

**National Aeronautics and Space Administration
Washington, DC**

**RETURN TO FLIGHT
TASK GROUP**

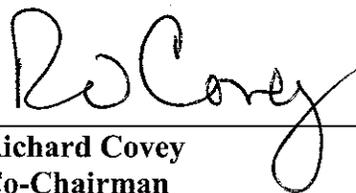
July 22, 2004

**Teleconference
Houston, Texas**

PUBLIC MEETING MINUTES



**Vincent Watkins
Executive Secretary**



**Richard Covey
Co-Chairman**

**RETURN TO FLIGHT (RTF) TASK GROUP
Teleconference, Houston, TX
July 22, 2004**

**PUBLIC MEETING REPORT
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Return to Flight (RTF) Task Group
Teleconference, Houston, TX
July 22, 2004

Polling of Task Group Members and Administrative Remarks

Mr. Vincent Watkins, Executive Secretary of the RTF Task Group, began the meeting by welcoming the public and news media to the July 22 Teleconference Plenary. The public and news media were monitoring the teleconference via a "listen" only connection. Mr. Watkins indicated that the teleconference was being recorded and would be available on the <http://returntoflight.org> website. Task Group members were reminded to mute their phone when not speaking and identify themselves whenever they spoke so that their comments would be correctly reflected in the minutes. Lastly, he asked each presenter to refer to their charts by page number in order to help participants follow along during the presentation.

Mr. Watkins conducted the roll call of Task Group members and determined that a quorum of members were present to proceed with the meeting. Members in attendance are indicated in Appendix C.

Introductory Remarks

Mr. Richard Covey, Co-Chair of the RTF Task Group, welcomed the public, media guests, and Task Group members. He noted that this was the first of several meetings that the Task Group plans to conduct by teleconference in order to expedite the Task Group's work. The purpose of today's meeting was to address two closure packages brought forward in response to actions taken by the Agency in response to recommendations from the Columbia Accident Investigation Board (CAIB). A summary of the closure packages would be presented by the Operations Panel and Col. Jim Adamson, Operations Panel Lead, would guide the Task Group through the review process. Mr. Covey outlined the process of how Task Group members received the closure packages from the Space Shuttle Program (SSP) and the Space Flight Leadership Council. The packages were reviewed by members of the Operations Panel for completeness and summarized into the public meeting charts submitted to Task Group members for clarification in preparation of today's deliberations. Task Group members who were not able to be present today on the teleconference, had the opportunity to indicate their nonconcurrence of the closure recommendation however, none were received from any member. Mr. Covey indicated that the Task Group would be presented with presentations on the closure recommendations from NASA SSP on R4.2-5, Foreign Object Debris and R10.3-1, Digitize Closeout Photography.

Mr. Covey turned the meeting over to Col. Jim Adamson for his opening remarks.

Col. Adamson introduced himself as the Operations Panel Lead and indicated that CAIB R4.2-5, Foreign Object Debris would be briefed by Operations Panel member, Gen. Forrest McCartney and that R10.3-1, Digital Closeout Photography by Mr. Robert Sieck. The Operations Panel would recommend unconditional closure on both recommendations and describe the remaining work activities to be completed by the SSP prior to flight. Col. Adamson emphasized the importance of the Space Flight Leadership Council letter signed by the Co-Chairmen, Mr. William Readdy and Dr. Michael Greenfield. The Operations Panel attended several fact-finding meetings with NASA over the last six months in order to support the recommendations that were being reviewed today. In addition, Operations Panel members talked to the workforce at Kennedy Space Flight Center (KSC) on numerous occasions to evaluate the impact on the implementation of these changes. Col. Adamson stated that the results of these fact-findings would be presented today and he extended his thanks to Gen. McCartney and Mr. Sieck for their leadership and help in assembling the packages for discussion.

Col. Adamson turned the meeting over to Gen. McCartney to present the closure recommendation for R4.2-5, Foreign Object Debris to the Task Group.

KSC Foreign Object Debris (R4.2-5) Presentation

Gen. McCartney introduced himself and stated that the origin of R4.2-5 was based on the CAIB interviewing KSC employees who expressed concern regarding management actions to redefine the

definition of Foreign Object Debris (FOD). The management actions had good intentions; however it was not well understood by some of the workforce. Gen. McCartney stated that KSC should use definitions for FOD consistent with industry standards and Department of Defense (DOD) facilities. KSC had performed benchmarking for best practices and determined that KSC was effective with the provisions of FOD implementation. KSC adopted their standard from the National Aerospace FOD Prevention Institute (NAFPI) which is a recognized institute for FOD prevention. The term "processing debris" had been eliminated from all procedures and no longer used in any KSC procedures. Metrics will be tracked and reviewed at significant management meetings by showing the Top 5 FOD items collected and the Top 5 locations where FOD is occurring. The FOD data will be collected and entered into a robust database that will be accessible by Quality Assurance personnel to help perform inspections and site surveillance of the FOD program. NASA Safety and Mission Assurance will perform a baseline audit three months after implementation to determine process effectiveness. Definitions for foreign object debris, foreign object damage, and clean-as-you-go were established and are compliant with NAFPI guidelines and industry standards. He described the schedule for updating operating procedures and database and workforce training rollouts. The activities that had been completed by KSC in satisfying closure of this recommendation and meeting the intent of CAIB were summarized. Gen. McCartney stated that the only Operations Panel concern is related to the self reporting system that ensures that the workforce understands that no one will be penalized but will be encouraged to identify FOD.

Mr. Covey asked if the additional oversight and the data being collected would hamper the long-term practice of self-reporting which is the key to a successful FOD program. Gen. McCartney responded that KSC management intends to monitor the implementation and attitude of the workforce and ensure the FOD program has positive incentives for detection and elimination which is very important toward preventing the generation of FOD.

Mr. Covey stated that the key is to make sure management is aware of the reporting concerns and asked if this item needs to be reflected in the Task Group's Interim Report. Gen. McCartney agreed and Mr. Covey recommended that the Operations Panel capture concerns related to negative reporting of FOD in the next Interim Report (Action #1).

Mrs. Susan Livingstone asked if there were plans for NASA to take lessons-learned from the KSC FOD program and roll out to the other centers that are involved in FOD prevention. Gen. McCartney responded that he was not aware of any efforts by NASA to incorporate at other centers and he asked Jim Lloyd if he was aware of any efforts. Mr. Lloyd stated that there was a follow-on activity after CAIB called the Diaz Review which did not determine the need for NASA to look at other FOD reduction programs within the Agency. However, NASA's Office of Safety and Mission Assurance (OSMA) will ensure that NASA's acquisition guidelines will establish a consistent foundation toward implementing FOD programs across NASA. He mentioned that OSMA will perform benchmarking to look at other acquisition guidelines used by other government agencies such as DOD.

Mr. Covey ask if the planned work item of completing the baseline audit identified for R4.2-5 were related to NASA's "raising the bar" and enhancing the FOD program which goes beyond satisfying the CAIB's recommendation and therefore may be determined as a conditional closure item for the Task Group to track. Gen. McCartney agreed that the actions taken by KSC were clearly a raising the bar or self-imposed action intended to improve the quality of their implementation and was not necessarily a constraint for closure. Dr. Dan Crippen suggested that the Task Group make this a conditional closure based on the approach taken by the Task Group on previous recommendations. He stated that the audit activities were not directly called for by the CAIB recommendation but they are items that the Task Group expects NASA to fully comply with and complete. The Task Group should be mindful of the audits and associated results before recommending full closure. Col. Adamson indicated that the Operations Panel's rationale for recommending unconditional closure was based on NASA not needing to perform any additional activities other than what was already planned to satisfy the intent of CAIB; however, for consistency, he agreed with Dr. Crippen's assessment that the Task Group should recommend that completion of the baseline audit become a condition for closure for R4.2-5. Mr. Covey asked if there were any other comments from other Task Group members concerning conditional closures for this recommendation. No other Task Group member responded with any concerns.

Mr. Covey recommended, based on the closure package submitted by NASA, the Operations Panel's presentation, and the associated deliberation, the record reflect that the Task Group believes NASA has conditionally met the intent of CAIB R4.2-5 and NASA will be informed of the conditions for full closure. There were no objections from the Task Group. He turned the meeting over to Col. Jim Adamson and Mr. Bob Sieck to present the closure recommendation for R10-3-1, Digitize Closeout Photography to the Task Group.

Digitize Closeout Photography (R10.3-1) Presentation

Mr. Bob Sieck introduced himself and stated that the origin of R10.3-1 was based on the CAIB recommendation to develop an interim program of closeout photographs for critical subsystems that differ from engineering drawings and digitize those photographs to make them available for on-orbit troubleshooting. The CAIB had difficulty determining the "as flown" configuration of the vehicle through drawings they were provided. As background, he stated the engineering drawings had not been kept up-to-date and did not reflect changes from previous engineering orders and field changes through Material Review Boards (MRB). The goal is to improve the closeout photography system particularly in the area of field changes and make those photographs available to users in the field as well as during Shuttle missions. The closeout photographs will not replace the drawings and their associated changes but will be used to supplement drawing deficiencies with enhanced photographs.

Mr. Sieck outlined the approach NASA has taken for implementation such as developing new closeout requirements, clarifying closeout inspection requirements, mandating photography of all MRB conditions are entered into the Shuttle Image Management System (SIMS) database, obtaining photography requirements from flight elements, incorporating SIMS database enhancements, implementing changes to procedures to standardized the photography process, incorporating upgrades to photographic equipment and developing user certifications and training.

Mrs. Livingstone asked if training had been initiated for personnel who support the Mission Evaluation Room (MER). Mr. Sieck responded some of the MER personnel had completed training and several trainers who will train others on digitize photography have completed their training.

Mr. Sieck outlined the Operations Panel assessment for closure based on previous fact-finding sessions, the program's identification and implementation of requirements for closeout photographs, demonstration of the SIMS database upgrades, and the positive responses from trained users. The ongoing/planned work includes continuing to demonstrate the database with the Mission Management Team to allow more users to have the opportunity to work with the database during simulation training. In addition, the closeout photography requirements will be incorporated into KSC procedures and there is an interim policy directive in place which ensures that photographs will be captured during vehicle closeout. In closing, Mr. Sieck stated that NASA has taken the initiative to satisfy the intent of CAIB R10.3-1.

Mr. Covey asked if the interim policy guidance is enough to meet the intent of the CAIB recommendation in lieu of not having the closeout photography requirements incorporated into the KSC work documents. Mr. Sieck responded it is an ongoing activity to update all work documents with the closeout photography requirements but all work documents had not been updated. Mr. Covey asked if there were discrete or specific planned completion dates for those work activities. Mr. Sieck answered most of the work documents are scheduled to be updated during September 2004 and updates to the rest will occur well out into next year. Some of the documents used for STS-114 would be updated sometime next year.

Mr. Covey concluded the Task Group should not make the incorporation of the general closeout photography requirements a condition for closure because the estimated completion time is beyond return to flight; however, demonstration of the SIMS database during training simulations should be a condition for closure. Mr. Sieck agreed that it should be a condition for closure based upon precedent established by the Task Group for previous closure acceptances. Dr. Crippen suggested that the Task Group consider the completion of KSC photographer training, completion of the SIMS familiarization course, and development of the computer-based training as conditions for closure as well. Mr. Covey asked if there were any other comments from the Task Group members for items for condition closure. Col. Adamson

said he had an administrative procedure recommendation for the Task Group to consider. He stated the Operations Panel had existing Requests For Information (RFI) on the two recommended conditions for closure. One RFI requires the SSP to provide objective evidence on completion of the baseline audit for R4.2-5 and the second RFI requires the SSP to demonstrate use of the SIMS database during a training simulation. Col. Adamson suggested that the Operations Panel take the action to review RFI's related to R4.2-5 and R10.3-1 and either 1) closeout existing RFI's and reopen new RFI's to satisfy these conditions for closure or 2) leave any existing RFI's open if they pertain to these conditions for closure (Action #2). Mr. Covey thought Col. Adamson's approach was reasonable and asked the RTF Task Group support staff to ensure there were no concerns or issues with this action.

Mr. Covey asked for final comments from the Task Group on the decision to track completion of the KSC photographer training, completion of the SIMS familiarization course and computer-based training development, and demonstration of the SIMS database during training simulations as conditions for the Task Group's acceptance for closure on R10.3-1. Mr. Joe Cuzzupoli indicated he was in full agreement with the decisions and recommendations for conditional closures based on suggestions from Dr. Crippen and Mr. Covey.

Mr. Covey recommended, based on the closure package submitted by NASA, the Operations Panel's presentation and the associated deliberation, the record reflect that the Task Group believes NASA has conditionally met the intent of CAIB R10.3-1 and NASA will be informed of the conditions for full closure. There were no objections from the Task Group. He thanked the Operations Panel for the quality of work done to bring these closure packages forward and he turned the meeting over to the Executive Secretary to review the actions.

Mr. Watkins stated he had recorded two actions. Action #1 - Operations Panel to capture concerns related to negative reporting of FOD in the next Interim Report. Action #2 - Operations Panel to review existing open RFI's and determine which ones need to be closed or open for the conditional closures identified for R4.2-5 and R10.3-1. Two additional actions were recorded by Mr. Covey. Action #3 - RTF Task Group staff submit draft of a memorandum to outline the conditional closures for R4.2-5 and R10.3-1 to NASA. Action #4 - RTF Task Group members should send any feedback/comments to the Executive Secretary on the teleconference process and any recommended improvements.

Mr. Covey thanked the Task Group members for calling in and participating in the review of the closure packages. He stated the Task Group will continue with the teleconferences in order to facilitate and expedite the review and closure acceptance. Mr. Covey adjourned the meeting.

RETURN TO FLIGHT TASK GROUP

Public Meeting Agenda
July 22, 2004

Location: Teleconference
Houston, TX

1145 – 1200	Task Group Call Into Telecon	RTG Task Group
1200 – 1202	Public Connect Into Telecon	
1202 – 1205	Polling of Task Group Members Administrative Remarks	Mr. Vincent Watkins Executive Secretary
1205 – 1210	Introductory Remarks	Mr. Richard Covey Co-Chair
1210 – 1215	Operations Panel Opening Remarks	Col. James Adamson Operations Panel Lead
1215 - 1235	KSC Foreign Object Debris (R4.2-5)	Lt. Gen. Forrest McCartney
1235 – 1245	Task Group Deliberation/Questions	RTF Task Group
1245 - 1305	Digitize Closeout Photography (R10.3-1)	Mr. Bob Sieck
1305 – 1315	Task Group Deliberation/Questions	RTF Task Group
1315 – 1330	Action Item Summary and Closing Remarks	Mr. Richard Covey Co-Chair

RTF Task Group Membership

Co-Chairmen of the Return to Flight Task Group

Lt. Gen. Thomas Stafford, USAF (Ret.), Chairman, NASA Advisory Council Task Force on International Space Station Operational Readiness (Stafford Task Force), President, Stafford, Burke & Hecker Inc., Astronaut (Gemini 6A, Gemini 9A, Apollo 10, CDR of the Apollo-Soyuz Test Project)

Mr. Richard O. Covey, Vice President, Support Operations, Boeing Homeland Security and Services, Astronaut (STS-51I, STS-26, STS-38, STS-61)

Task Group Members

Colonel Jim Adamson, US Army (Ret.), CEO, Monarch Precision, LLC, Astronaut (STS-28 & 43)

Major General Bill Anders USAF (Ret.), Retired Chair and CEO of General Dynamics Corporation, Astronaut (Apollo 8)

Dr. Walter Broadnax, President, Clark Atlanta University

Dr. Kathryn Clark, Vice President for Education, TIVY, Incorporated

Mr. Ben Cosgrove, Senior Vice President, Boeing Commercial Airplane Group (Retired)

Dr. Dan Crippen, Former Director of the Congressional Budget Office, Member Aerospace Safety Advisory Panel

Mr. Joseph Cuzzupoli, Vice President and K-1 Program Manager, Kistler Aerospace Corporation

Dr. Charles Daniel, Engineering Consultant, Stafford –Anfimov Task Force

Dr. Richard Danzig, J.D., Director of National Semiconductor Corporation and Human Genome Sciences, Senior Fellow, Center for Naval Analysis

Dr. Amy Donahue, Assistant Professor of Public Administration, University of Connecticut

General Ronald Fogleman, USAF (Ret.), President and Chief Operating Officer of Durango Aerospace Incorporated

Ms. Christine Fox, President, Center for Naval Analyses

Mr. Gary Geyer, Aerospace Consultant, Served for 26 years with the NRO

Colonel Susan Helms, Vice Commander, 45th Space Wing Patrick AFB, Florida

Mr. Richard Kohrs, Chief Engineer, Kistler Aerospace Corporation

Mrs. Susan Livingstone, Former Under Secretary of the Navy

Mr. James Lloyd (Ex Officio Member), Deputy Associate Administrator, Office of Safety & Mission Assurance, NASA Headquarters

Lieutenant General Forrest McCartney, USAF (Ret.), Aerospace Consultant, Former Director of Kennedy Space Center

Dr. Rosemary O'Leary, Professor of Public Administration, Syracuse University, Member Aerospace Safety Advisory Panel

Dr. Decatur Rogers, Dean, Tennessee State University, College of Engineering, Technology and Computer Science

Mr. Sy Rubenstein, Aerospace Consultant, Former (Ret) President Rockwell International Space Division.

Mr. Robert Sieck, Aerospace Consultant, Former Director of Shuttle Processing, Kennedy Space Center

Mr. Thomas M. Tate, Consultant, Vice President of Legislative Affairs for Aerospace Industries Association (AIA) (Retired)

Dr. Kathryn C. Thornton, Professor, University of Virginia School of Engineering and Applied Science, Astronaut (STS-33, STS-49, STS-61)

Mr. Bill Wegner, Consultant, Former Deputy Director to Admiral Rickover in Nuclear Navy Program

Task Group Support Staff

Mr. Charles Armstrong, Technical Panel Representative
Ms. Shannon Bach, Administration, Databases
Mr. Thomas Diegelman, Integrated Vehicle Assessment Sub-Panel Representative
Mr. Dave Drachlis, Public Affairs and Editorial Sub-Panel Representative
Maj. Gen. Joe Engle, Technical Support
Ms. Lillian Hudson, Administration, Travel
Ms. Sharon Martin, Budget Manager
Ms. Susie Mauzy, Closure Representative
Mr. George Mueller, Management Panel Representative
Ms. Kitty Rogers, Administration Representative
Ms. Susan Stone, Administration, Travel
Ms. Barbara Teague, Operations Panel Representative
Mr. Vincent Watkins, Executive Secretary
Ms. Tamara West, Secretary

RETURN TO FLIGHT (RTF) TASK GROUP
Webster Civic Center, Houston, TX
July 22, 2004

MEETING ATTENDEES

RTF Task Group Members:

Richard Covey (Co-Chairman)
Jim Adamson
Kathryn Clark
Amy Donahue
Christine Fox
Forrest McCartney
Rosemary O'Leary
Bob Sieck
Kathy Thornton
Dan Crippen
Walter Broadnax
Gary Geyer
Susan Livingstone
James Lloyd (Ex-Officio)
Thomas Tate
Bill Wegner
Joseph Cuzzupoli
Ben Cosgrove
Chuck Daniel
Richard Kohrs
Decatur Rogers
Sy Rubenstein

Affiliation:

Boeing Homeland Security and Services
Monarch Precision, LLC
TIVY, Inc.
University of Connecticut
Center for Naval Analyses
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Syracuse Univ., Aerospace Safety Advisory Panel
Consultant
University of Virginia
Aerospace Safety Advisory Panel
Clark Atlanta University
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Consultant
NASA Headquarters
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Kistler Aerospace
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Kistler Aerospace
Tennessee State University
Consultant

RTF Task Staff Members:

Charles Armstrong
Shannon Bach
Tom Diegelman
Dave Drachlis
Joe Engle
Susan Mauzy
Ned Mueller
Kitty Rogers
Susan Stone
Barbara Teague
Vincent Watkins (Executive Secretary)

Affiliation:

RTF TG Staff
RTF TG Staff

NASA Attendees:

Deborah Byerly
Chuck Cole
Robert Galvez
Jimmie Griggs
Jim Halsell
George Jacobs
Ronnie Lanier
Larry Neu
Pete Nickolenko
Rebekah Reed
Gary Snyder

Affiliation:

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NASA/JSC
NASA/JSC OIG
NASA/JSC
NASA/KSC
NASA/JSC
NASA/KSC OIG
NASA/KSC
NASA/JSC
NASA/KSC

Other Attendees:

Bill Adkins
Mark Carreau
Marcia Dunn
Mark Evangelista
Ed Feddeman
Todd Halverson
Tom Hammond
Richard Harris
Bill Harwood
Isao Kanazawa
Peter King
Warren Leary
Brad Liston
Maggie McKee
Frank Mooring
Dave Santucci
Gwenyth Shaw
Tracey Watson

Affiliation

House Science Committee
Houston Chronicle
Associated Press
Clear Lake Citizen
House Science Committee
Florida Today
House Science Committee
NPR
CBS News
JAXA
CBS Radio
New York Times
Reuters
New Scientist Magazine
Aviation Week
CNN
Orlando Sentinel
USA Today