

Meeting Minutes



**Federal Aviation
Administration**

Commercial Space Transportation Advisory Committee (COMSTAC)

Thursday, December 15, 2022

Zoom & YouTube Meeting

12:30 pm – 1:37 pm

List of Committee Members Present at the Meeting

Major General Edward Bolton, USAF (Ret), SGE, former FAA Associate Administrator

Capt. Joseph DePete, President, Air Line Pilots Association

Ms. Karina Drees, **COMSTAC Chair**, President, Commercial Spaceflight Federation

Mr. Mat Dunn, Senior Director of Global Government Affairs, Space Exploration Technologies

Mr. John Elbon, Chief Operating Officer, United Launch Alliance

Mr. Mike French, **COMSTAC Vice-Chair**, Vice President of Space Systems, Aerospace Industries Association

Ms. Therese Jones, Senior Director of Policy, Satellite Industry Association Holdings, LLC

Mr. Dale Ketcham, Vice President Government and External Relations, Space Florida

Ms. Kate Kronmiller, Vice President of Government Relations, Jacobs

Major General Ted Mercer, USAF (Ret), CEO and Executive Director, Virginia Commercial Space Flight Authority

Ms. Megan Mitchell, Vice President of Government Relations, Blue Origin

Mr. Mike Moses, President of Space Missions and Safety, Virgin Galactic

Dr. Dava Newman, Apollo Program Professor of Astronautics, Massachusetts Institute of Technology

Dr. George Nield, President, Commercial Space Technologies

Dr. Michelle Parker, Vice President and Chief Engineer, Space and Launch Engineering, Boeing

Ms. Melanie Preisser, Vice President of National Systems, York Space Systems

Ms. Caryn Schenewerk, Vice President of Regulatory and Government Affairs, Relativity Space

Ms. Amanda Simpson, Vice President for Research and Technology, Airbus

Mr. Ganesh Sitaraman, New York Alumni Chancellor's Chair in Law, Vanderbilt University

Mr. Jay Skylus, Chief Executive Officer and Chief Engineer of the Aether Transport System, Aevum

Ms. Sita Sonty, Partner and Associate Director, Boston Consulting Group

Ms. Janice Starzyk, Vice President of Government Operations, Virgin Orbit

Ms. Melanie Stricklan, Co-Founder and Chief Executive Officer, Slingshot Aerospace

Ms. Jolie Zoller, Head of Global Regulatory Affairs, Project Kuiper, Amazon

Ms. Ann Zulkosky, Vice President, Commercial Civil Space, Lockheed Martin

Committee Staff:

Mr. James Hatt

DFO of COMSTAC

Manager Innovation and Policy Division

Office of Commercial Space Transportation, FAA

Agency Employees:

Mr. Billy Nolen

FAA Administrator (Acting)

Mr. Kelvin Coleman

Associate Administrator

Office of Commercial Space Transportation, FAA

Mr. Michael O'Donnell

Deputy Associate Administrator (Acting)

Office of Commercial Space Transportation, FAA

Other Attendees:

Hon. Pete Buttigieg

Secretary, Department of Transportation

Description of each matter discussed and conclusions reached:

Designated Federal Officer (DFO) Mr. James Hatt called the meeting to order at 12:30 PM and shared the legal requirements for conducting COMSTAC meetings. He presented the meeting's agenda and then introduced Ms. Karina Drees, Chair of COMSTAC. Ms. Drees welcomed members to this year's first COMSTAC meeting and subsequently introduced Secretary of Transportation Pete Buttigieg.

After being introduced, Secretary Buttigieg welcomed the members, and then highlighted the significance of the COMSTAC, including its role in debris mitigation, the importance of collaborating with the National Space Council, and the necessity of enhancing diversity, equity, and inclusion in the commercial space industry. Looking forward, Sec. Buttigieg mentioned the increased number of players in commercial space, using the Axiom-1 mission, an all-private mission to the International Space Station, as an example.

Regarding future regulatory safety, the Secretary conveyed that we have the responsibility to make sure that, with the increased number of commercial space participants in this industry, the industry moves forward in a safe and responsible manner and that the innovations they bring support the public good. It was communicated that we are at the outset of what will become an

industry that requires management and appropriate regulation for public safety, public good, and national interests. The Department is directly involved in policy and regulations that call for solutions in the coming months and years, leaning into debris mitigation, smarter launch and re-entries, and alternative fuels. The Department is building a legislative proposal to expand core safety principles to orbital activities, which requires continued relationship building with our interagency partners and the White House National Space Council. The Secretary also highlighted that the Department looks forward to working with all of our partners to gather insights and ensure that our policies keep pace with the technologies and markets that are emerging. Sec. Buttigieg closed by thanking members for their commitment to the committee.

Ms. Drees thanked the Secretary and then introduced FAA Acting Administrator Billy Nolen. Mr. Nolen welcomed new and returning members, specifically Ms. Drees and Mr. Mike French as Chair and Vice-Chair, respectively. Mr. Nolen highlighted some changes since the last COMSTAC meeting, such as, Mr. Kelvin Coleman is now the Associate Administrator for the Office of Commercial Space Transportation. Mr. Nolen stated he is looking forward to the comments and recommendations on the draft report to Congress on Human Spaceflight and also looking forward to recommendations on how the FAA can partner with industry to increase diversity and participation in STEM education. Mr. Nolen highlighted the increase in the number of FAA-licensed launches and citizens going to space, including COMSTAC member, Dr. George Nield. Mr. Nolen thanked the members and introduced Mr. Kelvin Coleman.

Mr. Coleman thanked Mr. Nolen and Secretary Buttigieg and welcomed everyone to the meeting. He called attention to Ms. Drees and Mr. French for their new roles as Chair and Vice Chair of COMSTAC. After introducing and thanking current and new members individually, Mr. Coleman highlighted AST's successful safety record over 30 years with 500 launches. He opined that we'll see the next 500 launches much quicker and contended that one of the challenges for AST is keeping pace with industry. To this end, the FAA is working closely with air traffic, safety, and airports organizations. Mr. Coleman reviewed AST's efforts in diversity, specifically the reorganization of the office, which has resulted in increased representation on managerial positions and staff.

Mr. Coleman then revealed that the FAA and the National Transportation Safety Board (NTSB) signed a new Memorandum of Agreement (MOU) defining roles for investigating commercial space launch accidents. Mr. Coleman disclosed that, during a November 2022 meeting with the National Space Council (NSpC) in Houston, DOT received an action to review what it is doing to keep human space flight safe. Those efforts include creating recommended practices for operators, developing standards, and establishing Aerospace Rulemaking Committees (SpARCs). DOT shared with the NSpC mission authorization proposals regarding on-orbit operations for consideration in the coming months.

Mr. Coleman then remarked about what lies ahead. He explained about FAA's effort to increase the number of launches, operators, and licenses simultaneously. Indeed, FAA does not want to be the bottleneck to industry and slow down launches. FAA is aiming continuously for process improvement, including the need to prioritize work, and COMSTAC's advice will be needed here. Mr. Coleman then handed the meeting back to Ms. Drees.

Task 1 - Ms. Drees thanked Mr. Coleman for his remarks and then summarized today's task for increasing diversity and participation in STEM education. Maj. Gen. Ed Bolton explained the Space Workforce 2030 (SWF 2030) pledge. He disclosed that many companies have agreed to advance Diversity, Equity, and Inclusion (DEI) in space industry by increasing the numbers of women and underrepresented groups in technical workforce and leadership positions. He also revealed that industry is collaborating with universities to increase the percentage of those receiving aerospace engineering degrees and expanding K-12 programs to reach over five million underrepresented students annually. Gen. Bolton then summarized statistics showing minority participation in the space industry and university STEM programs. Thus far, the SWF 2030 team has achieved several goals, including: working with the NSpC to develop a SWF2030 internship program that will begin this academic year; creating a university partnership program to support academic pipeline of talent for industry; establishing social media accounts; and meeting with all SWF2030 signatories for a working level meeting.

In a related topic, Mr. French presented the White House/Industry Skilled Technical Workforce Initiative. The program is a partnership among companies that will look for existing workforce development opportunities. Once programs are identified, it directs efforts in three geographic areas: Florida Space Coast; Gulf Coast; and Los Angeles/Long Beach/South Bay. Eight COMSTAC members are already participating.

Ms. Drees then presented the STEM Working Group recommendations which included working closely with the NSpC, industry, and academia. Maj. Gen. Ted Mercer offered that engagement with students should start much earlier to include middle school students to generate interest and excitement in the field. Similarly, Ms. Melanie Preisser shared her experience of interviewing new graduates and how they do not seem to understand "a day in the life" of employees in the space industry. This lack of insight is shown in their lack of understanding of what to ask or what matches with their majors. A member from the audience had the following question: Would partnership with Civil Air Patrol be helpful? Ms. Drees agreed that it such a partnership could be helpful.

Task 2 - Turing to the Human Spaceflight Safety Framework Report to Congress, Ms. Drees summarized the report and underscored the increased number of launches; however, she conveyed those involving humans is still very low and no regular cadence exists at this juncture. Due to the low flight rate of humans, there is a lack of flight data to inform industry and FAA. Ms. Drees then presented the COMSTAC feedback on the report:

- What indicators are used to determine industry readiness.
- Report should adopt a more accurate depiction of the goals of the learning period.
- Report seems to suggest that the FAA should regulate industry for success post-learning period, but does not explain which aspects of the industry should be regulated and why.
- Establishing standards should receive more prominent focus.
- Suggest clearer outline on what proposed transition would be per Congressional language.
- AST should build from the last COMSTAC Safety Working Group effort.
- COMSTAC and commercial space operators should revise the 2014 version of the Recommended Practices for Human Spaceflight Occupant Safety.

Ms. Drees indicated that the number of work groups went from three to four. She introduced the new working groups and their membership assignments. The new groups are: Regulatory; Safety; Research and Development; and Innovation and Infrastructure

Ms. Drees and Mr. French made closing remarks and thanked the COMSTAC for their time and looking forward to the spring meeting. Mr. Hatt expressed appreciation for all the work that was done on short notice and looks forward to the topics to come such as nuclear guidance and mission authorization.

The meeting concluded at 1:37pm.