

National Aeronautics & Space Administration

**AEROSPACE SAFETY ADVISORY PANEL
PUBLIC MEETING**

September 18, 2003

**Florida Space Authority
Cape Canaveral, Florida**

MEETING MINUTES

original signed by

**Mark D. Erminger
Executive Director**

AEROSPACE SAFETY ADVISORY PANEL (ASAP) PUBLIC MEETING

September 18, 2003

**Florida Space Authority
Cape Canaveral, Florida**

Panel Attendees

Ms. Shirley C. McCarty, Chair

Lt Gen Forrest S. McCartney (USAF Ret), Vice –Chair

R ADM Walter H. Cantrell (USN Ret)

Mr. Otto K. Goetz

Mr. Roger D. Schaufele

Mr. Robert B. Sieck

Mr. Arthur I. Zygielbaum

M Gen. Nathan Lindsay

Mr. Mark Erminger, Executive Director

INTRODUCTION

Mr. Erminger started by reading the purpose of the meeting from the announcement in the Federal Register.

The first 30 minutes of the meeting was reserved for public comment on safety at Kennedy Space Center specifically or NASA in general. No members of the public requested time to make a public comment, and no members of the public submitted any written comments.

WELCOME AND PAST ACCOMPLISHMENTS

Ms. McCarty welcomed meeting attendees and stated the purpose of the meeting was to plan for the Annual Report and deliberate any open issues. She stated that the panel would look at last years' recommendations and NASA's responses when they become available, review what has been done, and follow-up this meeting with subsequent meetings or a teleconference prior to producing the Annual Report, if further deliberations are required. She then introduced panel members and gave an outline of 2003 activities.

SAFETY ORGANIZATION AND CULTURE TEAM WHITE PAPER

Mr. Zygielbaum gave a summary of the content of the Safety Organization and Culture Team White Paper. Admiral Cantrell summarized how the U.S. Navy handled safety requirements in support of the White Paper recommendations. He also talked about the NASA/Navy Benchmarking Study. Mr. Zygielbaum said there was some concern about taking responsibility

for safety away from the Program. The approach recommended in the paper does not take responsibility away from the Program Manager. The Program is still responsible but they need to go outside to get approval for waivers to safety-critical requirements. Mr. Sieck said that NASA was concerned that they didn't have enough people to provide adequate technical balance. Mr. Zygielbaum said that this will increase the importance of the safety organization. Admiral Cantrell said that you can't just waive a wand to change Shuttle because it was built under another system. Our recommendation is to make the future better. Ms. McCarty said that the Panel had been looking at this for about six months. The Columbia Accident Investigation Board (CAIB) has come out with a recommendation with some of the same flavor. Admiral Cantrell stated that the CAIB does not require this system to be in place, they just require a plan. He also talked about Navy experience losing some ships. General McCartney said that NASA needs to be careful that changes made are "Value Added". Admiral Cantrell added that we need to do "Value Needed" first and then work on "Value Added". General McCartney said don't fix things that are not broken. He was gratified for the Panel's insight into KSC to evaluate the quality of their work. They went through thousands of documents and showed that their process worked well.

INFRASTRUCTURE

On Infrastructure, Ms. McCarty said that things are looking a lot better probably due to full cost accounting. General McCartney said that NASA has recognized the problem with infrastructure and put more attention on it. They are moving in a positive direction. It did not get this way overnight and will not be fixed overnight. This probably won't be a pivotal issue for next year. Admiral Cantrell said that there has been increased funding and this validates additional attention.

TRENDING

Mr. Goetz said that within the program, there are repeated incidents, and trending analysis needs to be augmented. The analysis needs to determine the worst possible outcome. We need to recommend areas to be addressed that show repeated incidents

ORBITAL SPACE PLANE (OSP)

Ms. McCarty said that at Marshall Space Flight Center, the Panel reviewed OSP. The Level II requirements need to include safety requirements. Mr. Schaufele led a team that reviewed the Level II Requirements and the Human Rating Plan. Safety requirements were not clearly spelled out in the Systems Requirements Document. It is important to spell out at the top levels. References to Systems Safety were component level and not systems level. Safety requirements must be specified before the contractor starts work and then not tailored out. Safety requirements were also in the Human Rating Plan. The document allows tailoring and waivers. This needs to be sorted out before contractor proposals. Ms. McCarty added that the Panel would be reviewing OSP Preliminary Hazards. Mr. Schaufele stated that this is critical because NASA is looking to accelerate OSP and it is important to put this up front.

INTERNATION SPACE STATION (ISS)

Ms. McCarty stated that the Panel reviewed ISS plans to move to a two person crew. They looked at what would happen if we waited for the Soyuz to land before docking the next Soyuz. Mr. Zygielbaum said the Panel asked for a study to be done. The ISS Program convinced the Panel that there was more hazard with not having an overlap of Soyuz vehicles on orbit. ISS also could not be left un-commanded for a long period of time. Admiral Cantrell added that there was

risk in the ability to control ISS during an earth re-entry and risk to people on the ground. He also discussed other issues around going to two crewmembers.

ORBITER MAJOR MODIFICATION (OMM)

Mr. Sieck said that the Panel had concerns about moving OMM from the West Coast to Florida. They looked at it and there was no safety risk but there were management challenges. The Panel looked at this last year at the mid-point and graded it as a success. NASA just completed the major part of the modification and only had a couple of problems on power-up. General McCartney added that having the people doing the work where the vehicle has to perform has many advantages. Ms. McCarty said that the Panel was originally concerned that the KSC workforce would be tugged away from OMM to support flights, and they have not seen any trends in that direction. Mr. Sieck said there was a robust schedule until late last year and they were meeting all of their schedules. Admiral Cantrell added that one might make an argument that things have improved by having the OMM at KSC

SPACE STATION CONCERN

Mr. Zygielbaum said that the 2002 Annual Report had a black mark on the scorecard for ISS International Partner cooperation. He then described the problems with the Cardiocog experiment. It represented a disagreement in what two different countries thought was safe. Attitude control was lost last year during the STS-113 flight to ISS due to a lack of coordination of the configuration of the American and Russian segments. The Station also lost attitude control a week before the meeting because Russian controllers sent commands to fire thrusters on the docked Progress module for a planned attitude change before the American reaction control wheel system was taken off-line. The result was one system fighting the other and saturation of the control wheel. Mr. Zygielbaum stated that these events might evidence a trend that needed to be investigated.

SPACE SHUTTLE

Mr. Sieck summarized the Annual Report outline that included Service Life Extension Program, logistics, suppliers, and re-certification. Mr. Goetz added a concern about supplier problems with companies going out of business.

MISCELLANEOUS TOPICS

Ms. McCarty said that the Panel would cover aviation safety issues at a later meeting

General McCartney said that the panel would review NASA's response to concerns from last year and will defer discussion on Crew Escape until then.

Ms. McCarty said that the panel did not get to review some of the things that they had hoped to: personnel, concern about retirements, loss of skills, and Human Capital initiatives. NASA has made great strides on Human Resources Management, but the retirement demographics are a reality that presents considerable challenge.

Mr. Sieck said there was a backlog of deviations to work documents last year. We can't measure progress but we know NASA is working on it.

General McCartney said that as a result of the Columbia accident, NASA's intense activity to re-examine all deviations, waivers, exceptions, critical items lists, hazards, and quality of paper has a lot of benefits. They will have a better feel for the risk of flying the Shuttle. The Panel may want to make an observation about this in the Annual Report

MEETING ADJOURNED

Ms. McCarty adjourned the meeting and opened the floor to questions from the public that attended the meeting.

NOTE: These minutes were prepared by the Executive Director and reviewed by panel members. The Aerospace Safety Advisory Panel resigned on 22 Sep 2003, four days after this public meeting. The Panel Chair did not sign the meeting minutes since they were not a member of the Panel when the minutes were prepared.