

---

*Office of Inspector General*

***Audit Report***

---

**FAA AND INDUSTRY ARE ADVANCING THE  
AIRLINE SAFETY ACT, BUT CHALLENGES  
REMAIN TO ACHIEVE ITS FULL MEASURE**

*Federal Aviation Administration*

*Report Number: AV-2013-037*  
*Date Issued: January 31, 2013*





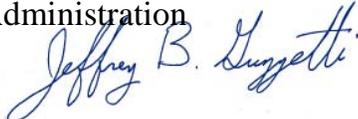
# Memorandum

U.S. Department of  
Transportation  
Office of the Secretary  
of Transportation  
Office of Inspector General

---

Subject: **ACTION:** FAA and Industry Are Advancing  
the Airline Safety Act, but Challenges Remain  
To Achieve Its Full Measure  
Report No. AV-2013-037  
Federal Aviation Administration

Date: January 31, 2013

From: Jeffrey B. Guzzetti   
Assistant Inspector General  
for Aviation and Special Program Audits

Reply to JA-10  
Attn. of:

To: Federal Aviation Administrator

The February 12, 2009, crash of Colgan Air flight 3407 highlighted the need for improvements in pilot training, hiring and qualification programs, and ensuring consistent safety standards between carriers. Congress and the Federal Aviation Administration (FAA) took swift action following the crash to address these issues, culminating in the August 2010 passage of the Airline Safety and FAA Extension Act<sup>1</sup> (the Act). Effectively implementing the Act's requirements is key to improving safety in commercial airline travel by raising standards in pilot training and performance, as well as advancing voluntary programs that yield critical safety information.

The Ranking Members of the House Committee on Transportation and Infrastructure and its Subcommittee on Aviation, joined by the Chairmen and the Ranking Members of the Senate Committee on Commerce, Science, and Transportation and its Aviation Subcommittee, requested that we conduct a review of FAA and industry's efforts to enhance safety in response to the Colgan accident. Accordingly, our objectives were to (1) examine FAA and industry progress in implementing elements of the Act and (2) identify any challenges to completing these actions.

We conducted this review in accordance with generally accepted Government auditing standards. Exhibit A details our scope and methodology.

---

<sup>1</sup> Airline Safety and Federal Aviation Administration Extension Act of 2010, Pub. L. 111-216, August 1, 2010.

## RESULTS IN BRIEF

While FAA has implemented many elements of the Act, the Agency and industry have not yet achieved the full measure of the Act's intended safety enhancements. FAA has made considerable and important progress advancing voluntary safety programs, improving pilot rest requirements, and establishing better processes for managing safety risks. However, FAA has not provided sufficient management attention or assistance to smaller carriers for meeting new safety standards, or followed through on its commitment to help these carriers with safety program development and support. For example, only 12 percent of small carriers<sup>2</sup> have flight data recording programs that monitor aircraft performance, compared to more than 90 percent of large carriers. Until FAA takes a more focused approach working with and assisting smaller carriers, the full safety benefits associated with these programs will not be realized.

FAA faces significant challenges to fully implement the Act, such as meeting timelines for rulemaking efforts while balancing competing interests of stakeholders involved with controversial safety measures. For example, FAA is experiencing lengthy delays and considerable industry opposition in issuing and finalizing rules that will enhance pilot qualification standards, revise crew training requirements, and establish mentoring and professionalism programs. Further, while FAA is on target with the initial development phase of a new, centralized electronic pilot records database, it remains uncertain when it will be implemented and what level of information it will contain. Three primary challenges exist with the new database: retaining and standardizing historical records, transitioning from current requirements, and incorporating driving records from the State level. Finally, FAA has not provided the level of education, outreach, and guidance needed for air carriers to implement new safety programs, such as mentoring, leadership, and professional development committees. As a result, industry efforts to enhance aviation safety in accordance with the Act are limited.

We are making a series of recommendations to FAA to improve its efforts in implementing the Act.

## BACKGROUND

The 2010 Act included 16 provisions to improve airline safety and pilot training with milestones spread over a 3-year period (see exhibit B for further details and the current status of FAA's efforts in each section of the Act).<sup>3</sup> In addition to the heightened standards for pilots, the Act also required FAA to perform annual,

---

<sup>2</sup> Air carriers having 15 or fewer aircraft, as defined by FAA's ASAP & FOQA Implementation Plan per Section 214 of the Act.

<sup>3</sup> Sections of the Act pertaining to inspector staffing, pilot fatigue, and code sharing are not included in this audit, as they have been addressed by other recently completed or ongoing OIG projects.

random, onsite inspections of regional air carriers that contract with other air carriers to ensure their continued compliance with safety standards.

Additionally, the Act also required that FAA develop a rule that would require all Part 121 air carriers to implement Safety Management Systems (SMS). The system, which is currently voluntary, provides air carriers with a comprehensive process for managing safety risks and integrating safety activities into normal, day-to-day operations. Additionally, the Act included other important initiatives that FAA did not complete during the Agency's Call to Action on Airline Safety and Pilot Training,<sup>4</sup> such as developing mentoring and professional development programs for pilots, and following up with air carriers on efforts to adopt voluntary safety programs. As required by the Act, FAA provided Congress with a report on air carrier use of three Voluntary Safety Programs that the Agency oversees:<sup>5</sup>

- **Aviation Safety Action Program (ASAP)**—A joint FAA/industry program that allows aviation employees to self-report safety violations to air carriers and FAA without fear of reprisal through legal or disciplinary actions.
- **Flight Operational Quality Assurance (FOQA)**—A program for the routine collection and analysis of digital flight data generated during aircraft operations.
- **Advanced Qualification Program (AQP)**—A voluntary alternative to traditional pilot training regulations that replaces programmed hours with proficiency-based training, and incorporates data-driven processes enabling air carriers to refine training based on identified individual needs.

The Act further required FAA to modify the requirement for an Airline Transport Pilot (ATP) certificate<sup>6</sup> as well as which pilots are required to hold the ATP. The Act also called for the Agency to establish a new Pilot Records Database (PRD) that air carriers are expected to access and review qualifications and past performance data before hiring pilots.

Finally, this year, as mandated by the Act, FAA updated its flight and duty time regulations for Part 121<sup>7</sup> air carriers to better ensure pilots are rested when they fly—a significant achievement for the Agency given that these updates were the

---

<sup>4</sup> FAA's Call to Action Plan, announced on June 24, 2009 in response to the Colgan accident, consisted of 10 short- and mid-term initiatives to enhance pilot performance and training, increase air carrier participation in voluntary safety programs, and expand pilot records review. FAA also set goals to develop new safety oversight guidance to its inspectors, issue rulemakings on pilot fatigue and training, conduct regional safety forums to discuss industry best practices, and develop programs addressing pilot professionalism.

<sup>5</sup> FAA's Voluntary Safety Programs report to Congress (Response to P.L. 111-216, Sec. 213, dated January 28, 2011).

<sup>6</sup> 14 CFR Part 61, Subpart G – Airline Transport Pilot, Section 153, Eligibility Requirements.

<sup>7</sup> 14 CFR Part 121, Operating Requirements, Domestic, Flag, and Supplemental Operations.

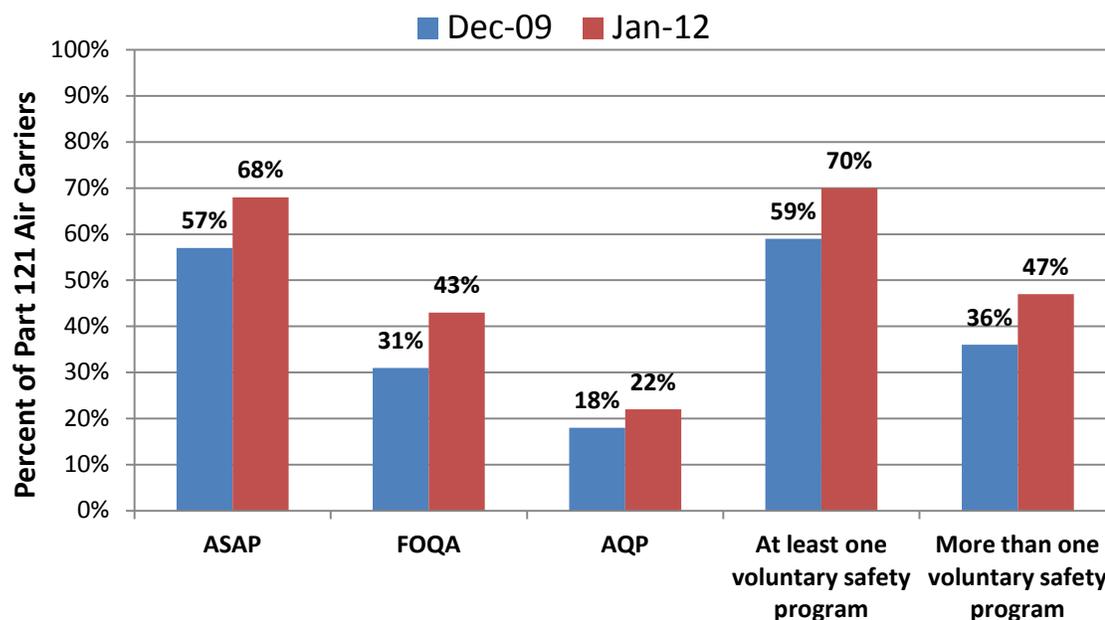
first modifications to the regulations since 1985. Unlike the old rules—which included different rest requirements for domestic, international, and unscheduled flights—the new regulations establish one set of rules for commercial passenger carriers that are based on scientific factors, such as the time of day pilots begin their first flight, the number of scheduled flight segments, and the number of time zones crossed.

### **FAA HAS MADE PROGRESS WITH IMPLEMENTING KEY ELEMENTS OF THE ACT, BUT SAFETY ADVANCEMENTS AT SMALLER AIR CARRIERS HAVE BEEN LIMITED**

FAA has successfully promoted use of new voluntary safety programs at larger air carriers and has nearly completed its efforts to issue a final rule on SMS. Despite this progress, the Agency has not sufficiently targeted assistance to smaller air carriers who are furthest behind in developing new programs. FAA's efforts to advance these programs have been hindered by, among other things, the Agency's inability to link its budget to planning the advancement of safety programs and address concerns regarding whether these programs would be scalable to carriers of all sizes.

### **FAA Has Helped To Increase Use of Voluntary Safety Programs, but Work Remains To Advance These Programs at Smaller Air Carriers**

Overall, FAA and industry have made significant progress in advancing voluntary safety programs at mainline and regional air carriers; however, work remains to implement these programs to the same extent at smaller carriers. As of January 2012, FAA data show a continued rise in voluntary safety program use—70 percent of Part 121 air carriers have at least one program, up from 59 percent 2 years ago. Further, for the same time period, 47 percent of air carriers have multiple programs, compared to 36 percent 2 years ago. As shown in figure 1 below, the highest concentration of new growth for these air carriers has been with the ASAP and FOQA programs.

**Figure 1. Increase in Voluntary Safety Program Participation**

Source: OIG analysis of FAA data

Despite overall gains at Part 121 air carriers, implementation of voluntary safety programs has lagged at smaller air carriers. While all large carriers with more than 50 aircraft in their fleet have an incident reporting system (ASAP), the system has been adopted by only 41 percent of small carriers with 15 or fewer aircraft, as shown in table 1. Similarly, just 7 percent of these small carriers have advanced qualification programs for pilot training, compared to more than 50 percent of large carriers.

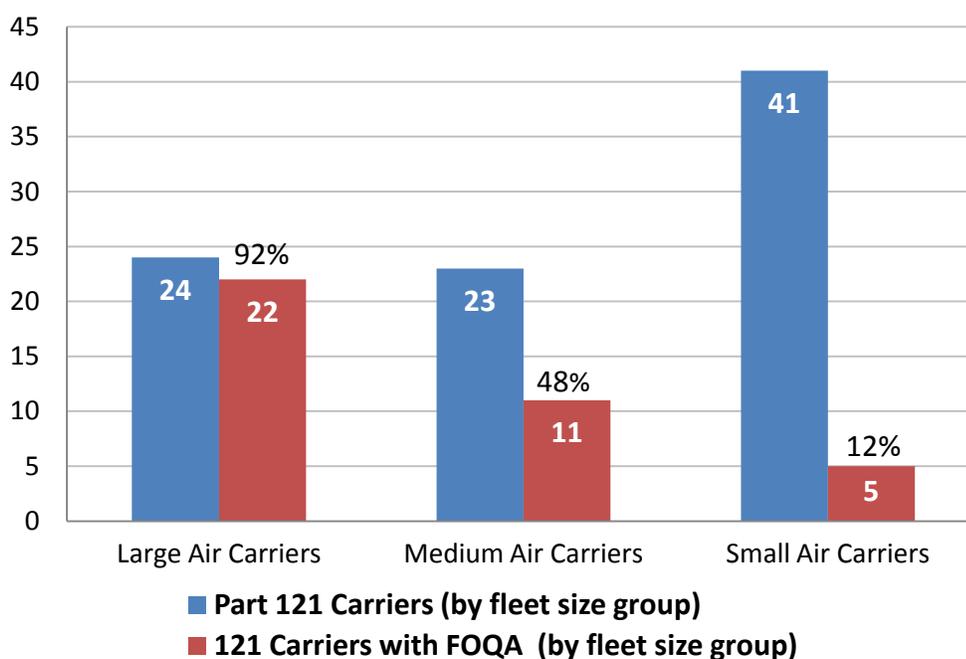
**Table 1. Air Carrier Voluntary Safety Program Participation**

Program	Number of Carriers Participating	Large Carriers (more than 50 aircraft)	Medium Carriers (16-50 aircraft)	Small Carriers (15 or fewer aircraft)
<b>Aviation Safety Action Program</b>	60 of 88 (68%)	24 of 24 (100%)	19 of 23 (83%)	17 of 41 (41%)
<b>Flight Operational Quality Assurance</b>	38 of 88 (43%)	22 of 24 (92%)	11 of 23 (48%)	5 of 41 (12%)
<b>Advanced Qualification Program</b>	19 of 88 (22%)	13 of 24 (54%)	3 of 23 (13%)	3 of 41 (7%)

Source: OIG analysis of FAA data as of January 2012

Smaller carriers are particularly challenged with implementing FOQA because the program depends upon successful installation of aircraft flight monitoring equipment to report safety data back to the air carrier. The technology to collect and analyze flight data is not available for all aircraft types and fleets used by Part 121 air carriers. Even in cases where it is available, it can be very costly for small carriers to install the equipment on their aircraft. Three of four air carriers we asked that did not already have a FOQA program in place stated that high costs was the primary reason for not moving forward with a program—either they could not afford to purchase and install flight data equipment for their aircraft, or the cost of data analysis was prohibitive. Additionally, while small air carriers with 15 or fewer aircraft make up the largest group of Part 121 carriers, only 12 percent have a FOQA program, as shown in figure 2.

**Figure 2. FOQA Use at Part 121 Carriers**



Source: OIG analysis of FAA data

The relative lack of progress at smaller air carriers is also due in part to the fact that FAA lacks a focused strategy to assist these carriers, such as providing best practices and guidance in implementing voluntary safety programs. The Act required FAA to develop a plan to help establish ASAP and FOQA programs at smaller air carriers. To carry out this requirement, FAA developed a plan and proposed improving existing ASAP tools and guidance, hosting information sharing meetings with industry, and potentially conducting an additional FOQA demonstration project. However, FAA has not fully implemented this plan and, citing a lack of funding, has not been able to carry out the FOQA demonstration

project that may have illustrated the cost effectiveness and feasibility of this program to smaller air carriers.

### **FAA Has Assisted Larger Air Carriers in Implementing SMS, but Concerns Remain That the Program May Not Fully Align With Smaller Air Carrier Operations**

FAA fell short of meeting an August 2012 final deadline for issuing the SMS rule, but has taken steps to assist air carriers in developing these systems. In 2007, FAA initiated an SMS Pilot Project to promote voluntary air carrier adoption of SMS. The Pilot Project allows FAA and air carriers to provide input in developing guidance, implementation strategies, and share best practices. Currently, 95 percent of all Part 121 air carriers (80 of 84) are participating in the Pilot Project.

Despite this success, some carriers remain concerned about the current proposed rule, especially smaller carriers, who have had the least success implementing SMS to date. In fact, 3 of the 4 air carriers that are not yet participating in FAA's SMS Pilot Project are smaller air carriers (15 or fewer aircraft). Industry representatives have expressed concerns that the final SMS rule will not be scalable for air carriers of varying size and operations, making it more costly and difficult for smaller carriers to integrate into their operations.

Furthermore, NTSB and air carriers are concerned about public disclosure of SMS-collected data. Most of these concerns focus on whether the data can be used for other purposes, such as litigation, and the current proposed rule does not address this issue. NTSB is also concerned that air carrier employees may be discouraged from providing important safety information due to a lack of SMS data protection.

### **FAA AND AIR CARRIERS MUST OVERCOME KEY CHALLENGES IN MEETING ACT PROVISIONS ON PILOT TRAINING AND SAFETY ISSUES**

Significant challenges remain as FAA continues to work towards meeting the remaining requirements of the Act. First, FAA has not succeeded in meeting milestones for issuing key Act-mandated rules on pilot screening and qualifications, training, and mentoring and leadership programs. In addition, the Agency lacks a clear long-term strategy with detailed milestones for transitioning to a new pilot records database and addressing data privacy concerns. Finally, poor communication between FAA and industry is impeding progress on several initiatives.

## FAA Has Faced Difficulties in Issuing Key Rulemakings Within the Deadlines Mandated by the Act

FAA is behind schedule on implementing key rulemaking initiatives to enhance pilot qualifications and training standards, and to establish mentoring and leadership programs. A key challenge FAA faces in achieving the full measure of the Act is to implement mandated rules within the established milestones. Rulemaking activities are complex, require extensive public notification and comment periods, and can encounter significant industry opposition. In addition to notice and comment periods required by law, FAA must also conduct detailed analyses of each rule's economic impact and coordinate with stakeholders. As a result, as shown in table 2, FAA efforts to issue Act-mandated rules are delayed.

**Table 2. Missed Pilot Training, Qualification, and Mentoring Milestones**

Act Section	Product	Deadline	Milestone Status
206 Mentoring	NPRM	8/1/2011	Overdue & Not Complete
207 Crew Pairing	Study	8/1/2011	Completed Late
208 Training Recommendations	ARC Report <sup>8</sup>	11/30/2011	Completed Late
209 Crew Training	ARC Formation	9/30/2010	Completed Late
209 Crew Training	ARC Report	8/1/2011	Completed Late
209 Crew Training	Final Rule	10/1/2011	Overdue & Not Complete
216 Pilot Qualifications	NPRM	1/28/2011	Completed Late
216 Pilot Qualifications	Final Rule	8/1/2012	Overdue & Not Complete

Source: OIG analysis of FAA-reported data & Act requirements

FAA is overdue and has not completed three critical rulemaking projects aimed at raising pilot standards: (1) pilot qualifications, (2) pilot training, and (3) pilot mentoring, leadership, and professional development. Successful implementation of such rules depends on FAA's ability to address air carrier concerns and work through the regulatory process in a timely manner, which has presented challenges for the Agency.

**Pilot Qualifications.** FAA is behind schedule in meeting the Act's requirement to substantially raise airline pilot qualifications. FAA expects to issue a final rule by August 2013—1 year after the Act's deadline. As mandated by the Act, FAA's

<sup>8</sup> FAA formed multiple Aviation Rulemaking Committees (ARCs) comprised of aviation experts from FAA and industry as required in specified sections of the Act. These ARCs were responsible for issuing reports to FAA and Congress.

proposed rule (issued in February 2012) would require all Part 121 pilots to hold an Airline Transport Pilot (ATP) certificate,<sup>9</sup> which is currently required only for Pilots-in-Command (captains). As shown in table 3, first officers would need 1,500 hours of flight time to obtain an ATP certificate—six times the current minimum of 250 hours needed for a commercial pilot’s certificate.

**Table 3. Minimum Requirements for First Officers in Part 121 Air Carrier Service**

	Pilot Certificate	Total Flight Hours	Type Rating	Age
<b>Current Requirements</b>	Commercial	250*	None	18
<b>Proposed Requirements</b>	ATP	1500	Yes	23
	Restricted ATP	750 with military flight experience or 1,000 with 4-year aviation degree	Yes	21

\* This can be reduced to 190 hours if the pilot completes specialized flight training.

Source: OIG analysis of 14 CFR 61.153, 61.159, 61.129, and Pilot Certification and Qualification Requirements NPRM

To provide some flexibility, FAA’s proposed rule would also allow pilots with a 4-year aviation degree or military flight experience to obtain a “restricted” ATP certificate as an alternative to the 1,500 hour requirement.<sup>10</sup> However, air carrier representatives remain opposed to the proposed rule because they feel a pilot’s quality and type of flying experience should be weighted more heavily than the number of flight hours.

FAA’s delayed rulemaking is a particular concern because, under the terms of the Act, the requirement that all pilots possess ATP certificates will automatically take effect if FAA cannot issue a final rule by August 2013—without the additional flexibility of the restricted ATP certificate option provided in FAA’s proposed rule. As a result, air carriers may not have adequate time to make necessary adjustments to their pilot training and qualification programs to meet the new requirements by the Act’s deadline.

FAA has also not taken steps to ensure carriers and FAA inspectors are ready to transition to these new pilot qualification requirements. For example, at two regional air carriers we visited, more than 75 percent of current first officers did not have an ATP certificate. Yet, neither carrier had developed a plan to ensure

<sup>9</sup> An Airline Transport Pilot (ATP) Certificate is the highest level of pilot certification. Pilots certified as ATP are authorized to act as pilot-in-command of an aircraft in commercial airline service. Additional eligibility requirements are contained in 14 CFR 61.153.

<sup>10</sup> In addition to an ATP or restricted ATP certificate, FAA’s proposed rule would require all first officers to have an aircraft type rating, which involves additional training and testing specific to the airplanes they fly.

these pilots will meet the enhanced requirements by the deadline, nor had local FAA inspectors followed up with these carriers to assess their ability to comply. Additionally, FAA inspectors will have an increased workload as they perform new ATP certificate examinations for first officers. As the deadline approaches, it will be important for FAA to ensure its workforce and carriers can meet the impending demand for new certification testing.

While some air carriers have moved forward with new ATP programs for first officers, they encountered obstacles in obtaining FAA approval for the program. A regional air carrier we visited attempted to establish a program for first officers to obtain advanced certification. Although the local FAA office initially approved the program, the Agency rescinded the approval 1 day before it was set to launch because FAA had not issued national guidance on developing such programs. Almost 11 months later, the principal inspector approved the same program and the carrier was able to incorporate it into its training manual.

Finally, while FAA's pilot qualification proposed rule satisfies most of the Act's requirements to increase the minimum standards needed for commercial pilots, it may fall short in ensuring sufficient pre-employment screening. For example, the Act states that applicant pilot screening must include an assessment of skills, aptitudes, airmanship, and suitability specific to each air carrier's operations. The proposed rule focuses on the requirements for obtaining an enhanced ATP certificate. The rule does not, however, specify how carriers should determine whether the pilot's background and experience is appropriate and would allow them to function effectively in the carrier's operating environment.

**Pilot Training.** FAA is more than 15 months overdue on issuing a final rule revising pilot training requirements and efforts have been considerably delayed due to significant industry opposition. This is an important safety initiative that will require pilot training programs to use flight simulators for scenario-based training and enhance pilots' ability to work together during emergencies.

In January 2009, FAA issued a proposed rule; however, industry opposed that the rule imposes overly prescriptive training hours rather than basing pilot training on skills most needed to safely perform flight operations. This prompted FAA to issue a second proposed rule in May 2011. The revised proposal requires more thorough ground and flight training for pilots on how to recognize and recover from stalls,<sup>11</sup> as well as remedial training for pilots who perform poorly in training. This initiative has been significantly delayed, as FAA reviewed comments on the revised proposal for more than 8 months before submitting the appropriate documents in June 2012 to advance the rulemaking process.

---

<sup>11</sup> Aerodynamic stalls—such as the one experienced by the airplane involved in the Colgan accident—occur when the airflow over the wing is disrupted and the aircraft's lift is quickly reduced.

**Pilot Mentoring, Leadership, and Professional Development.** FAA is more than 17 months overdue in meeting a mandated timeline to issue a proposed rule requiring that air carriers establish pilot mentoring, leadership programs, and professional development committees to improve pilot performance.<sup>12</sup> FAA intends to issue a proposed rule that would reinforce safe flying practices, but the proposed rule has encountered a lengthy delay, due in part to challenges in developing an appropriate balance between the costs and benefits of these programs. For example, regional air carrier officials expressed concerns that a mentoring program would have to be scaled to their business model and that pilot turnover could outweigh the benefits of establishing these programs.<sup>13</sup> FAA has been working to address industry comments and resolve cost-benefit balance issues.

FAA's efforts to issue a proposed rule establishing pilot mentoring and professionalism programs at air carriers are behind schedule, and air carriers are hesitant to establish these programs. For example, seven of nine carriers we visited did not have formal mentoring programs, and none had professional development programs for their pilots. Without FAA guidance, air carriers view developing programs ahead of final rulemakings as risky and they are reluctant to allocate resources to implement these new safety programs.

### **FAA Lacks a Clear, Long-Term Strategy for Transitioning to a New Centralized Electronic Pilot Records Database**

FAA has yet to make long-term implementation decisions on the new electronic database for pilot records. These include decisions about how to incorporate data from different sources and transition to the new system while ensuring data integrity. According to the Act, the database should include records not only from FAA, but from air carriers and the National Driver Register (NDR).<sup>14</sup> FAA achieved an early milestone to begin developing the electronic database for pilot screening by October 2010. Additionally, in July 2011 an advisory committee provided FAA with recommendations on the database's design and functionality. However, the pilot records database is only in the early stages of development and the Act did not establish a milestone for implementation.

---

<sup>12</sup> Pilot performance—a longstanding NTSB safety concern—was cited in 7 of the 10 major accidents that occurred over the last decade, indicating that the quality of training, professionalism, and mentoring is important to safety. Several NTSB reviews of airline accidents (including the Colgan accident) cite poor pilot performance—such as poor decision-making, inadequate aircraft control, improper flying techniques, and a disregard for operating procedures—as a high-ranking causal factor.

<sup>13</sup> In 2011, we reported that regional carriers were not pursuing mentoring opportunities for their pilots. OIG Report Number AV-2012-027, “New Approaches Are Needed to Strengthen FAA Oversight of Air Carrier Training Programs and Pilot Performance,” December 20, 2011.

<sup>14</sup> NDR is a central information system that allows States to electronically exchange information on licensed drivers through a computerized network.

Further, the Agency projects that the launch of the database will not occur before 2014, and pilots are opposed to many facets of the new records database due to concerns over the subjectivity and relevance of potential data. As a result of the delayed implementation and industry concerns, it is unclear when the new system will achieve the goal of enhancing the screening process of newly hired pilots. To meet this goal, FAA must overcome three key challenges.

- First, FAA must define the level of detail to be captured from air carrier pilot training records, such as whether recurrent flight training will be included. The Act stipulates that comments and evaluations made by the check airman<sup>15</sup> be included in the database; however, industry is highly protective of these data and opposes including them in the new database. Consequently, some FAA officials are concerned that carriers may instruct pilot examiners not to record comments during evaluations so that they would not be included in the database. Additionally, FAA must determine how to include historical air carrier pilot training records into its new system. Incorporating standardized historical records from various air carrier and other sources will be difficult because information varies based on differences in air carrier training programs and because record retention policies vary from 5 years to indefinitely, depending on the carrier.
- Second, the Agency will have to develop a strategy to transition to the new database while also ensuring air carriers receive all available data in the interim before the Agency issues its final rule and launches the database. FAA's 2009 Call to Action on Airline Safety and Pilot Training called on carriers to obtain more comprehensive records on pilots prior to hiring. However, we reported in December 2011<sup>16</sup> that FAA lacks a centralized process to receive and respond to carriers' requests for pilot records. FAA may mitigate this problem once the database is launched. Since database implementation is years away, we are concerned whether air carriers can currently obtain all relevant information on pilots before they are hired.
- Finally, FAA identified multiple challenges in accessing records from the NDR and incorporating them into the database. Specifically, FAA must decide how to ensure the accuracy of NDR records entered into the database because searches are based on names and physical characteristics of the pilots (height, age, eye color, etc.) that allow for inaccuracies in matching. For example, FAA officials stated that during a 1-week test period, FAA requested NDR information on 3,000 pilots and received possible matches for approximately 900 of them. However, after obtaining

---

<sup>15</sup> Pilots who are employed by air carriers to evaluate pilot proficiency.

<sup>16</sup> OIG Report Number AV-2012-027, "New Approaches Are Needed to Strengthen FAA Oversight of Air Carrier Training Programs and Pilot Performance," December 20, 2011.

the actual records from the States to verify the match, less than 20 of the possible 900 matches were valid. Additionally, FAA must assess whether the pilot records database requirements to maintain data for the life of the pilot would conflict with each State's reporting policies that require the records to be expunged after a certain period.

FAA states that rulemaking will be necessary to fully develop and implement the intricacies of this electronic system and is in the preliminary stages of writing a proposal. However, major system changes may arise as a result of industry comments, making it uncertain what level of detail the database will contain, how the database can be used, and ultimately when it will be implemented.

### **FAA Has Not Provided the Level of Education, Outreach, and Guidance Needed for Industry To Implement New Safety Programs**

FAA has not adequately communicated with its own field offices or with industry on the status of new rules or provided air carriers with sufficient guidance to incorporate new safety requirements. FAA engaged a cross-section of Government and industry representatives and created six ARCs to develop recommendations on multiple initiatives, such as identifying and promoting best practices in pilot training and developing the pilot records database. However, the Agency has not informed its field offices or airlines of many of the ARCs' outcomes, including the sharing of best practices and the impact of ARC reports on pending rulemakings, or engaged in effective outreach efforts for new safety programs other than SMS. For example, none of the nine field offices we visited had received information from FAA Headquarters on the Agency's progress in developing pilot mentoring, professional development, and leadership programs.

Further, FAA did not follow up to ensure air carriers properly implemented the guidance it provided. For example, while FAA issued guidance<sup>17</sup> for retaining and submitting pilot training records for the new electronic pilot records database, it did not follow up to ensure air carrier compliance. Four of six carriers we visited had not clarified their policies to reflect this change. As a result, important details concerning pilot training and proficiency may be lost and not available for air carriers to use in future hiring decisions.

FAA also did not provide clear instructions for field inspectors on how to perform the random onsite safety inspections of regional airlines as required by the Act. While the Agency did issue guidance to local offices,<sup>18</sup> it did not clearly

---

<sup>17</sup> InFO 11014: Retention of Pilot Records for the Pilot Records Database (PRD)—voluntary guidance from FAA to air carriers recommending policies on pilot records retention.

<sup>18</sup> Notice 8900.137 Flight Standards Service (AFS) Geographic Surveillance Program for 14 CFR Parts 121 and 135 – Phase I.

communicate the objectives of the inspections, how to perform them, or the intended benefits, leading to inconsistent data collection and varying levels of FAA surveillance at air carriers. The guidance required just one random onsite inspection to be performed per air carrier,<sup>19</sup> and as of June 2012, 1,052 total inspections had been completed at 51 air carriers. However, a lack of clear instructions resulted in widely differing implementation of these inspections and ineffective use of inspection resources. For example, almost half (464) of these inspections were completed at 3 air carriers.

Additionally, some air carriers that had moved forward with new voluntary safety programs encountered obstacles in obtaining FAA approval. One air carrier we visited faced a lengthy delay from its local FAA office in the approval of a new incident reporting system (i.e., ASAP). According to air carrier representatives, there was almost a 7-month gap between when the air carrier and labor organization signed the program approval letter and when FAA inspectors provided the final approval for program implementation. Air carrier officials identified a lack of local inspector resources and knowledge about the safety program as the reasons for the delay.

## **CONCLUSION**

FAA plays an integral role in maintaining the excellent safety record of the National Airspace System. The Agency acted swiftly to address safety concerns highlighted by the 2009 Colgan crash, and FAA and air carriers have made commendable progress in meeting new requirements of the Airline Safety Act. FAA still faces several challenges, however, in updating pilot training and leadership programs, developing screening and qualification standards, and ensuring carriers have the data they need to make sound hiring decisions. To effectively implement these initiatives in a timely manner, FAA must balance industry concerns with a sustained commitment to oversight. Nonetheless, until FAA establishes final rules on new safety standards and focuses management attention on assisting smaller carriers with establishing new programs, the Agency cannot be assured that momentum will be sustained in implementing these initiatives.

---

<sup>19</sup> Only Part 121 air carriers who performed contracted flights with other Part 121 air carriers were subject to these inspections.

## RECOMMENDATIONS

We recommend that FAA:

1. Fully implement the Act-required ASAP and FOQA plan that assists smaller carriers in developing these safety programs.
2. Determine how many Part 121 pilots currently do not meet the heightened qualification standards required by the Act, and assess the data for the potential impact on FAA and air carrier operations.
3. Develop and communicate with key stakeholders the status of major milestones, including the proposed rule, to improve timeliness and accountability for implementing the new Pilot Records Database.
4. Require inspectors to determine if air carriers have modified policies, in accordance with the Act, to retain pilot records for the new, centralized electronic pilot records database.
5. In developing the Pilot Records Database, require training records for all unsatisfactory pilot evaluation events to include written comments from the examiner to aid in identifying specific performance deficiencies.

## AGENCY COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE

We provided a draft of this report to FAA on October 22, 2012, and received its response on December 27, 2012. FAA's response is included in its entirety as an appendix to this report. FAA concurred or partially concurred with all of our recommendations. Based on FAA's response, we consider recommendations 3 and 4 resolved but open pending completion of planned actions. However, FAA's responses did not meet the full intent of recommendations 1, 2, and 5, as detailed below.

FAA requested that we close recommendation 1 based on the high rate of air carrier participation in voluntary safety programs and its plans to require that all air carriers implement a SMS. While we recognize the significant progress in advancing these programs at mainline and regional air carriers, we note that implementation at smaller carriers—those with 15 or fewer aircraft—is lagging. This is a notable concern given that smaller carriers make up nearly half of all Part 121 operating airlines. While FAA submitted to Congress a required plan to help establish voluntary programs at smaller carriers, the Agency has yet to fully implement this plan. Without a more targeted approach that demonstrates the benefits of such programs to smaller carriers, the Agency will be hard pressed to increase participation for this segment of the industry. Therefore, we ask that the

Agency either implement its plan in its entirety or provide an alternative action that would fully meet the intent of our recommendation.

FAA partially concurred with recommendation 2, but did not agree to gather and analyze data on the number of Part 121 pilots that currently do not meet the newer and more stringent airman qualification standards. Rather, in its response FAA contends that its ongoing communication with industry and its data assessment performed during the NPRM comment period is sufficient to meet the intent of our recommendation. We recognize that FAA should prioritize the actions needed for issuance of the final rule on pilot qualifications before August 1, 2013. However, while FAA has provided information to air carriers and inspectors regarding the Act's requirements for revised ATP certification, the Agency has not demonstrated that the industry can fully transition to the new pilot requirements by that date. Because the uncertainty surrounding this element of the Act continues to be of significant concern, we request that FAA reconsider its position and provide data regarding the number of Part 121 pilots that currently do not meet the heightened qualifications, as well as how many air carriers have not modified their training programs to ensure pilots will meet the enhanced requirements by August 1, 2013.

FAA concurred with recommendation 5, but the Agency's proposed action does not meet the full intent of our recommendation. We recommended that FAA require that the training records for *all* unsatisfactory pilot evaluations include examiner comments. While FAA plans to require that any comments contained in pilot evaluation records be included in the database, this will not address our concern that air carriers *may not capture* examiner comments during the evaluation. As we noted in our report, some FAA officials are concerned that air carriers may be reluctant to create an official record of a pilot's poor performance through written comments. However, without these comments, air carriers and FAA may not be able to identify pilots with specific performance deficiencies to ensure they get the additional training they need. Accordingly, we consider recommendation 5 open and unresolved and request that the Agency propose additional actions to meet the intent of our recommendation.

## **ACTIONS REQUIRED**

FAA's planned actions for recommendations 3 and 4 are responsive, and we consider these recommendations resolved but open pending completion of the planned actions. For recommendations 1, 2, and 5, we request that FAA either provide additional information or reconsider its position as described above. In accordance with Department of Transportation Order 8000.1C, we request that FAA provide this additional information within 30 days of this report.

We appreciate the courtesies and cooperation of FAA representatives during this audit. If you have any questions concerning this report, please call me at (202) 366-0500 or Tina Nysted, Program Director, at (404) 562-3770.

#

cc: DOT Audit Liaison, M-1  
FAA Audit Liaison, AAE-100

## **EXHIBIT A. SCOPE AND METHODOLOGY**

We conducted our work from June 2011 through October 2012 in accordance with generally accepted Government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

To assess FAA and industry progress implementing sections of the Airline Safety Act, we met with Flight Standards and other officials at FAA headquarters who are responsible for required actions and oversight of Airline Safety Act initiatives. We visited nine air carriers representing mainline, regional, supplemental, and cargo operators, along with their respective FAA oversight offices, and interviewed 31 FAA inspectors.

The nine air carriers were selected based on the Part 121 and 121/135 carriers identified in FAA's Voluntary Safety Programs report to Congress (Response to P.L. 111-216, Sec. 213, dated January 28, 2011). The three air carriers and FAA oversight offices we visited in the survey phase of our audit were selected based on location and their classification as a Part 121 air carrier and represented two types of operations (mainline and regional). For the six carriers we visited during the verification phase of our audit, the Office of Inspector General statistician developed a sample from the 32 Part 121 air carriers with no voluntary safety programs identified in FAA's January 2011 report to Congress. We also interviewed representatives from five industry associations and trade groups who represent the interests of major, regional, supplemental, and cargo air carriers and airline pilots to obtain their input regarding progress and challenges identified for FAA and industry implementing specific sections of the Airline Safety Act.

To determine the progress and specific challenges associated with the development of the new, centralized electronic pilot records database, we interviewed FAA pilot records branch personnel in Oklahoma City, OK, responsible for the storage of these records and for development of related policy.

## EXHIBIT B. STATUS OF AIRLINE SAFETY ACT MILESTONES

Section	Initiative	Milestone	Deadline	Milestone Status
202	NTSB Recommendations Report	Report	Annual	Met, On-Target
203	FAA Pilot Records Database	Database Development	10/30/2010	Met
		Report	2/1/2012	Completed Late – 2/24/12
204	Air Carrier Safety & Pilot Training ARC	ARC Report	7/31/2011	Met
		ARC Report	7/31/2012	Met
205	FAA Inspector Staffing	Start OIG Review	5/1/2011	Met
206	Mentoring, Development, and Leadership	NPRM	8/1/2011	Missed & Overdue
		Final Rule	8/1/2013	To Be Determined
207	Crew Pairing and CRM	Study	8/1/2011	Completed Late – 8/26/2011
208	NTSB Training Recommendations	ARC Formation	11/30/2010	Met
		NPRM	8/1/2011	Met
		ARC report	11/30/2011	Completed Late – 3/7/2012
		Final Rule	8/1/2013	To Be Determined
209	FAA Rulemaking on Training	ARC Formation	9/30/2010	Completed Late – 11/16/2010
		ARC Report	8/1/2011	Completed Late – 9/23/2011
		Final Rule	10/1/2011	Missed & Overdue
210	Code Share Ticket Disclosure	Amend 49 U.S.C. § 41712	N/A	Met
211	FAA Safety Inspections	Perform one per year	Annual	Met & On-Target
212	Fatigue & Commuting	NPRM	2/1/2011	Met
		Final Rule	8/1/2011	Completed Late – 1/4/2012
		Risk Management Plans	11/1/2010	Met
		Start Study	9/30/2010	Met
		Preliminary Findings	1/30/2011	Met
		Report	6/30/2011	Met
213	Voluntary Safety Programs	Report	1/28/2011	Completed Late – 3/16/2011
214	ASAP & FOQA Implementation	Plans Issued	1/28/2011	Completed Late – 4/14/2011
		Plans Implemented	8/1/2011	FOQA Portion Overdue
215	Safety Management Systems	NPRM	11/1/2010	Met
		Final Rule	8/1/2012	Missed & Overdue
216	Screening & Qualifications	NPRM	1/28/2011	Completed Late - 2/29/2012
		Final Rule	8/1/2012	Missed & Overdue
		ATP	8/1/2013	To Be Determined
217	ATP Certification	Final Rule	8/1/2013	To Be Determined

## EXHIBIT C. ORGANIZATIONS VISITED OR CONTACTED

### Federal Aviation Administration (FAA) Headquarters:

Flight Standards Service	Washington, DC
Pilot Records Branch	Oklahoma City, OK

### FAA Certificate Management Offices (CMO):

Phoenix CMO	Phoenix, AZ
Portland CMO	Hillsboro, OR
South Florida CMO	Miramar, FL
United Air Lines CMO	Aurora, CO

### FAA Certificate Management Units (CMU) at Flight Standards District Offices (FSDO):

Cape Air CMU at Boston FSDO	Lexington, MA
Comair CMU at Louisville FSDO	Louisville, KY
Kalitta Air CMU at Detroit FSDO	Belleville, MI
PSA CMU at Cincinnati FSDO	Cincinnati, OH
USA Jet CMU at East Michigan FSDO	Belleville, MI

### Air Carriers:

Cape Air/Hyannis Air Service	Hyannis, MA
Comair	Erlanger, KY
Evergreen International Airlines	McMinnville, OR
Florida West International Airways	Miami, FL
Kalitta Air	Ypsilanti, MI
PSA Airlines	Vandalia, OH
Sierra Pacific Airlines	Tucson, AZ
United Airlines	Denver, CO
USA Jet Airlines	Belleville, MI

### Industry Representatives or Organizations:

Airlines For America (A4A) <i>Previously known as Air Transport Association (ATA)</i>	Washington, DC
Regional Airline Association (RAA)	Washington, DC
Air Line Pilots Association (ALPA)	Washington, DC
National Air Carrier Association (NACA)	Washington, DC
Cargo Airline Association (CAA)	Washington, DC

**EXHIBIT D. MAJOR CONTRIBUTORS TO THIS REPORT**

<b>Name</b>	<b>Title</b>
Tina Nysted	Program Director
Travis Wiley	Project Manager
Stefanie McCans	Senior Analyst
Curt Boettcher	Senior Analyst
Marshall Anderson	Senior Analyst
Aiesha Gillespie	Analyst
Audre Azuolas	Writer/Editor
Megha Joshipura	Statistician



## Federal Aviation Administration

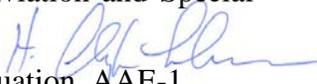
---

---

# Memorandum

Date: December 27, 2012

To: Jeffrey B. Guzzetti, Assistant Inspector General for Aviation and Special Program Audits

From: H. Clayton Foushee, Director, Office of Audit and Evaluation, AAE-1 

Subject: Response to Office of Inspector General (OIG) Draft Report—Airline Safety Act

---

---

The Federal Aviation Administration (FAA) has implemented many elements of the Airline Safety and Pilot Training Act of 2010 (the Act), which are key to improving safety in commercial airline travel by raising standards in pilot training and performance as well as advancing voluntary programs that yield critical safety information.

The FAA wrote and delivered seven reports to Congress, initiated five rulemaking projects, and continued rulemaking efforts for another four final rules as a result of the Act. The FAA is continuing to develop rule-making initiatives and policy changes in response to the Act.

### RECOMMENDATIONS AND RESPONSES

**Recommendation 1:** Fully implement the Act-required ASAP and FOQA plan that assists smaller carriers in developing these safety programs.

**FAA Response:** Concur. In our report to Congress, the FAA noted it had a range of options available to promote Aviation Safety Action Program (ASAP) and Flight Operational Quality Assurance (FOQA), depending on budget and resource availability. The FAA has implemented this plan by improving the functionality of the Web-Based Access Tool (WBAT) and continuing to host ASAP-FOQA Information-Sharing meetings with the industry, which have been effective. Participation in FAA's voluntary programs is at an all time high. In September of 2010, 69% of part 121 operators participated in at least one voluntary program (ASAP, FOQA, Advanced Qualification Program [AQP], Line Operations Safety Audit [LOSA]). Today over 80% participate and virtually 100% of the "mainline" and "regional" air carriers participate in at least one voluntary program, and most participate in several voluntary programs. As of October 16, 2012, 78% of part 121 air carriers participate in ASAP and 48% participate in FOQA.

Furthermore, the FAA will require each part 121 air carrier to implement a safety management system (SMS). A SMS is a comprehensive, process-oriented approach to

managing safety throughout an organization. A SMS includes an organization-wide safety policy; formal methods for identifying hazards, controlling, and continually assessing risk; and promotion of a safety culture. SMS stresses not only compliance with technical standards but also increased emphasis on the overall safety performance of the organization. SMS's proactive emphasis on hazard identification and mitigation, and on communication of safety issues, provides certificate holders robust tools to improve safety, regardless of the size of the operator. The FAA submitted to Congress a copy of the implementation plan required under Section 214 of the Act. Therefore, the FAA has met the intent of this recommendation and requests that it be closed.

**Recommendation 2:** Determine how many part 121 pilots currently do not meet the heightened qualification standards required by the Act, and assess the data for the potential impact on FAA and air carrier operations.

**FAA Response:** Partially Concur. The FAA has communicated regularly with aviation industry stakeholders to facilitate compliance with the requirements of the Act, beginning with Information for Operators 10024, Airline Transport Pilot (ATP) Certificate Requirement for Pilots in Part 121 Operations, and dated 12/15/2010. Additionally, on 4/17/2012, the FAA issued Notice 8900.184, Incorporation of ATP Certification into an Air Carrier SIC Training Program, to provide guidance to principal operations inspectors (POIs) with oversight responsibilities of Title 14 of the Code of Federal Regulations (14 CFR) part 121 certificate holders on incorporating airline transport pilot (ATP) certification into an air carrier second-in-command (SIC) training program. In addition to recurrent training programs, air carriers have revised new-hire training to incorporate the new requirements. Through its ongoing conversations with industry groups, the FAA considers that industry has qualified nearly half of the pilots needing an ATP as of October 2012. Most carriers are aware of the self-enactment date of the regulation and began their mitigation steps early enough to meet the August 1, 2013 deadline.

The FAA assessed the data collected during the comment period for the Pilot Certification and Qualification notice of proposed rulemaking (NPRM) regarding the number of Part 121 pilots that at that time did not meet the heightened qualification standards required by the Act. At that time, FAA determined that the workload increased for some inspectors, but the work has been spread over such a timeframe that existing resources are available to accommodate the additional workload.

**Recommendation #3:** Develop and communicate with key stakeholders the status of major milestones, including the proposed rule, to improve timeliness and accountability for implementing the new Pilot Record Database.

**FAA Response:** Concur. The focus of the FAA to date has been on the development of a prototype database system to answer questions on how the paper based Pilot Records Improvement Act of 1996 (PRIA) system can be automated. In addition, the implementation team has been developing an action plan with a list of activities and dates for the database delivery and the associated rulemaking activities. Once the action plan has been approved, correspondence will be issued to communicate the milestones for the project to all industry stakeholders.

Despite focusing on these priorities, the agency has also issued two documents to communicate with operators and others in industry on pilot records. The Flight Standards Service (AFS) issued an Information for Operators memorandum (InFO #11014) on August 15, 2011 to inform operators of their responsibility under the new law to retain records for the database. AFS also issued updated guidance (AC 120-68-F) on May 31, 2012 for the PRIA. Updates to the paper based PRIA system are currently being implemented to assist with the conversion to the Pilot Record Database (PRD) system and should be completed by December 31, 2013.

**Recommendation 4:** Require inspectors to determine if air carriers have modified policies, in accordance with the Act, to retain pilot records for the new, centralized electronic pilot record database.

**FAA Response:** Concur. InFO #11014, as stated in our response to recommendation 3, was issued to inform operators of their responsibility under the new law to retain records for the database. The FAA will conduct spot checks in order to examine airline policy guidance to ensure carriers have taken steps to comply with the intent of the Act. The FAA has met the intent of this recommendation and request that this recommendation be closed.

**Recommendation 5:** In developing the Pilot Records Database, require training records for all unsatisfactory pilot evaluation events to include written comments from the examiner to aid in identifying specific performance deficiencies.

**FAA Response:** Concur. The database will include a text block for the entry of examiner comments as stipulated by the statute. This will allow for the entry of comments that are made by an examiner whether the evaluation event was determined to be satisfactory or unsatisfactory. The intent is to capture any comments that an examiner deemed important and to include these in the pilot's PRD history. Any comment that is recorded as part of an evaluation on the paper based form or within an air carrier's automated system will be required for entry in the PRD system. The database should be completed by December 31, 2013.