASA consider establishing Chief Knowledge Officer positions at all NASA Centers and in all Mission Directorates to ensure standardization of programs and lessons-learned as we move forward.</p>	Bagian	Open with monitoring for receipt of revised NPR 7120.6	
2012-01-01	<p>Standardizing and Funding NASA Wellness Facilities: NASA should develop a standardized wellness program approach that ensures that all employees have an equal opportunity for access to NASA's wellness facilities. NASA should examine ways to standardize and control the level of support for the facilities to a higher degree. The ASAP encourages NASA to explore the funding streams and consider whether they should be centralized.</p>	Frost	Open - pending receipt of report, including funding and requirements	
2012-01-02	<p>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.</p>	Bagian	Open - request date NASA plans to brief ASAP on Rec 1. Rec 2 - open pending enhancement upgrades	

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2012-01-03	Extension of Soyuz Lifetime: NASA should actively pursue with the Russians the plan to extend the Soyuz on-orbit lifetime from six months to twelve months.	Frost	Open - request concrete timeline	
2012-01-04	Commercial Crew Safety Certification Process: NASA should define the safety certification process and standards, down to levels 3 and 4, as quickly as possible. NASA should provide the ASAP forthwith the schedule by which these requirements will be developed and promulgated.	McErlean	Open pending receipt of Agency approval of certification plan expected in Fall 2012.	
2012-01-05	Maintaining NASA Pilot Proficiency: NASA should investigate the risk of reliance on its historical approach for maintaining pilot proficiency considering anticipated further budget reductions, including an assessment of the need to develop a centrally-funded flight training budget so as to ensure all NASA pilots maintain flight proficiency.	Nield	Open - request to see audit findings including budget and requirements	