

National Aeronautics and Space Administration

**NASA Advisory Council Task Force
on
International Space Station Operational Readiness**

**April 12, 2005
NASA Headquarters
Washington, DC**

MEETING REPORT



Original signed by

Todd F. McIntyre
Executive Secretary

Original signed by

Thomas P. Stafford
Chairman

**NASA ADVISORY COUNCIL TASK FORCE ON INTERNATIONAL
SPACE STATION OPERATIONAL READINESS**

April 12, 2005
NASA Headquarters
Washington, DC

MEETING REPORT

TABLE OF CONTENTS

Attachment A	Task Force Membership
Attachment B	Meeting Attendees

NASA ADVISORY COUNCIL TASK FORCE ON INTERNATIONAL SPACE STATION OPERATIONAL READINESS

April 12, 2004
NASA Headquarters
Washington, DC

MEETING REPORT

Mr. Todd McIntyre, Executive Secretary of the NASA Advisory Council (NAC) International Space Station (ISS) Operational Readiness (IOR) Task Force, welcomed the participants and called roll.

Lt. General Thomas P. Stafford, USAF (Ret.) and Chairman of the NAC IOR Task Force, presided over the open meeting and gave the following remarks:

Good afternoon to those on the east coast, and good morning to those on the west coast. Thank you for participating in the open meeting of the NASA Advisory Council Task Force on International Space Station Operational Readiness.

As directed by our two Agencies, the NASA Advisory Council Task Force and the Federal Space Agency Advisory Expert Council Joint Commission have reviewed the safety and operational readiness of the International Space Station, the flight readiness of the Expedition 11 crew, and the Russian and U.S. flight control teams' preparedness to accomplish the Expedition 11 mission. Additionally, the TF-AEC reviewed preparations for the Expedition 10 crew landing and crew recovery from the landing site.

I will begin with a summary of our findings:

- The TF-AEC Joint Commission finds that the Expedition 11 crew and Visiting Crew 8 have successfully completed training in full and passed their examinations. Based on their medical examinations and their results, the crews are considered ready for this mission.*
- The Russian and U.S. flight control teams are prepared to support the Expedition 11 mission which includes two planned Extravehicular Activities.*
- The ISS is safe and operationally ready to support the crew for the duration of their mission.*
- Finally, all vehicle and operational reviews have been completed to support the safe ascent of the Expedition 11 crew and Visiting Crew 8 on Soyuz TMA-6 and the safe descent and landing of the Expedition 10 crew and Visiting Crew 8 aboard Soyuz TMA-5.*

The findings of this report resulted from meetings in Moscow, Russia, on March 22nd through the 24th, conducted at TsNIIMash and the Gagarin Cosmonaut Training Center, and meetings in Houston, Texas, at the Johnson Space Center on April 4th through the 6th.

The briefings conducted last month in Moscow included the following topics: Flight Plan for ISS; Oxygen supply system, including Elektron and ECLSS; Medical Operations; Soyuz TMA-6 Readiness; Soyuz TMA-5 Readiness; EVA; MCC-M Flight Control; MCC-M Facility; Crew Training; Biomedical Training; TMA-5 crew training; Search and Rescue Complex Readiness; and a visit with the crews.

The briefings conducted last week at the Johnson Space Center included: MCC-H Readiness, EVA plans, Return to Flight Status, including Contingency Shuttle Crew Support, Program Manager's status, TVIS, ECLSS system status, and CMG status.

From these briefings, the Joint Commission produced the following observations: The Joint Commission expects continued intermittent operation from Elektron until the new unit, number eight, is installed. The Joint Commission is confident in the crew's ability to maintain safe operations with the parts and supplies on board.

Recent hardware failures on TMA-5 have been thoroughly investigated. The anomalous thruster operation and partial back-up battery discharge anomalies have all been corrected. The Joint Commission believes that all problems have been adequately addressed and that Soyuz TMA-5 is ready to return the Expedition 10 crew.

Final processing of TMA-6 has been completed at Baikonur, including pressure checks. The planned launch of TMA-6 is scheduled for April 15th. The Joint Commission believes TMA-6 is ready for launch.

The crew has been medically cleared by the Multilateral Space Medical Board and the Multilateral Medical Operations Panel. The Expedition 11 crew and Visiting Crew 8 have successfully completed medical training, have passed their medical examinations, and are ready for the mission.

The Nutrition Working Group has developed measures to supply the Expedition 11 crew with sufficient food onboard ISS.

Current countermeasure equipment is operational and sufficient to maintain crew health during Expedition 11. The Russian BD-1 treadmill will be tested as an integrated unit with TVIS, as crew time allows. Once the crew size increases to six, two TVIS devices will be required on ISS.

Based on analysis performed, the environment and radiation parameters onboard ISS are nominal.

The Joint Commission has concluded that the flight crew, ground support, and search and rescue forces are trained and ready to perform this mission.

The Joint Commission understands that the flight planning and control teams are busily preparing and configuring operations for the support of Expedition 11, including the planned long-duration flight of a European Space Agency astronaut. This activity includes the addition of ESA flight control personnel as well as the reconfiguration of software for the Mission Control Center-Moscow. Although the schedule is aggressive, MCC-Moscow and MCC-Houston believe these tasks will be accomplished successfully.

The Joint Commission noted that the EMU suits and Quest heat exchanger loop were not ready to support US segment EVAs. The Joint Commission was also briefed on the failures of two of the four CMGs and the resulting attitude control limitations. These three items will be recovered during the STS-114 mission.

The Joint Commission observes that much work has been done to safely return the Space Shuttle to flight. In addition to these activities, an uncertified Contingency Shuttle Crew Support plan has been developed by NASA, which has been assessed without the support or agreement of the Russian side. The TF-AEC therefore was unable to take a joint position concerning this capability.

This constitutes our completed assessment as of this date.

Do any of the Task Force members on line have any questions? There were no questions.

Are there any objections to our findings? There were no objections.

Fine, then based on our fact-finding meetings, the full Task Force and Joint Commission concur with the assessment I've outlined here.

In performing its assessment, the Joint Commission appreciates the efforts of the subject matter experts in providing full and open discussions. We will continue to follow the mission prior to the anticipated launch of the Expedition 11 crew, scheduled to occur no earlier than April 15th. If any concerns develop as we proceed toward launch, Todd McIntyre, Joe Engle and I will contact NASA and the Task Force members immediately.

We wish both crews well.

Thank you again for your participation.

Todd McIntyre:

This meeting is adjourned at 1:12pm. Thank you all for participating.

Attachment A

NASA Advisory Council
Task Force on International Space Station Operational Readiness
April 12, 2005
NASA Headquarters
Washington, DC

Task Force Membership

Chairman

Lt. Gen. Thomas Stafford, USAF (Ret.)

Members

Col. James Adamson, U.S. Army (Ret.)
Mr. Percy Baynes
Dr. Kathy Clark
Mr. Benjamin Cosgrove
Mr. Joseph Cuzzupoli
Dr. Charles Daniel
Dr. Craig Fischer
Mr. J. Milt Heflin
Dr. Daniel Heimerdinger
Maj. Gen. Ralph Jacobson, USAF (Ret.)
Mr. Jim Lloyd
Dr. Ronald Merrell
Mr. David Mobley
Dr. Shawn Rahmani
Dr. Peggy Whitson

Technical Advisors

Maj. Gen. Joe Engle, USAF (Ret.)
Maj. Bob Maiberger, U.S. Army (Ret.)

Executive Secretary

Mr. Todd McIntyre

Asst. Executive Secretary

Ms. Holly Stevens

Attachment B

NASA ADVISORY COUNCIL TASK FORCE ON INTERNATIONAL SPACE STATION
OPERATIONAL READINESS

April 12, 2005
NASA Headquarters
Washington, DC

Meeting Attendees

Stafford Task Force Representatives

Chairman, Lt. Gen. Tom Stafford, USAF (Ret.) – via teleconference
Mr. Percy Baynes – via teleconference
Dr. Kathryn Clark – via teleconference
Mr. Joe Cuzzupoli – via teleconference
Dr. Charles Daniel – via teleconference
Mr. Milt Heflin – via teleconference
Dr. Daniel Heimerdinger – via teleconference
Maj. Gen. Ralph Jacobson, USAF (Ret.) – via teleconference
Mr. Jim Lloyd
Dr. Ronald Merrell – via teleconference
Dr. Shawn Rahmani – via teleconference

Stafford Task Force Technical Advisors

Maj. Gen. Joe Engle, USAF (Ret.) – via teleconference
Maj. Bob Maiberger, U.S. Army (Ret.) – via teleconference

Task Force Executive Secretary

Mr. Todd McIntyre

Task Force Asst. Executive Secretary

Ms. Holly Stevens – via teleconference

NASA

Ms. Melissa Mathews, NASA HQ Public Affairs