Office of Inspector General
Audit Report

NEW APPROACHES ARE NEEDED TO STRENGTHEN FAA OVERSIGHT OF AIR CARRIER TRAINING PROGRAMS AND PILOT PERFORMANCE

Federal Aviation Administration

Report Number: AV-2012-027
Date Issued: December 20, 2011

U.S. Department of Transportation

Office of the Secretary
of Transportation
Office of Inspector General

Memorandum

Subject: <u>ACTION</u>: New Approaches Are Needed To Strengthen FAA Oversight of Air Carrier Training Programs and Pilot Performance
Federal Aviation Administration
Report Number AV-2012-027

Date: December 20, 2011

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Reply to Attn. of: JA-10

To: Acting Federal Aviation Administrator

For more than a decade, the National Transportation Safety Board (NTSB) has called for the Federal Aviation Administration (FAA) to incorporate safety improvements impacting pilot performance and professionalism. NTSB determined that the cause of the fatal 2009 crash of Colgan Air flight 3407 was due in part to pilot failure to follow appropriate procedures. In June 2009, 4 months after the crash, FAA announced its Call to Action Plan, which included 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.

The Senate Committee on Commerce, Science, and Transportation and the House Committee on Transportation and Infrastructure requested that we review FAA's oversight of airline pilot training programs to determine whether pilot training is up to date, and to what extent FAA can verify pilots are receiving appropriate training. The Committees also requested that we determine what actions apply when pilots repeatedly fail training or other tests, what information pilots must provide airlines when hired, and whether this information is sufficient to verify pilot employment and training. This request was also reiterated by Representatives Louise Slaughter and Brian Higgins. This report provides the results of our audit to (1) assess FAA's oversight of air carrier pilot training and proficiency programs and (2) examine the data FAA maintains on pilots' qualifications and past performance and the process air carriers use to obtain these data when hiring.

To conduct our work, we visited 18 air carriers, 18 FAA inspection offices, and interviewed 60 inspectors and managers. We conducted this review between October 2009 and October 2011 in accordance with generally accepted Government auditing standards. Exhibit A details our scope and methodology, including lists of the air carriers and FAA offices we visited or contacted.

RESULTS IN BRIEF

FAA's oversight of air carriers' pilot training and proficiency programs lacks the rigor needed to identify and track poor performing pilots and address potential program risks. These oversight gaps are largely due to inadequate FAA guidance and policies for tracking and gathering data on pilots who fail proficiency tests. Further, FAA has not sufficiently trained inspectors on how to evaluate air carriers' basic training assessments, such as check rides.[1] Finally, FAA has not ensured that its inspectors are prepared to oversee air carriers' use of a new data-driven proficiency-based system for training and evaluating pilots.

FAA maintains extensive pilot information that air carriers can use to evaluate the competence and qualifications of pilots; however, its current request process hinders air carriers' ability to easily obtain all relevant data. Three factors contribute to this failure. First, air carriers must contact two different offices within FAA to obtain all pilots' records. Second, the Agency lacks a centralized process for receiving and responding to pilot record requests, raising doubt as to whether air carriers are getting all the relevant information FAA has on pilots before they are hired. Finally, the Agency did not confirm that air carriers followed through on commitments to expand pilot records requests for new hire pilots.

We made seven recommendations to FAA to improve its oversight of air carrier pilot training and pilot performance.

BACKGROUND

All Part 121[2] air carriers—whether mainline or regional—must have an FAA-approved pilot training program. FAA is responsible for ensuring that regulatory requirements are met and that the air carrier's pilots can competently perform their assigned duties. The Colgan accident highlighted differences between the hiring, training, and safety programs of most regional and mainline carriers even though they are under the same regulations and oversight system. For example, mainline

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[1] Check rides, or practical flight examinations conducted by either FAA inspectors or FAA-approved designees to determine pilot proficiency, are a crucial aspect of pilot training programs and ensuring safety.

[2] 14 CFR Part 121, Operating Requirements: Domestic, Flag, and Supplemental Operations. Mainline air carriers are major airlines that generally operate aircraft seating 100 or more passengers. Regional air carriers are airlines that generally operate aircraft seating 99 or fewer passengers.

carriers typically hire more experienced pilots from the military or the regional airlines, whereas regional airlines usually hire pilots with fewer flight hours from flight training schools and Part 135[3] or corporate business operators.

Air carriers have the option of following either traditional pilot training programs—which include minimum standards for training hours, curriculum, and required flight maneuvers—or the Advanced Qualification Program (AQP), a proficiency-based alternative to traditional training.[4] Roughly two-thirds of Part 121 air carriers continue to conduct traditional training. The training is typically conducted in a flight simulator (see Figure 1) and generally involves proficiency checks of pilots' knowledge and skills and flight training for pilots to practice normal and advanced operations.

Figure 1. Airbus A320 Series Flight Simulator Used for Proficiency Checks

Source: Lufthansa Flight Training

Proficiency checks and flight training are taken alternately at prescribed intervals; captains require more frequent flight training and evaluation exercises than first officers (see Table 1).

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[3] 14 CFR Part 135, On-Demand, Operating Requirements: Commuter and On Demand Operations and Rules Governing Persons On Board Such Aircraft.

[4] 14 CFR Part 121, Subparts N & O. Subpart N (§§ 121.400-.429) prescribes the requirements for establishing and maintaining a training program for crewmembers, aircraft dispatchers, and other operations personnel, and for the approval and use of training devices in the conduct of the program. Subpart O (§§ 121.431-.459) prescribes crewmember qualifications.

Table 1. Example of a Traditional Pilot Training Pattern for Captains and First Officers

	6 Months	12 Months	18 Months	24 Months
Proficiency check	⊙	O	⊙	
Flight training		⊙		⊙ O

⊙ Captain   O First officer

Note: All pilots (captains and first officers) receive a proficiency check as part of their initial flight training. In addition, captains are required to have an annual line check, which are typically performed during scheduled commercial flights.
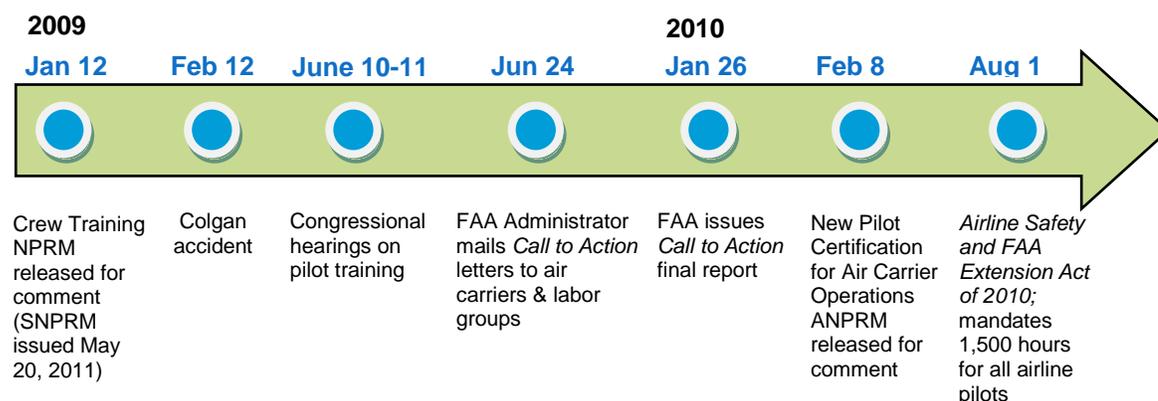
Air carriers can opt to use AQP training but must demonstrate that any departure from the training standards prescribed in 14 CFR Part 121 provides an equivalent or better level of safety. AQP incorporates data-driven quality control processes to refine pilot training based on the individual's proficiency and identified training needs. By design, AQP training:

- employs innovative training and qualification concepts, such as flying in abnormal conditions and emergencies;

- increases opportunities to integrate with related airline safety databases and systems, such as Flight Operations Quality Assurance (FOQA) and Aviation Safety Action Program (ASAP);[5]

- allows for standardized training across fleets and between instructors and evaluators within the airline; and

- provides access to resources of the larger AQP community, including free flow of information among carriers, annual industry meetings, and FAA resources.

The push towards implementing AQP for air carrier pilot training can be attributed to a proposed rulemaking that enhances traditional training requirements by requiring the use of flight simulators and including additional training and evaluation requirements for pilots. While this rulemaking was first proposed in 2009, the Colgan Air crash accelerated the effort and set off a series of intense debates and regulatory action between the airline industry and FAA (see Figure 2).

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[5] FOQA programs collect and analyze digital flight data generated during normal operations to improve overall safety; ASAP encourages air carrier and repair station employees to voluntarily report safety information that may be critical to identifying potential precursors to accidents.

Figure 2. Timeline of Pilot Training Events and Legislation

2009

| Jan 12 | Feb 12 | June 10-11 | Jun 24 | Jan 26 | Feb 8 | Aug 1 |

2010

Crew Training NPRM released for comment (SNPRM issued May 20, 2011)

Colgan accident

Congressional hearings on pilot training

FAA Administrator mails *Call to Action* letters to air carriers & labor groups

FAA issues *Call to Action* final report

New Pilot Certification for Air Carrier Operations ANPRM released for comment

Airline Safety and FAA Extension Act of 2010; mandates 1,500 hours for all airline pilots

FAA'S OVERSIGHT OF PILOT TRAINING PROGRAMS DOES NOT EFFECTIVELY IDENTIFY AND TRACK POOR PERFORMING PILOTS

FAA is not well positioned to assess air carriers' pilot training programs—in part because it has not prepared inspectors to effectively oversee pilots who have performed poorly or failed training. While FAA guidance calls for inspectors to promptly investigate pilot training evaluation failures and take corrective action, it does not clearly define when inspectors should be notified of failures or at what point surveillance should be enhanced. As a result, we found circumstances where FAA inspectors did not enhance surveillance following multiple training failures. FAA also lacks detailed guidance for air carriers to develop comprehensive remedial training programs. Therefore, the Agency cannot effectively target surveillance of pilots who experience difficulty in training or assess risk in air carrier training programs.

FAA Inspectors Are Not Adequately Prepared To Monitor Pilot Training Programs

FAA has not provided guidance to its inspectors on how to evaluate and track pilot performance and training. For example, FAA requires inspectors to establish a process for air carriers to notify FAA of pilots who perform unsatisfactorily during training. However, FAA has not issued procedures or guidance for developing an effective notification process. At 12 of the 18 FAA offices we visited, air carriers notify inspectors of pilot training failures through informal email or telephone exchanges. Moreover, only 5 of the 30 FAA inspectors we interviewed maintain historical logs or tracking sheets for pilots who fail proficiency checks.

FAA guidance also calls for inspectors to promptly investigate identified deficiencies in pilot training and take corrective action. However, more than half of the inspectors we interviewed did not enhance surveillance of poor performing

pilots, or delayed enhanced surveillance until after two consecutive failures. As a result, pilots could fail multiple proficiency checks but would not be subject to increased oversight if the failures were not consecutive. While failing a single proficiency check does not necessarily indicate systemic performance issues, inspectors should be aware of these occurrences so they can enhance surveillance when negative trends become apparent.

FAA also lacks standardized training for inspectors on how to evaluate pilots and check airmen—pilots who are employed by air carriers to evaluate pilot proficiency. To be certified to fly Part 121 aircraft, pilots must pass an oral exam and a practical flying exam, or "check ride." FAA inspectors new to the Agency will perform or observe these tests for the first time without supervision or guidance from more senior inspectors. In these cases FAA inspectors typically rely on their prior experience and on-the-job training to conduct surveillance of these exams. However, because check ride tests and pilot performance assessment standards vary based on operational differences among air carriers, prior experience may not provide FAA inspectors with sufficient knowledge to perform check rides and observations of check airmen.

FAA Does Not Provide Sufficient Oversight of Pilot Performance

Check airmen perform the majority of proficiency checks on air carrier pilots. While check airmen help supplement the Agency's oversight resources, FAA inspectors still have responsibility to oversee pilot training and address unsatisfactory performance. FAA guidance states that when inspectors identify pilot deficiencies, they should conduct a comparison of failure rates between checks conducted by themselves and those conducted by check airmen. However, inspectors seldom conduct proficiency checks themselves so comparative analysis usually cannot be performed.

Check airmen are critical to ensuring pilots are well trained. However, FAA does not renew their authority or observe them as frequently as it does Aircrew Program Designees (APD)—air carrier pilots approved to act on behalf of FAA to authorize pilot certification, such as issuing ratings for the type of aircraft the pilot can fly (see Table 2).[6] Check airmen are evaluated every 24 months. In contrast, APDs must renew their designation with FAA every 12 months. Specifically, APDs are required to submit a renewal package to FAA that includes verification of their qualifications, a record of their checking activity for the past year, and certification that required training was completed. Further, APDs receive training on FAA policies and procedures that check airman do not receive.

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[6] A type rating is an addition to a pilot certificate that qualifies the pilot to fly a specific aircraft make and model. It requires additional training beyond the scope of initial licensure. In the United States this applies to aircraft heavier than 12,500 lbs, having a passenger capacity of more than nine, or being jet propelled.

Table 2. Key Differences in Check Airman and APD Oversight Requirements and Duties

Qualification/Duty	Check Airman	APD
Current, Qualified, and Type Rated in Aircraft	X	X
Perform Check Rides on Pilots	X	X
Observed by FAA	X (every 2 years)	X (every year)
Authorized and Certified by FAA	X	X
Required Renewal of Designation		X (every year)
Conduct Airman Certifications on behalf of FAA and Issue Type Ratings to Pilots		X
Receive Training in FAA Policies and Certification Procedures		X

Source: OIG analysis of FAA and air carrier information

FAA Is Not Capitalizing on Benefits of Air Carrier Remedial Training Programs for Pilots

FAA inspectors do not incorporate inspections of remedial training programs into their surveillance plans. Air carriers' remedial training programs provide additional oversight to ensure performance deficiencies are corrected. The majority of air carriers we visited, 14 of 18 (77 percent), had these programs in place. Through these programs, carriers can provide FAA inspectors with key information for evaluating pilot performance and targeting risk in air carrier training programs. Consequently, inspectors are missing opportunities to improve training and overall air carrier safety and operations. For example:

- One-third of the carriers we visited did not review the training records of pilots who entered a remedial training program to identify unresolved performance problems. In its investigation of the Colgan crash, NTSB discovered that the captain had failed four FAA certification checks—the last of which occurred 16 months before the crash.[7] Consistent with standard practice in the airline industry at the time, Colgan did not perform a comprehensive search of the airman's full record and, therefore, was unaware of the captain's previous failures.

- Of the 13 air carriers we asked, none had procedures in place to prevent two pilots in remedial training programs[8] from being paired together during

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[7] The captain had failed three FAA certification checks prior to his employment with Colgan and one certification check for his initial upgrade to Captain at the air carrier.

[8] At the air carriers we visited, the number of pilots in remedial training represented on average less than 5 percent of the overall pilot population at each air carrier.

scheduled commercial flights. According to air carrier representatives, pilots in remedial training are still current and qualified to fly the aircraft. However, FAA instituted a regulation—referred to as the "green-on-green" rule—to prevent pilots with less than 75 hours in an aircraft type from flying together in commercial operations[9] after it determined there were inherent risks in pairing low-time pilots. The Agency determined that this rule was necessary because of accidents and incidents that had occurred at least in part because of inexperienced flight crews.

- Two pilots with repeated failures and remedial training were effectively absolved from scrutiny when the air carrier downgraded them from captain to first officer. While the FAA inspector maintained emails from the carrier documenting the failures and remediation, the pilots were removed from the carrier's tracking roster and their training cycles were reset when they were downgraded. Ultimately, the inspector took no further action to observe the pilots or reevaluate the carrier's program to determine whether the downgraded pilots should receive additional oversight in the interest of safety.

- One air carrier we visited failed to sufficiently observe pilots with multiple training failures because it diverted attention from the remedial training program to handle an influx of new hire pilots. Eight of 15 pilots we reviewed who were in the remedial program had failed consecutive proficiency checks. However, none of the eight had received additional observations as prescribed by the remedial program. This oversight gap was widened because the local FAA office did not observe a majority of the re-testing that occurred after the second proficiency check failure. We found that FAA observed only four of those eight pilots following their second evaluation failure. Two of the four pilots failed the third proficiency check while being observed by FAA inspectors, and elected to surrender any advanced licenses and aircraft type ratings.[10] However, they were re-issued a commercial certificate instead of being re-examined by FAA to determine their competency,[11] which enabled both pilots to return to training with the airline as first officers.

FAA Has Yet To Fully Implement Initiatives To Improve and Oversee Pilot Training Programs

FAA's Call to Action Plan on Airline Safety and Pilot Training, launched in 2009, included key initiatives such as issuing a final rule on crew training, and establishing programs for mentoring and professionalism. These initiatives, while

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[9] 14 CFR 121.438: Pilot Operating Limitations and Pairing Requirements.

[10] A type rating is an addition to a pilot certificate which qualifies the pilot to fly a specific aircraft make and model. It requires additional training beyond the scope of initial licensure. In the United States, this applies to aircraft heavier than 12,500 lbs, having a passenger capacity of more than 9, or being jet propelled.

[11] Also known as a 709 ride, as outlined in USC Title 49 Section 44709.

ongoing, were not completed during Call to Action and subsequently became requirements under the Airline Safety and FAA Extension Act of 2010 (Airline Safety Act).[12] In February 2010, our office testified before the House Subcommittee on Aviation and reported that FAA missed milestones in its Call to Action Plan, and had still not implemented initiatives with the greatest potential to improve safety. As of October 2011, significant safety initiatives remain incomplete, as shown in Table 3.

Table 3. FAA Progress on New Safety Initiatives

Initiative	Status
Enhance Pilot Training Requirements	
Establish new requirements for traditional air carrier safety training programs—such as a complete flight crew training environment, flight simulator devices, and new special hazard practices for pilots and crew members—and for new practices in Crew Resource Management.[13]	FAA issued a Notice of Proposed Rulemaking (NPRM) in January 2009—5 months prior to the Call to Action Plan. The proposed rule received over 3,000 pages of comments necessitating a supplemental notice to address stakeholder concerns, which was issued on May 20, 2011. The Airline Safety Act requires a final rule to be issued by October 1, 2011; however, FAA has yet to complete this action.
Air Carrier Remedial Training Programs	
In June 2009, FAA instructed all Part 121 principal operations inspectors to perform special inspections to validate air carrier flight crewmember training and qualification programs met regulations. Additionally, FAA asked inspectors to ensure that air carriers had the capability to identify, track, and manage low-time pilots, as well as those who have failed training or evaluation events.	The guidance expired on December 31, 2009, and inspectors are currently not required to evaluate remedial training programs as part of their routine surveillance. The Airline Safety Act requires FAA to issue a rule mandating Part 121 air carriers to establish remedial training programs. The Agency has since included this provision in the new pilot training program rulemaking mentioned above.
Pilot Records	
FAA committed to work with Congress to pursue appropriate amendments to the Pilot Records Improvement Act of 1996 (PRIA) to enhance the records review process by which air carriers receive information on new hire pilots.	The Airline Safety Act requires FAA to establish and maintain an electronic pilot records database of pertinent information from FAA, air carrier, and other records (including the National Driver Register) that an air carrier can access and evaluate before an individual begins service as a pilot. FAA is in the early stages of developing the database; however, it faces challenges in addressing new requirements for data retention and storage, as well as implementation costs.

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[12] Airline Safety and Federal Aviation Administration Extension Act of 2010, Pub. L. No. 111–216, August 1, 2010.
[13] Crew Resource Management training focuses on leadership and decision making in the cockpit.

Initiative	Status
Seek Industry Comments on Promoting Professionalism	
Establish and support professional standards and ethics committees to develop peer audit and review procedures, and to elevate ethics and professional standards.	FAA has not developed guidelines for cockpit discipline and pilot professionalism. NTSB cited a lack of professionalism in its investigation of the Colgan accident when it determined that the crew violated "sterile cockpit" rules, requiring that pilots refrain from personal conversations during taxi, takeoff, or landing. The air carriers we visited revealed that discussions of professionalism are most often covered in leadership and command training offered to first officers being promoted to captains.
Work With Industry To Create Mentoring Programs	
Share best practices among air carriers to enhance professionalism, such as establishing mentoring programs for flight crews.	To date, FAA has not released a detailed plan to implement flight crew mentoring programs. Regional air carriers we reviewed were not pursuing mentoring opportunities, and expressed concern that a mentoring program would have to be scaled to fit their business model, and that pilot turnover lowered incentive to establish the sometimes costly programs. In contrast, at one mainline carrier we visited, chief pilots meet regularly with new first officers during the first year to discuss performance in the cockpit. With a more stable workforce, mainline carriers have a greater motivation to establish a mentoring program. Mentoring and Professional Development Programs were also included in the Airline Safety Act and FAA has until August 2013 to develop the framework and issue a final rule.

At the request of the ranking members of the House Committee on Transportation and Infrastructure and Subcommittee on Aviation, we have initiated a review of FAA's and industry's efforts to enhance safety since the Colgan accident—with the Airline Safety Act being a key piece of that evaluation.[14]

FAA Has Yet To Fully Prepare for Air Carriers' Shift to Data-Driven Pilot Training Programs

Currently, while more than 75 percent of all part 121 *pilots* are being trained under AQP, FAA still faces significant challenges as a growing number of regional air carriers are transitioning to this program. For example, even though FAA must approve an air carrier's AQP before it can fully implement the program, inspectors are not required to receive training on AQP before granting program approval. As a result, air carriers seeking to adopt this more data-driven approach may face

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[14] On May 19, 2011, the OIG announced a followup review on FAA and Industry Efforts To Enhance Airline Safety in Response to the Colgan Air Accident. The announcement letter can be found on our Web site at http://www.oig.dot.gov/.

lengthy lead times in converting to AQP because inspectors are overseeing programs for which they have not been trained.

Since 1994, air carriers have used AQP to train pilots, and more recently expanded AQP training to include dispatchers and flight attendants. Over the past 2 fiscal years, AQP pilot training among air carriers increased from 17 to 28; AQP training for pilots, flight attendants, and dispatchers almost doubled (see Figure 3). Regional air carriers account for all new AQP training in fiscal year 2010. FAA officials responsible for AQP oversight and several air carriers attributed the increase in AQP to FAA's introduction of a proposed rulemaking on crewmember training in early 2009.[15]

Figure 3. Adoption of AQP Training by Part 121 Air Carriers
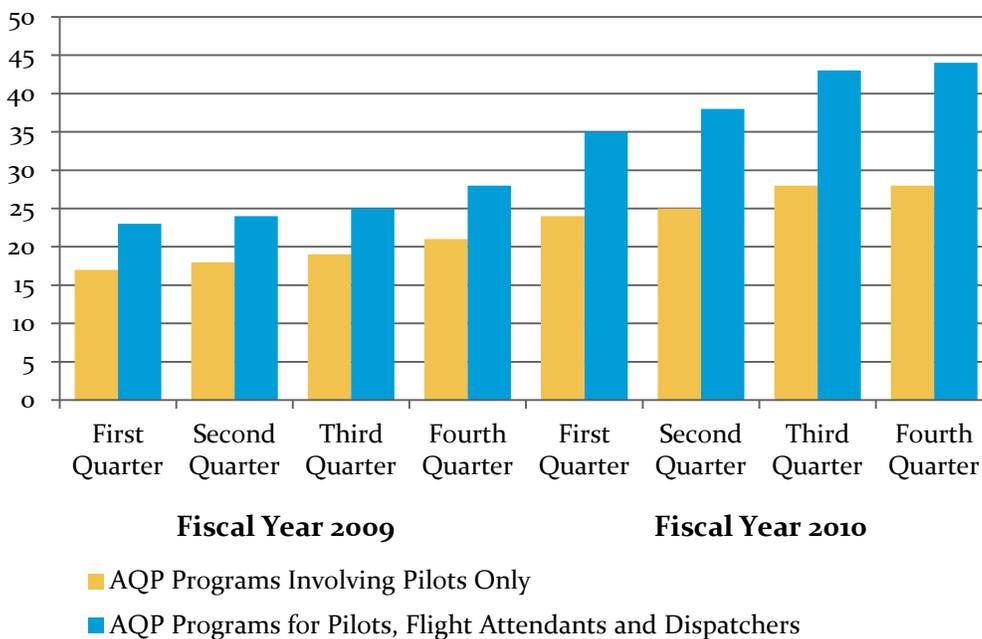
Source: OIG analysis of FAA data

AQP is tailored to the needs of individual carriers and is adaptable to the skill level of each pilot. For example, every AQP pilot receives baseline pre-testing before receiving instruction, which allows the carrier to gauge the pilot's level of proficiency, and target its training to specific areas of need. Despite these complexities, FAA has not ensured it has sufficient resources to oversee carriers' AQP programs. At the national level, FAA has seven inspectors who oversee an average of four pilot AQP training programs; however, each of these seven inspectors are also responsible for overseeing an additional 30 voluntary safety

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[15] Qualification, Service, and Use of Crewmembers and Aircraft Dispatchers, 74 Fed. Reg. 1280 (Jan. 12, 2009), Docket Number: FAA-2008-0677.

programs.[16] To balance their workload, some inspectors were forced to reduce their AQP oversight responsibilities. For example, one inspector's AQP workload has been cut from four air carriers to two in order to focus on supporting integration of FAA's new Safety Management Systems (SMS)[17] and Safety Assurance Systems (SAS)[18] initiatives.[19] One inspector will be relinquishing all AQP certificate oversight to focus solely on oversight of another program.

At the same time, FAA has not provided sufficient or timely training on AQP's advanced concepts, such as how to review carriers' risk assessments and training decisions, which are based on comparisons between operational and AQP-generated training data. One FAA operations supervisor we interviewed did not receive formal FAA instruction on how to oversee AQP programs until more than 8 months after approving his carrier's transition to AQP. At one FAA oversight office, we found that three operations inspectors assigned to oversee the air carrier had not received any AQP training.

FAA CAN DO MORE TO ENSURE AIR CARRIERS HAVE FULL ACCESS TO ALL INFORMATON ON NEW HIRE PILOTS

Between fiscal years 2009 and 2010, air carrier requests for full airman files increased from 81 to 1,768—more than 20 times as many requests. During the same period, requests for notices of disapproval[20] more than tripled—from 29 to 96 requests. Despite these increases, air carriers may lack the information needed to evaluate the competence and qualifications of applicant pilots—largely because FAA lacks an effective process to provide carriers with pilot record data.

Under a Pilot Records Improvement Act (PRIA)[21] request, air carriers receive basic certificate and medical information, closed FAA enforcement actions, and training records from past employers over the previous 5 years. However, information on accidents and incidents and open enforcement data must be requested separately under the Privacy Act or the Freedom of Information Act (FOIA) (see Table 4), and would only include cases FAA investigated.

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[16] Other voluntary programs include *Voluntary Disclosure Reporting Program* (VDRP), which provides incentives for air carriers or other eligible FAA-regulated entities to voluntarily identify, report, and correct instances of regulatory noncompliance; *Line Operations Safety Audit* (LOSA), which uses highly trained observers to collect data about flight crew behavior and situational factors on "normal" flights; *Internal Evaluation Program*, which provides air carrier management insight regarding potential problem areas before non-conformance occurs; FOQA; and ASAP.

[17] An organized approach to managing safety, including the necessary organizational structures, accountabilities, policies, and procedures.

[18] The FAA Flight Standards (AFS) Safety Assurance System—the combination of people, processes, and technology that will become the new oversight system for 14 CFR Parts 121, 135, and 145 in 2013.

[19] Since the completion of our review, FAA reported that the inspector previously focusing on SMS was reassigned to AQP duties.

[20] A notice of disapproval is provided to an airman when they fail to satisfactorily complete a flight test (i.e., instrument rating, flight instructor, or airline transport pilot certificate).

[21] Pub. L. No. 104-264, Section 502 (codified at 49 U.S.C. § 44703(h)-(j)).

Table 4. FAA Airman Data Available Through Air Carrier Requests

	PRIA	Privacy Act	FOIA
Airman Certificate / Medical Certificate	✓		
Closed Enforcement Action	✓	✓	✓
Open Enforcement Action *(Limited Information Only)*		✓	✓
Accident / Incident Information		✓	✓
FAA Inspector Surveillance Comments			✓

FAA's Call to Action Plan requested that pilot applicants voluntarily disclose their FAA records, which includes data on notices of disapprovals. As a result, 7 of the 18 carriers we visited now receive this information, compared to only 2 prior to the February 2009 Colgan accident. FAA concluded that it had achieved its intended outcome with this initiative; however, we found 34 of the 80 commercial air carriers that responded to FAA's Call to Action had not changed their policies—20 of which committed but had not developed polices to ask pilot applicants for FAA records and notices of unsatisfactory events.

While air carriers that implemented new policies now have more robust pilot information, the Agency's procedures for providing the information to air carriers are unwieldy and complicate the goal of providing full disclosure. Currently, air carriers must contact two separate FAA offices to obtain background information on a pilot's qualifications, experience, and safety record. In addition, air carriers may not receive complete airman files—which contain certificate information, enforcement actions, notices of disapprovals, and knowledge test results—depending on which of FAA's two request forms they use. Further, neither form includes FAA inspector surveillance comments on a pilot's past performance. Instead, air carriers need to specifically ask for these records.

CONCLUSION

FAA's 2009 Call to Action Plan was an immediate and focused measure to improve airline safety. While air carriers have responded to the plan's initiatives to identify and implement safety improvements impacting pilot performance, FAA has yet to provide the level of oversight needed to identify and track poor performing pilots and ensure air carriers have the information needed to hire qualified pilots. Until FAA takes a more active role in evaluating pilots and air carrier training programs and provides air carriers full access to pilot information, it cannot be assured that air carriers will maintain momentum in advancing these important initiatives.

RECOMMENDATIONS

We recommend that FAA:

1) Require inspectors to select a representative sample of air carrier proficiency and line check rides each year to analyze the results for trends, and take action if needed in accordance with FAA guidance.

2) Renew authority of check airmen every 2 years to increase accountability in the system and improve consistency in the manner in which flight checks are conducted and rated.

3) Develop a standardized procedure for air carriers to report failures of pilot proficiency checks as well as remedial and recurrent flight training to FAA, and require inspectors to monitor trends and target surveillance to highest risk areas.

4) Develop and implement standardized training for aviation safety inspectors on Part 121 air carrier pilot performance and administration of check rides and check airman observations.

5) Conduct a study of air carrier policies to determine whether controls should be in place to prevent pilots in remedial training programs from being paired together.

6) Require inspectors at the certificate level to be fully trained on AQP before approving and overseeing these programs. Ensure that FAA's Voluntary Safety Program Branch (AFS 230) has adequate resources for overseeing AQP.

7) While developing the Pilot Records Database, verify that staff in the offices of Airmen Certification and Aviation Data Systems can continue to manage the increased workload caused by enhanced records requirements.

AGENCY COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE

We provided a draft of this report to FAA on October 6, 2011, and received its response on November 28, 2011. 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 4 and 5 resolved but open pending completion of planned actions. We consider recommendation 6 resolved and closed. However, we are concerned that FAA's

responses did not meet the intent of recommendations 1, 2, 3, and 7 as detailed below.

For recommendation 1, FAA suggested we close this recommendation due to current guidance that outlines inspector responsibilities for overseeing check airmen. However, the guidance cited in FAA's response does not meet the intent of our recommendation to enhance oversight of pilot training. The guidance requires biennial observations of check airmen, which in our view are too infrequent for FAA to rely on to detect training program deficiencies. Additionally, although not specifically cited in FAA's response, the same guidance requires inspectors to compare pilot checks that they have performed against those performed by check airmen. However, we question the viability of this requirement since the majority of proficiency checks on air carrier pilots are conducted by check airmen, not FAA inspectors. As a result, FAA inspectors may not have sufficient data to make a meaningful comparison. At the air carriers we visited, we were unable to determine whether this analysis was being performed. In order to verify the extent to which inspectors are currently performing this comparative analysis, we request that the Agency provide us with a summary of proficiency or line checks conducted by FAA inspectors over the past 5 years at the 18 air carriers we visited, as well as documentation showing that inspectors compared these results to those completed by check airmen. Accordingly, we consider recommendation 1 open and unresolved pending receipt of this information.

For recommendation 2, FAA partially concurred and proposed actions that are responsive, in part, to the intent of our recommendation. However, in its response, the Agency asserted that "every check airman must be observed by the FAA while conducting his or her approved checking activity at least once every two years." During the course of our audit, we found that FAA can delegate the responsibility for these observations to the air carrier. We believe that accountability and consistency would be enhanced if a significant percentage of these observations were conducted by FAA inspectors, rather than air carrier employees. To better assess FAA efforts in this area we are requesting that FAA provide data on the number of check airman observations performed by FAA inspectors at the 18 carriers we visited over the past 5 years. Accordingly, we consider recommendation 2 open and unresolved pending receipt of this information.

For recommendation 3, FAA did not address the intent of our recommendation to develop a standardized process for air carriers to report failures of pilot proficiency checks as well as remedial and recurrent flight training failures to the Agency. FAA noted that its guidance requires air carriers to report failure rates and maintain records of failed events. These pass/fail reports are useful to analyze the evaluations of check airmen, but because the reports are cumulative and do not

track repetitive failures by pilots, they lack the specificity necessary to detect problems in pilot performance. FAA would be better equipped to target surveillance of poor performing pilots by standardizing a process for reporting failures consistently among air carriers. This would include adding a measure for carriers to alert FAA to remedial and recurrent pilot flight training failures. In its response, FAA makes note of a pending rule, "*Qualification, Service, and Use of Crewmembers and Aircraft Dispatchers*," which would require air carriers to develop remedial training programs. However, FAA does not indicate whether failures that occur within remedial training would be reported to FAA. Accordingly, we consider recommendation 3 open and unresolved and request that the Agency reconsider its position.

For recommendation 7, FAA did not provide a strategy for ensuring that personnel can manage increased requests for pilot records. Instead, the Agency summarized its efforts and challenges to develop the pilot records database as required by the Airline Safety and Federal Aviation Administration Extension Act of 2010. We agree that the database, when implemented, will provide carriers with a new method for requesting pilot records. However, in addition to current requirements to obtain information on a newly hired pilot's training, experience, qualification, and safety background, air carriers are expected to obtain proficiency data and practical test results from FAA. Considering the launch of the database is several years away, FAA should, in the interim, ensure that staff in the offices that process pilot records requests can manage an increased workload. Accordingly, we consider recommendation 7 open and unresolved and request that the Agency reconsider its position.

ACTIONS REQUIRED

FAA's planned actions for recommendations 4 and 5 are responsive and we consider these recommendations resolved but open pending completion of the planned actions. We consider recommendation 6 resolved and closed. For recommendations 1, 2, 3, and 7, we request that FAA provide, within 30 days of this report, additional information or reconsider its position. Specifically, for recommendation 1, we request that FAA provide a summary of proficiency or line checks conducted by FAA inspectors and evidence that inspectors compared these results to those completed by check airmen. For recommendation 2, we request that FAA provide data on the number of check airman observations performed by FAA inspectors. For recommendations 3 and 7, we request that the Agency submit a revised response to meet the intent of our recommendations.

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.

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cc: Anthony Williams, AAE-001
Martin Gertel, M-1

EXHIBIT A. SCOPE AND METHODOLOGY

We conducted our work from October 2009 through October 2011 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 oversight of Pilot Training and Regional Airlines, we met with FAA officials at FAA headquarters responsible for the application of both FAA required training ("traditional") and Advanced Qualification Programs (AQP). We visited 15 of the top 50 regional air carriers and 3 of 10 mainline air carriers along with their respective FAA oversight offices. The business models of the selected carriers aligned closely with the nature of the Congressional request. We met with a part 142 flight training center that provides contracted aircraft simulator training and equipment use for commercial air carriers.

We also met with representatives of the Air Transport Association (ATA), Regional Airline Association (RAA), and the Air Line Pilots Association (ALPA) to obtain their input regarding the quality of pilot training and professionalism as well as the effectiveness of FAA oversight.

To determine the process and data FAA and air carriers use to evaluate the competence and qualifications of pilots when they are hired, we interviewed FAA personnel in Oklahoma City, OK, responsible for pilot record keeping.

EXHIBIT B. ACTIVITIES VISITED OR CONTACTED

Federal Aviation Administration (FAA)

Headquarters:

Flight Standards Service   Washington, DC

Certificate Management Offices (CMO):

Delta Air Lines CMO	Hapeville, GA
Rocky Mountain CMO	Denver, CO
AMR CMO	Ft. Worth, TX
Southwest Airlines CMO	Dallas, TX
Alaska Airlines CMO	SeaTac, WA
Denali CMO	Anchorage, AK
Portland CMO	Hillsboro, OR

Flight Standards District Offices (FSDO):

Indianapolis FSDO	Plainfield, IN
St. Louis FSDO	St. Ann, MO
Memphis FSDO	Memphis, TN
Washington FSDO	Herndon, VA
Dallas - Ft. Worth FSDO	Ft. Worth, TX
Baltimore FSDO	Glen Burnie, MD

Regional Air Carriers

Republic Airlines	Indianapolis, IN
Chautauqua Airlines	Indianapolis, IN
Shuttle America	Indianapolis, IN
Trans States Airlines	St. Louis, MO
GoJet Airlines	St. Louis, MO
Pinnacle Airlines	Memphis, TN
Colgan Air	Memphis, TN
Piedmont Airlines	Salisbury, MD
Great Lakes Airlines	Cheyenne, WY
Mesa Airlines	Phoenix, AZ
Freedom Airlines	Mesa, AZ
American Eagle Airlines	Ft. Worth, TX
Horizon Air	Portland, OR
PenAir	Anchorage, AK
ERA Aviation	Anchorage, AK

Mainline Air Carriers

Delta Air Lines	Atlanta, GA
Southwest Airlines	Dallas, TX
Alaska Airlines	Seattle, WA

Part 142 Flight Training Facility

FlightSafety International	St. Louis, MO

Other Industry Representatives or Organizations

Air Line Pilots Association (ALPA)	Herndon, VA
Regional Airline Association	Washington, DC
Air Transport Association	Washington, DC

Exhibit B. Activities Visited or Contacted

EXHIBIT C. MAJOR CONTRIBUTORS TO THIS REPORT

Name	Title
Tina Nysted	Program Director
Gloria Denmark	Project Manager
Marshall Jackson	Project Manager
Travis Wiley	Project Manager
Stefanie McCans	Senior Analyst
Curt Boettcher	Senior Analyst
Marshall Anderson	Analyst
Karen Sloan	Communications Officer
Andrea Nossaman	Writer/Editor
Audre Azuolas	Writer/Editor

Exhibit C. Major Contributors to This Report

Federal Aviation Administration

Memorandum

Date: NOV 2 8 2011

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

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

Subject: Office of Inspector General (OIG) Draft Report: New Approaches are Needed to Strengthen FAA Oversight of Air Carrier Training Programs and Pilot Performance (09A3008A000)

Following the Colgan accident, air carrier and pilot performance issues have been the subject of considerable public scrutiny, and the assessment of regulatory enhancements to improve the safety margin has been a top priority of the Federal Aviation Administration (FAA). FAA has undertaken a number of rulemaking projects to address air carrier training programs and pilot performance. FAA is committed to improving its oversight of the air transport industry and will allocate the resources necessary to ensure that these safety enhancements are implemented.

RECOMMENDATIONS AND RESPONSES

Recommendation 1: Require inspectors to select a representative sample of air carrier proficiency and line check rides each year to analyze the results for trends, and take action if needed in accordance with FAA guidance.

FAA Response: Concur. This requirement is in place and is described in the FAA Order 8900.1, Volume 3, Chapter 20, Section 2, paragraph 3-1433, "Surveillance of Check Airmen." This guidance was implemented in March 2009 during the course of the OIG audit. The new guidance requires FAA inspectors to conduct observations of check airmen performing proficiency and line checks for all air carriers. From these representative samples of inspector observations of proficiency and check rides, FAA Certificate Management Offices analyze trends and ensure compliance with the regulatory requirements.

Surveillance includes an evaluation of the air carrier's process measurements, including its ability to identify concerns and take corrective actions to address them. The Air Carrier Training and Part 142 Training Center Branch (AFS-210) will coordinate with the Flight Standards Quality Assurance Division (AFS-40) to ensure the policy is applied

uniformly across FAA field offices. Accordingly, we request that this recommendation be closed.

Recommendation 2: Renew authority of check airmen every 2 years to increase accountability in the system and improve consistency in the manner in which flight checks are conducted and rated.

FAA Response: Partially Concur. In March 2009, FAA developed a check airman surveillance program that requires the regular monitoring of check airman activity. Before the FAA issues a letter of authorization to allow an individual to be a check airman, the FAA inspector responsible for oversight of the check airman is required to establish a surveillance program to monitor the performance of the check airman in accordance with FAA Order 8900.1, Volume 3, Chapter 20, Section 2, paragraph 3-1433 "Surveillance of Check Airmen."

Under this surveillance program, every check airman must be observed by the FAA while conducting his or her approved checking activity at least once every two years. In addition to these observations, the operator must submit a periodic report to its Principal Operations Inspector (POI) outlining the check airman's checking activities, including pass/fail rates during that period. The air carrier provides this report to coincide with the POI's surveillance of a check airman. Based upon a review of this periodic report and the FAA observation of the check airman, a check airman's authorization may be withdrawn by the POI at any time for the following reasons: 1) unsatisfactory performance; 2) lack of checking activity; or 3) at the request of the operator.

Because this activity is monitored at the POI level, and most documentation of approvals were kept in hard copy at the time the OIG audit began, the FAA was not able to accurately capture data on check airman authorizations and terminations. The FAA has since modified the Program Tracking and Reporting System to capture these data.

In addition, a major redesign of the enhanced Vital Information Database (eVID) system has been completed and is in the test phase. This system will allow for each check airman letter of authorization to be completed electronically and stored on a national database that will allow for data retrieval and mining as necessary. We anticipate that the test phase will be accomplished by the first quarter of 2012 and that eVID will be implemented by the second quarter of 2012.

As a result of the enhanced surveillance program for check airmen, which requires every check airman to be evaluated every two years, and the data collection requirements that have been developed and are being implemented, FAA does not believe it is necessary to "renew" check airmen authorizations every two years. FAA believes the intent of the OIG recommendation has been met through the development and implementation of the new surveillance program and requests that this recommendation be closed.

APPENDIX. AGENCY COMMENTS

Recommendation 3: Develop a standardized procedure for air carriers to report failures of pilot proficiency checks, as well as remedial and recurrent flight training to FAA, and require inspectors to monitor trends and target surveillance to highest risk areas.

FAA Response: Concur. FAA Order 8900.1, Volume 3, Chapter 20, Section 2, paragraph 3-1433 "Surveillance of Check Airmen" requires that air carriers report failure rates and maintain records of failed events. That order ensures that each certificate holder maintains a standardized procedure, acceptable to the FAA, for reporting pilot failures on proficiency checks to the FAA, as well as a requirement for the provision of remedial and recurrent training.

Air carriers with an approved Advanced Qualification Program (AQP) training program are required to have implemented a comprehensive trend analysis process. Section 121.917 (c) requires air carriers with an AQP program to have data collection and analysis processes acceptable to the FAA that will ensure the certificate holder provides performance information on its crewmembers, dispatchers, instructors, evaluators, and other operations personnel to enable the certificate holder and the FAA to determine whether the form and content of training and evaluation activities are satisfactorily accomplishing the overall objectives of the curriculum. Performance data provided by the certificate holder to the FAA is analyzed at POI level to determine targeted surveillance priorities.

The FAA intends to similarly address air carriers without an AQP training program when it issues the final rule associated with the Supplemental Notice of Proposed Rule Making (SNPRM) entitled *Qualification, Service, and Use of Crewmembers and Aircraft Dispatchers*. In its SNPRM, the FAA proposed to require a continuous analysis process (CAP), which will require an air carrier to identify and correct deficiencies in their training programs. The SNPRM proposed notification and appeal procedures to ensure that any changes to the CAP were approved by the FAA.

This rulemaking effort also has a requirement for air carriers to develop remedial training programs for pilots who are not able to demonstrate proficiency. The comment period for the SNPRM closed on September 19, 2011. The FAA is in the process of reviewing the comments and developing a final rule.

Recommendation 4: Develop and implement standardized training for aviation safety inspectors on Part 121 air carrier pilot performance and administration of check rides and check airman observations.

FAA Response: Concur. The Flight Standards Training Division (AFS-500), in coordination with the Flight Standards Air Transportation Division (AFS-200), is developing a training course titled "Aviation Safety Inspector (ASI) Training in the Conduct of Airman Testing and Checking in Simulators." The purpose of this training course is to provide ASI standardization in the conduct of air carrier airman testing and checking in simulators. This course is scheduled for deployment at the FAA Training Academy by December 31, 2012.

Recommendation 5: Conduct a study of air carrier policies to determine whether controls should be in place to prevent pilots in remedial training programs from being paired together.

FAA Response: Partially Concur. The FAA shares the OIG's concern with pilots in need of remedial training being paired. In lieu of a study to determine if controls are either needed or feasible, the FAA has recently published a SNPRM, entitled *Qualification, Service, and Use of Crewmembers and Aircraft Dispatchers*, which will require air carriers to develop approved procedures for managing pilots identified as needing remedial training, and these programs could contain specific policy guidance on the pairing of "low performing pilots." FAA is currently reviewing the public comments to this SNPRM and will take this recommendation under advisement during the development of the final rule. The agency believes that this rulemaking project will serve the same purpose as the recommended study and produce a more definitive outcome. FAA anticipates publishing this rule by August 2013.

Recommendation 6: Require inspectors at the certificate level to be fully trained on AQP before approving and overseeing these programs. Ensure that FAA's Voluntary Safety Program Branch (AFS-230) has adequate resources for overseeing AQP.

Since these are two separate recommendations, the FAA has addressed each in sequence as "Part A" and "Part B."

Part A: Require inspectors at the certificate level to be fully trained on AQP before approving and overseeing these programs.

FAA Response: Concur. FAA now provides both formal and informal AQP training prior to involvement in training program approval. Formal training is provided as a three-day classroom course conducted by personnel from the Flight Standards Voluntary Safety Programs Branch, AFS-230. For those inspectors who are unable to register in time for the formal course prior to the need for such training, AFS-230 personnel routinely travel to field offices to conduct field AQP training, using the same course materials.

Formal training for all inspectors was not always possible in the past because of a large increase in new AQP applications, making it difficult to schedule formal training for all inspectors. That increased demand has now subsided. For example, in FY 2011 the formal Training Needs Assessment (TNA) conducted by AFS-500 showed a need for five formal classes, and those classes were provided. The TNA conducted for FY 2012 showed a need for only 2 classes.

AQP approval and oversight is a collaborative process conducted by an Extended Review Team (ERT). All AQP approvals are made jointly by an ERT, which consists of field and AFS-230 personnel. AFS-230 provides assistance to the Flight Standards District Offices, Certificate Management Offices, or Certificate Management Units from initial application through the final approval. AFS-230 provides assistance in the development,

implementation, and review, as well as follow-on reviews of the certificate holder's AQPs. Every field office is partnered with an AFS-230 inspector who works with that office throughout the life of the AQP. All training documentation and data that are submitted to the field office for review are simultaneously submitted to AFS-230.

FAA believes that the above-described process meets the intent of the recommendation and requests that this recommendation be closed.

Part B: Ensure that FAA's Voluntary Safety Program Branch (AFS-230) has adequate resources for overseeing AQP.

FAA Response: Concur. FAA reviews its aviation inspector workforce annually to ensure that FAA's Voluntary Safety Program Branch (AFS-230) has adequate resources for overseeing all approved AQPs. AFS-230 is staffed and budgeted based upon workload and has adopted a staffing model consisting partially of remotely-sited inspectors. This reduces travel time and will allow a better allocation of AFS-230 resources.

In addition, new rule changes will shift oversight assignments for the many of the current voluntary safety programs. This change will relieve AFS-230 inspectors of some of their previous oversight responsibilities and provide them with more time to focus on AQP. The implementation of the Safety Management System (SMS) rule will replace the current Air Transportation Oversight System (ATOS) with a new system, the Safety Assurance System (SAS). This new oversight system will transfer oversight responsibilities from AFS-230 to field inspectors for the Aviation Safety Action Program (ASAP) and Flight Operational Quality Assurance Program (FOQA). This change will free AFS-230 inspector workforce resources to concentrate more on AQP. Thus, FAA requests that this recommendation be closed.

Recommendation 7: While developing the Pilot Records Database, verify that staff in the offices of Airman Certification and Aviation Data Systems can continue to manage the increased workload caused by enhanced records requirements.

FAA Response: Concur. There are concerns about the potential for increases in inspector workload as a result of new Pilot Record Database (PRD) reporting requirements. This is especially true if the agency is burdened with the responsibility of converting records of various formats; or if a labor intensive, paper-based exchange of records is accommodated. FAA intends to pursue alternatives to alleviate this potential problem.

The PRD sponsor, Flight Standards Regulatory Support Division (AFS-600), has included the Airman Certification office as well as the Aviation Data Systems Branch on the planning team that is gathering requirements for the PRD. The current system design relies on the electronic submission of records from air carriers and other entities that will be required to submit pilot records. The design also allows for two methods of electronic submission: 1) automated submission for large air carriers and those with sophisticated

electronic record systems; and 2) a web-based portal for small air carriers or "others" that may not generate many records. The FAA believes it has met the intent of this recommendation and requests that it be closed.