

GAO
Accountability · Integrity · Reliability

Highlights

Highlights of [GAO-07-16](#), a report to the Ranking Democratic Member, Committee on Transportation and Infrastructure, House of Representatives

Why GAO Did This Study

In 2004, the successful launches of SpaceShipOne raised the possibility of an emerging U.S. commercial space tourism industry that would make human space travel available to the public. The Federal Aviation Administration (FAA), which has responsibility for safety and industry promotion, licenses operations of commercial space launches and launch sites. To allow the industry to grow, Congress prohibited FAA from regulating crew and passenger safety before 2012, except in response to high-risk events. GAO evaluated FAA's (1) safety oversight of commercial space launches, (2) response to emerging issues, and (3) challenges in regulating and promoting space tourism and responding to competitive issues affecting the industry. GAO reviewed FAA's applicable safety oversight processes and interviewed federal and industry officials.

What GAO Recommends

If DOT's commissioned report on dual safety and promotion roles does not fully address the potential for a conflict of interest, GAO suggests that Congress revisit FAA's promotional role and decide whether it should be eliminated. GAO recommends that FAA assess its future safety oversight resource needs and identify the circumstances that would trigger passenger safety regulation before 2012. Relevant federal agencies reviewed the draft and DOT agreed with the recommendations.

www.gao.gov/cgi-bin/getrpt?GAO-07-16.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Gerald L. Dillingham at (202) 512-2834 or dillinghamg@gao.gov.

COMMERCIAL SPACE LAUNCHES

FAA Needs Continued Planning and Monitoring to Oversee the Safety of the Emerging Space Tourism Industry

What GAO Found

Several measures indicate that FAA has provided a reasonable level of safety oversight for commercial launches. For example, none of the 179 commercial launches that FAA licensed over the past 17 years resulted in fatalities, serious injuries, or significant property damage. However, FAA shared safety oversight with the Department of Defense (DOD) for most of these launches because they took place at federal launch sites operated by DOD. In addition, FAA's licensing activities incorporate a system safety process, which GAO recognizes as effective in identifying and mitigating risks. GAO's analysis of FAA records indicates that the agency is appropriately applying management controls in its licensing activities, thereby helping to ensure that the licensees meet FAA's safety requirements.

In response to emerging issues in the commercial space launch industry, such as the potential development of space tourism, FAA has developed safety regulations and training for agency employees. The industry has raised concerns about the costs of complying with regulations and about the flexibility of the regulations to accommodate launch differences. However, FAA believes it has minimized compliance costs by basing its regulations on common safety standards and has allowed for flexibility by taking a case-by-case approach to licensing and by providing waivers in certain circumstances.

FAA faces several challenges and competitive issues in regulating and promoting space tourism. For example, FAA expects to need more experienced staff for safety oversight as new technologies for space tourism evolve, but has not estimated its future resource needs. Other challenges for FAA include determining the specific circumstances under which it would regulate space flight crew and passenger safety before 2012 and balancing its responsibilities for safety and promotion to avoid conflicts. Recognizing the potential conflict in the oversight of commercial space launches, Congress required the Department of Transportation (DOT) to commission a report by December 2008 on several issues, including whether the promotion of human space flight should be separate from the regulation of such activity. In addition, U.S. commercial space launch industry representatives said that they face competitive issues concerning high launch costs and export controls that can affect their ability to sell services overseas. The federal government has provided support to the industry to help lower launch costs.



Source: Scaled Composites. SpaceShipOne