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Contact:
John Gedmark
202.349.1121

Commercial Spaceflight Federation Responds to the Aerospace Safety Advisory Panel's 2009 Annual Report

Washington, D.C., January 21, 2010 – The Commercial Spaceflight Federation released the following statement on the Aerospace Safety Advisory Panel's 2009 annual report:

While the Commercial Spaceflight Federation agrees with the Aerospace Safety Advisory Panel (ASAP) on its recognition of the importance of commercial spaceflight both for cargo and crew missions, the Commercial Spaceflight Federation disagrees with certain other conclusions and finds some of the assertions in the ASAP's Annual Report to be incorrect.

The Commercial Spaceflight Federation commends the ASAP on their finding in the ASAP 2009 Annual Report that commercial spaceflight “is emerging as one of the critical programs for NASA” and that “if there is a widening gap, COTS could play a key role and could be a critical program for flight safety of the astronauts.”

The Commercial Spaceflight Federation agrees with the ASAP that NASA must “quickly establish fundamental safety requirements for...programs that may in the future be used to get NASA's astronauts to Low Earth Orbit (LEO)” and agrees with the ASAP's direction to NASA that “considerable work must be done,” and that NASA should “accelerate the level of effort underway.” To aid this process, the commercial space industry stands ready to begin working now with NASA to agree on a commercial human-rating plan, including the appropriate standards, requirements for vehicles to meet those standards, and the mechanism by which compliance with those standards will be validated, and industry has established a Commercial Orbital Spaceflight Safety Working Group to engage with NASA and FAA.

Since the ASAP correctly points out that NASA has not yet developed standards and processes for human-rating commercial vehicles, the Commercial Spaceflight Federation disagrees with ASAP's implication that safety will be compromised because “no COTS manufacturer is currently HRR qualified,” because, quite simply, it is impossible for companies to meet standards that do not currently exist. Until such time as commercial human-rating standards are determined, industry continues to develop vehicle hardware based on the only standards available: those NASA established for its own vehicles, known as NPR 8705.2B. As no commercial provider has yet been tasked by NASA to begin working through a NASA human-rating process, for the ASAP to state that “no COTS manufacturer is currently HRR qualified” is akin to saying that someone didn't pass his driver's test when he's still waiting in line at the DMV and hasn't even been given the exam yet.

The ASAP's repeated references to the two “COTS firms” ignores the fact that many companies, including both established firms and new entrants, will compete in the Commercial Crew Program envisioned by the Augustine Committee. While the Falcon 9 and Taurus II vehicles have already met numerous hardware milestones and will have a substantial track record by the time any astronauts are placed onboard, several other potential Commercial Crew providers envision use of launch vehicles such as the Atlas V, vehicles that are already entrusted by the government to launch multi-billion dollar national security payloads upon which the lives of our troops overseas depend.

Despite the ASAP Report's contention that commercial vehicles are "nothing more than unsubstantiated claims," the demonstrated track records of commercial vehicles and numerous upcoming manifested cargo flights ensure that no astronaut will fly on a commercial vehicle that lacks a long, proven track record. The Atlas V, for example, has a record of 19 consecutive successful launches and the Atlas family of rockets has had over 90 consecutive successes, and dozens of flights of the Atlas, Taurus, and Falcon vehicles are scheduled to occur before 2014 in addition to successful flights already completed. Further, thirteen former NASA astronauts, who have accumulated a total of 42 space missions, stated in a recent *Wall Street Journal* op-ed that commercial spaceflight can be conducted safely:

"We are fully confident that the commercial spaceflight sector can provide a level of safety equal to that offered by the venerable Russian Soyuz system, which has flown safely for the last 38 years, and exceeding that of the Space Shuttle. Commercial transportation systems using boosters such as the Atlas V, Taurus II, or Falcon 9 will have the advantage of multiple unmanned flights to build a track record of safe operations prior to carrying humans. These vehicles are already set to fly over 40 flights to orbit in the next four years."

In contrast, ASAP describes the Ares I as "demonstrated" despite the fact the Augustine Committee determined the Ares I vehicle will likely not fly until 2017, and the ASAP ignores the fact that NASA is planning to place astronauts on the second orbital flight of the Ares I system. As Constellation program manager Jeff Hanley recently stated, placing astronauts on these early Ares I flights poses a safety risk equal to or worse than that of the current Space Shuttle:

"What at least some of our work suggests is that, yes, on the second launch the LOC [loss of crew] risk may be roughly on par with today's mature shuttle risk. Other assessments are less rosy (a little riskier than a shuttle launch)."

The Commercial Spaceflight Federation disagrees with the ASAP's characterization of a Commercial Crew Program as an "alternative" to Ares I, because these two systems fulfill very different missions – Commercial Crew is not an alternative to systems designed to travel beyond Low Earth Orbit (LEO). Commercial Crew is akin to developing a Gemini spacecraft for low Earth orbit, rather than an Apollo spacecraft for reaching the Moon. The Orion exploration vehicle, for example, must reenter the atmosphere at one-and-a-half times orbital velocity, encountering nearly double the heat loads that a LEO-only spacecraft would encounter. Because it serves a simpler mission, any vehicle that is designed simply to service the Space Station and other LEO destinations will be more cost-effective without sacrificing safety.

The ASAP mischaracterized how safety was treated by The Review of U.S. Human Space Flight Plans Committee (also known as the "Augustine Committee"). The ASAP's 2009 Annual Report perpetuates the unfortunate misconception that the Augustine Committee inappropriately assumed safety to be a "given" (here the ASAP appears to be misquoting the Augustine Committee's statement that safety was treated as "*sine qua non*" – in fact, "*sine qua non*" is universally defined as "something absolutely indispensable or essential"). As Norm Augustine stated in a Congressional hearing, safety was "the number one issue for us [the Committee] to consider." The Augustine Committee, whose 10 members have cumulatively amassed 293 years of space industry experience, spent an extensive amount of time on safety issues and determined that "the Committee... would not suggest that a commercial service be provided for transportation of NASA crew if NASA could not be convinced that it was substantially safe." In contrast, the ASAP stated it has "not yet had the opportunity to evaluate any of these [commercial] concepts with regard to inherent safety issues."

About the Commercial Spaceflight Federation

The mission of the Commercial Spaceflight Federation (CSF) is to promote the development of commercial human spaceflight, pursue ever higher levels of safety, and share best practices and expertise throughout the industry. CSF member organizations include commercial spaceflight developers, operators, and spaceports. The Commercial Spaceflight Federation is governed by a board of directors, composed of the member companies' CEO-level officers and entrepreneurs. For more information please visit www.commercialspaceflight.org or contact Executive Director John Gedmark at john@commercialspaceflight.org or at 202.349.1121.