



Space Life Sciences Directorate

STS-114 Space Shuttle Program Flight Readiness Review (FRR)

June 28-29, 2005



SPACE LIFE SCIENCES DIRECTORATE

STS-114 Flight Readiness Review

ORGANIZATION SA

PRESENTER

SA/J. R. Davis

DATE

June 28-29, 2005

SPACE SHUTTLE STATUS

Crew Health

- Crew members are in good health and have been certified for flight
- Medical Operations is ready to support STS-114 operations

Crew Radiation Exposure

- Crew radiation exposure for Shuttle crew projected to be within acceptable limits

Water & Air Quality Assessments

- OPF Post-Service Water Sample is within specifications.
- MPLM Air Quality is projected to be well within limits for crew respiration upon module entry.

Life Sciences Human Research - Detailed Supplemental Objectives (DSOs)

- Pre-, Post-, and In-Flight activities are planned and scheduled.



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SPACE SHUTTLE STATUS- (continued)

Nominal Forward Work of Note

- > L-15 and L-3 day water samples and analysis are planned.
- > L-1 day Shuttle Air Sample
- > L-1 day Shuttle Microbial Surface Sampling

Special Discussion Topics

- > None



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ISS STATUS

ISS Crew Radiation Exposure

Crew radiation exposure for Increment 11 is projected to be within acceptable limits

Water and Air Quality Assessments

- > All required samples (per 9S Exceptions) returned.
- > Preliminary analysis of all water samples showed that water was of sufficient quality for consumption at the time of sample acquisition:
- > One slightly elevated nickel result in an SRV-K sample - not confirmed by Russian sample analysis.
 - > No impact for continued operations.
- > Preliminary analysis of Grab Sample Container (GSC) shows nominal atmospheric profile at the time of sample acquisition.
- > Dual Sorbent Tubes (DSTs) have been de-sorbed. Analysis is in work
 - > Analysis delayed due to MPLM sample analysis. ECD 07/08/05

Exceptions

- > Air, E10SSORR-003, and Water, E10SSORR-004, are opened and will remain open contingent upon joint US/Russian post-flight analysis.



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EVA STATUS

STS-114 EVA Assessment

- STS-114 EVA Certificate of Flight Readiness (CoFR2) and LF1 Certificate of EVA Readiness (CoER1) were completed on 4/12/05
- STS-114 EVA Delta-CoFR2 and LF1 Delta-CoER1 were completed on 6/21/05
- Continued participation in Cure In-Place Ablator Applicator (CIPAA) contingency tile-repair assessment
- No constraints for planned STS-114 EVA activities

LF1 Stage - Increment 11 EVA Assessment

- Medical and Radiation Assessments to be performed in advance of applicable XA CoER.



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Process Changes

The Engineering Directorate and Space Life Sciences Directorate conduct a joint EA/SA Flight Readiness Assessment (FRA) prior to each flight to provide a comprehensive review of the directorate's systems that support medical operations and/or impact crew health.

SLSD Facilities and Laboratories

SLSD facilities and laboratories are ready to support launch, flight, on-orbit operations, and post-flight activities.

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<p>Risks</p> <p><u>ISSP Risks</u> Top Program Risks (TPR):</p> <p>TPR 4706. ISS Re-plan Environmental Health System - Water Quality Monitoring (Watch Item)</p> <p><u>Status:</u> Revised Total Organic Carbon Analyzer-2 (TOCA-2) required prior to Regenerative Life Support System</p> <p>TPR 4707. ISS Re-plan Environmental Health System - Air Quality Monitoring</p> <p><u>Status:</u> The diagnostic In-flight Maintenance (IFM) executed 4/4/05 was successful and confirmed the suspected Volatile Organic Analyzer (VOA) hardware faults. VOA Repair parts were delivered on 18P. IFM not currently in the timeline. SA is working with OA for crew time to be made available to effect the repairs prior to STS-114/LF-1 launch.</p> <p><u>SSP Risks:</u></p> <p>None</p>			

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<p>Contingency Shuttle Crew Support (CSCS) - STS-300</p> <p>SLSD is prepared to support CSCS and the launch of STS-300 45 days after CSCS declaration.</p> <p>Dissenting Opinions - None</p> <p>SLSD Flight Activities Control Board (FACB) members along with the SLSD Discipline Technical Warrant Holders were polled to ensure each team member agreed with the SLSD CoFR statement. All team members unanimously concurred with the conclusions and proposed recommendations. There were no dissenting opinions. This agreement is reflected on the endorsed SLSD CoFR certificates herein.</p>			



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Certification of Flight Readiness Statement

SLSD is ready to proceed with STS 114 Launch and Stage LF1. The applicable SSP and ISS CoFR endorsements, associated waivers, deviations, and two (2) exceptions noted herein have been assessed and no constraints to launch or readiness of flight STS-114 have been identified. SLSD will continue to assess the decision for continued Increment 11 operations.

Concurrence by:

SA/J.R. Davis, M.D. Director, Space Life Sciences Directorate/
Warrant Holder, Independent Health and Medical Authority (IHMA)



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