Report to COMSTAC of the Operations Working Group

Presented to: COMSTAC
By: Janet Karika, OWG Chair
    Ray Johnson, OWG Deputy Chair
Date: September 17, 2014
# OWG Agenda

**Operations Working Group 3:00 p.m. – 5:00 p.m. Janet C. Karika, Chair**

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<tr>
<th>Time</th>
<th>Topic</th>
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<td>3:00 – 3:15</td>
<td>Introductions, Review of Previous OWG</td>
<td>Janet Karika, Chair</td>
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<td>Board (CLSRB) Overview</td>
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<td>3:40 – 4:00</td>
<td>Proposed Spaceport Guide</td>
<td>Robert Consolo, ERAU</td>
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<td>4:00 – 4:15</td>
<td>Recommended Practices for Human Spaceflight Occupant Safety</td>
<td>Mr. Randy Repcheck, FAA/AST</td>
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<td>4:15 – 4:45</td>
<td>Proposed Initial Commercial Spaceflight Standards</td>
<td>Janet Karika, Chair</td>
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<td>4:45 – 5:00</td>
<td>New Business, Wrap Up, OFRs</td>
<td>Janet Karika, Chair</td>
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Operations Working Group (OWG) Overview

• **Operations Working Group Charter**
  – Identifies key launch operations, support, and processing issues affecting U.S. commercial space competitiveness
  – Supports accessibility of new commercial space ventures to launch sites and services
  – Investigates options for commercialization/privatization of launch services, support, and facilities.

• **COMSTAC OWG members**
  Chair: Janet Karika, Vice Chair: Ray Johnson
  – Brett Alexander - Mike Gold - Debra Facktor Lepore
  – Christine Anderson - Jeff Greason - Michael Lopez-Alegria
  – Mark Campbell - Livingston Holder - Russ McMurry
  – Dan Collins - Tim Hughes - Charlie Precourt
  – Patricia Cooper - Steve Isakowitz - Carl Rising
  – Pete Fahrenthold - Bill Khourie - Mark Sundahl
  – Oscar Garcia - Chris Kunstalder - Will Trafton
Air Force Current Launch Schedule Review Board (CLSRB) Overview

Observation

• Current Air Force CLSRB process meets current Air Force Range needs
• The full potential commercial use of Air Force Ranges is unknown at this time

Finding

• Transparency into Air Force Range Scheduling is beneficial to both Government Agencies and Industry
• Future demand by both commercial and government launch customers on Air Force Ranges may present a challenge that will continue to be evaluated
Recommended Practices for Human Spaceflight Occupant Safety

Observations
• FAA’s response to COMSTAC collected comments has generated some questions

Recommendation
• FAA/AST and COMSTAC continue to work together to further define the recommended practices
Medical Issues for Commercial Suborbital Space Flight Crewmembers

Observation
• Minimal suborbital flight operational experience above 100 km exists

Finding
• Database needs to be expanded, medical evaluations and an independent data repository would be helpful

Recommendations
• **FAA/AST should require an FAA First Class medical certificate for pilots with a well defined, documented, and communicated waiver process inherent to medical certification similar to past spaceflight experience. FAA/AST should begin the process of modifying the regulation.**
• FAA/AST should periodically re-evaluate medical standards for flight critical crewmembers
• FAA/AST should advocate to the suborbital industry for investigation and documentation on the effects on flight critical crewmembers performance from effects of multiple suborbital flights
• FAA/AST should establish a non-attributable repository for flight critical crewmember medical data
Proposed Initial Commercial Spaceflight Standards

Observations

• Industry standards for commercial spaceflight are beneficial and needed
  – Congress and the FAA have stressed the need for the creation of industry standards

• Standards must be prioritized and an initial list created and submitted to establish the standards development process

Recommendation

• FAA/AST and industry via COMSTAC engage in on-going dialogue on development of human commercial spaceflight industry standards and establish the process through which a prioritized list of these standards will be ratified.
  – An initial list is attached. The COMSTAC will begin vetting the next list for submission via the newly formed Standards Working Group
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<thead>
<tr>
<th>Proposed Initial Commercial Spaceflight Standards</th>
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<td>Submitted to the FAA by COMSTAC, 17 September 2014</td>
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1. Breathable Atmosphere  
2. Crew-Imparted Loads  
3. Hazardous Test Notification  
4. Landing Gear  
5. Occupant Restraints and Acceleration Support  
6. Propellant Handling  
7. Risk Communication