



**U.S. Department of
Transportation**

Office of the Secretary
of Transportation

The Inspector General

Office of Inspector General

Washington, DC 20590

March 21, 2011

The Honorable Jerry F. Costello
Ranking Member, Subcommittee on Aviation
Committee on Transportation and Infrastructure
United States House of Representatives
Washington, DC 20515

Dear Ranking Member Costello:

Thank you for your letter requesting that we examine the Federal Aviation Administration's (FAA) oversight of on-demand aircraft operators. Specifically, you noted concerns that this segment of the aviation industry—widely used for short passenger flights, emergency medical transport, and small community access—operates with more risk but with less stringent regulatory requirements and FAA oversight than large, commercial carriers. In response, we conducted a review to evaluate these differences and their potential safety implications and identify specific challenges to FAA's oversight. We issued a report in July 2009 and recommended actions for FAA to revise outdated safety regulations and improve its risk assessment processes.¹ We also testified before the House Subcommittee on Aviation in March 2010 on areas where FAA should focus its oversight efforts for on-demand operations, such as Helicopter Emergency Medical Services (HEMS) and air tours.² Since then, FAA has made notable progress in addressing our recommendations and improving its oversight of this industry.

In summary, FAA has enhanced its oversight by developing risk-based tools to specifically target safety issues inherent to on-demand operations and by improving surveillance resources for FAA inspectors. FAA has also begun updating the regulatory structure for on-demand operators with rulemakings to address risks within HEMS operations and reduce human error in the cockpit through required crew resource management training. We are not making any additional recommendations to FAA at this time but will continue to monitor its efforts in these areas. The following discusses FAA's actions in further detail.

¹ OIG Report Number AV-2009-066, "On-Demand Operators Have Less Stringent Safety Requirements and Oversight Than Large Commercial Carriers," July 13, 2009. OIG reports and testimonies are available on our website: www.oig.dot.gov.

² OIG Testimony Number CC-2010-035, "The Federal Aviation Administration's Oversight of On-Demand Aircraft Operators," March 17, 2010.

FAA Has Improved Its Risk-Based Oversight of Part 135 Operators

We reported in 2009 that FAA's oversight of on-demand operators was based primarily on compliance with minimum FAA standards rather than where risk dictates. FAA's inspections were pre-determined at the national level, causing some on-demand operators with the most operational risks to receive fewer FAA inspections. Conversely, FAA oversight of large, commercial air carriers is based on risk assessments. Our report acknowledged FAA's ongoing efforts to develop a new risk-based oversight approach for on-demand operators; however, this new system is not scheduled for full deployment until 2013. We recommended that, in designing this system, FAA consider the inherent operational risk factors in on-demand operations. Our testimony last March also noted oversight gaps as FAA's inspectors for on-demand operators oversee multiple, geographically dispersed operations and generally did not use available FAA tools to best prioritize inspections based on key safety factors. FAA has since made the following significant strides to better identify risks in on-demand operations and adjust its inspectors' surveillance accordingly.

- **Developing On-Demand Operator Risk Indicators:** FAA has developed an initial set of risk indicators³ that can be used to qualitatively and quantitatively evaluate the overall risk profile of an air carrier. However, rather than waiting for the 2013 deployment of the new risk based oversight system, FAA plans to begin using these indicators immediately. The risk indicators are divided into three categories:
 - *Air Carrier Performance History*, which includes factors associated with the documented performance of the air carrier. This includes reports of accidents, incidents, and occurrences and surveillance results from FAA and other agencies, such as the Department of Defense.
 - *Air Carrier Operational Factors*, such as the size and complexity of air carriers' operations as well as other factors of the operational environment. These include aircraft types used, age of the fleet, geographic extent of operations, special weather considerations, and scheduled/non-scheduled operations.
 - *Air Carrier Organizational Factors*, such as an air carrier's business strategy or model, operations and company stability, and ability of the air carrier to balance its organizational resources and structure with operational requirements.

FAA also developed decision aids to assist inspectors in evaluating the risk indicators associated with their air carrier. The overall score of the operator determines what actions FAA inspectors should take, such as targeted surveillance at specific operators.

³ These indicators are considered "draft" and have not received final approval from FAA officials.

- Reinstating the Geographic Inspector Program for Commercial and On-Demand Carriers:** To further enhance oversight, FAA issued procedures in October 2010 to its inspectors to help them determine when they need to request additional surveillance assistance outside their office’s geographic area of responsibility.⁴ For example, inspectors might determine that based on risk assessments, they need surveillance assistance at airports where their assigned operators fly but that are outside of their geographic jurisdiction. The inspector can request specific surveillance, such as facility, aircraft records, or spot inspections, at a particular airport. FAA will deploy this surveillance program in three phases, each of which includes reviews of on-demand operators.⁵ Under the first phase, 115 Part 135⁶ operators from all regions across the United States will participate in this program. By the third phase—scheduled for September 2012—1,671 Part 135 on-demand operators will have participated.
- Mandating Use of the Surveillance Priority Index (SPI):** The SPI is an FAA inspector tool to aid in prioritizing surveillance based on risk. The SPI uses fleet size, accidents and incidents, management turnover, violations, and other factors to quantify the risk status of on-demand operators. The SPI provides a ranked order that can be used as the basis for increased surveillance of on-demand operators.

At the time of our audit, FAA did not require inspectors to use this tool to prioritize surveillance. As a result, only 6 of the 43 inspectors we interviewed used SPI scores to aid in targeting resources. However, on August 12, 2010, FAA mandated that inspectors use this important risk assessment tool and provided guidance on how to do so. The SPI allows FAA to leverage resources more efficiently by focusing attention and surveillance where it is most needed. We will continue to monitor FAA’s implementation of this tool.

FAA has made significant progress in advancing its risk-based oversight approach for the Part 135 industry, but, as we testified in March 2010, it could further improve its risk assessments if its inspectors had access to more accurate industry data. Currently, FAA relies on its General Aviation and Air Taxi Activity Survey, an annual voluntary survey, to collect industry data and project accident rates.⁷ While 63 percent of operators participate in this voluntary survey, the survey does not collect

⁴ FAA Notice N8900.137, “Flight Standards Service (AFS) Geographic Surveillance Program for 14 CFR Parts 121 and 135--Phase 1,” October 29, 2010. FAA utilized a geographic inspector program previously but phased out the program in FY 2007.

⁵ This notice does not include 469 single-pilot Part 135 on-demand operators.

⁶ 14 CFR Part 135, On-Demand, Operating Requirements: Commuter and On Demand Operations and Rules Governing Persons On Board Such Aircraft. 14 CFR Part 119, Certification: Air Carriers and Commercial Operators, and some of the requirements of Part 91 also pertain to on-demand operators and commercial air carriers.

⁷ This survey is also referred to as the General Aviation Part 135 Activity (GAP135A) Survey. Although on-demand operations are a form of commercial aviation, FAA has elected to group these operators with private general aviation for the purposes of data collection. In addition, when FAA reports commercial aviation accidents and fatalities, this includes only large, commercial air carriers (i.e., Part 121) and omits on-demand accidents and fatalities.

data on the number of passengers, departures, and other key elements needed to assess risk and make more accurate accident projections. The National Transportation Safety Board (NTSB) has repeatedly cited problems with the type of data the survey collects and made several recommendations to improve the survey. FAA has made some improvements to the survey but still has not called for mandatory data reporting. Without these data, FAA cannot fully evaluate the risk associated with different types of on-demand operations. To further enhance its risk assessment capabilities, FAA should pursue NTSB's recommendations in this area.

FAA Has Made Progress in Updating the Regulatory Structure for Part 135 Operators

Our March 2010 testimony noted that, despite the inherent risks within on-demand operators' environment, the regulations governing their safety and oversight were less rigorous than those for commercial carriers and had not been updated in more than 3 decades. This is a significant concern as on-demand operators typically fly in an environment that poses a number of inherent safety risks. For example, HEMS operators typically have shorter flights with more takeoffs and landings at altitudes that are vulnerable to terrain and weather obstacles. Many HEMS flights pick up patients at accident scenes and land at hospital helipads without the benefit of air traffic control. In addition, we found that regulations did not require most on-demand operators to provide their pilots with Crew Resource Management (CRM) training, which focuses on leadership and decision making skills in the cockpit.⁸ FAA has since undertaken rulemakings to impose new safety requirements on HEMS operators and expand CRM training throughout the on-demand industry.

- **Enhancing Safety in the Helicopter Emergency Medical Services Industry:** During 2003 and 2004, the HEMS industry experienced 32 accidents, resulting in 25 fatalities. Because of the large number of fatalities and the high-risk environment within the HEMS industry, FAA established a HEMS safety initiative in August 2004. Rather than regulatory requirements, this initiative focused on voluntary compliance by operators. After our March 2010 testimony, FAA recognized that voluntary compliance alone was not enough to ensure safe flight operations and proposed a rulemaking⁹ in October to address many of the HEMS issues identified over the years. For example, FAA's proposed rule would require operators to implement pre-flight risk analysis programs. It would also require operators with 10 or more helicopters engaged in air ambulance operations to establish an operational control center that would communicate with pilots, advise them on weather conditions, and monitor the progress of each flight. In

⁸ CRM is one of the NTSB's top six recommended safety improvements for on-demand operators. The NTSB determined that crew errors were the primary cause of three on-demand accidents between 2001 and 2004 and concluded that an effective CRM program might have prevented them.

⁹ Air Ambulance and Commercial Helicopter Operations, Part 91 Helicopter Operations, and Part 135 Aircraft Operations; Safety Initiatives and Miscellaneous Amendments; Docket ID: FAA-2010-0982 Agency: FAA RIN: 2120-AJ53 (Published in the Federal Register on October 12, 2010).

addition, the proposed rule includes a requirement for HEMS operators to equip their fleets with terrain awareness warning systems in the cockpit¹⁰ to reduce the risk of controlled flight into terrain¹¹—a common causal factor FAA identified in HEMS accidents. We will continue to monitor FAA’s efforts to finalize this important rulemaking.

- **Implementing Crew Resource Management:** On January 20, 2011, FAA finalized a rule¹² that requires all on-demand operators to train pilots and flight attendants in CRM. CRM is a concept that helps reduce human error in commercial aviation by teaching pilots, flight attendants, and other aviation workers to work as a team. The training must address the captain’s authority, intra-crew communications, teamwork, workload management, time, fatigue and stress, and decision making skills. FAA has required this type of training for larger commercial air carriers since 1995.

During our audit, we also identified other FAA watch areas regarding Part 135 on-demand operators. Many of these mirror those NTSB has identified as a result of accident investigations. While we commend FAA for its recent safety advancements in this industry, the Agency needs to implement NTSB’s recommendations aimed at closing the regulatory and oversight gaps that remain in areas such as air tours and illegal operators.

- **Air Tour Operators:** Air tour operations are inherently high-risk since they are usually conducted at low altitudes in areas where other aircraft are operating and with pilots who are conversing with passengers. Yet, some air tour operators are permitted to fly for hire under general aviation regulations,¹³ which have fewer requirements for FAA oversight. NTSB has recommended that FAA develop and implement national standards to bring all air tour flights under Part 135 requirements. While FAA issued a rule for air tours in February 2007,¹⁴ it was substantially changed from its original version. The final rule did not require many of the standards in place for Part 135 operators, including pilot training programs, more stringent maintenance policies, flight time limitations, crew rest restrictions, and an annual FAA surveillance program.
- **Illegal Operators:** FAA regulations require operators that carry passengers for hire to have a valid Part 135 certificate. However, finding and taking action against illegal operators is a significant challenge for FAA. To identify them,

¹⁰ Helicopter Terrain Awareness Warning System (H-TAWS) is technology specifically engineered for helicopter mission profiles that provides visual and/or aural advisories to help keep pilots safely separated from hazardous terrain and obstacles.

¹¹ Controlled flight into terrain (CFIT) occurs when an aircraft that is functioning normally is inadvertently flown into the ground, water, or an obstacle with inadequate awareness on the part of the pilot of the impending collision.

¹² Crew Resource Management Training for Crewmembers in Part 135 Operations; Docket No.: FAA-2009-0023; Amendment No.: 135-122, RIN 2120-AJ32 (published in the Federal Register on January 21, 2011).

¹³ 14 CFR Part 91, General Operating and Flight Rules.

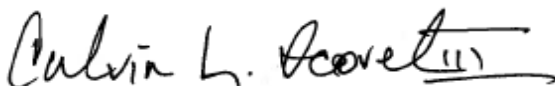
¹⁴ 14 CFR Part 61, 91, 119, 121, 135, and 136.

FAA generally relies on hotline complaints or the disclosure of an illegal operator through fatal accident investigations. For example, an illegal operator was discovered as a result of a March 2008 crash in Oklahoma that killed the two pilots and three passengers. During its investigation, NTSB determined that the local FAA office was too short-staffed and budget-constrained to catch on-demand operator violations. NTSB made several recommendations to help FAA identify illegal operators. For example, NTSB recommended that FAA assess why existing policies and procedures did not detect illegal operations and update the aircraft charter guide on the FAA website to include reliable information on the certification status of on-demand operators.

Overall, FAA has taken a number of significant steps to strengthen its oversight and regulatory structure for on-demand operators. We commend FAA's proactive interim initiatives to better prioritize surveillance until it can fully implement a new risk-based oversight approach, and we will continue to monitor this effort. As a result of FAA's progress, we do not intend to issue any additional recommendations to the Agency at this time but may initiate future audits in this area to evaluate the effectiveness of its actions.

Thank you again for your attention to this important issue. If I can answer any questions, please contact me at (202) 366-1959 or Jeffrey B. Guzzetti, Assistant Inspector General for Aviation and Special Program Audits, at (202) 366-0500.

Sincerely,

A handwritten signature in black ink that reads "Calvin L. Scovel III". The signature is written in a cursive style with a horizontal line at the end.

Calvin L. Scovel III
Inspector General

Enclosure

cc: Federal Aviation Administrator