



U.S. House of Representatives
Committee on Transportation and Infrastructure

Washington, DC 20515

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April 20, 2012

MEMORANDUM

TO: Members, Subcommittee on Aviation

FROM: The Honorable Thomas E. Petri, Chairman

SUBJECT: Hearing on a Review of Aviation Safety in the United States

Wednesday, April 25, 2012, 9:00 a.m. in 2167 Rayburn House Office Building

PURPOSE

The Subcommittee on Aviation will hold a hearing to receive testimony from government, industry and labor witnesses on the Federal Aviation Administration's safety oversight of the aviation system, as well as ways to improve our very safe system.

BACKGROUND

The United States aviation system is the safest in the world, with an impressive safety record. On any given day the Federal Aviation Administration's (FAA) air traffic control will handle roughly 28,537 commercial flights. In calendar year 2011, there were zero commercial passenger fatalities in the United States. In the past five years, there has been only one tragic and fatal passenger accident. While even one accident is too many, to put this in context, during that time, roughly 52 million passenger flights were operated safely.¹ In addition, the U.S. aviation system is also the safest mode of transportation. For example, of the 9,562,900 departures that

¹ Research and Innovation Technology Administration, Bureau of Transportation Statistics. Press Release "U.S. Airlines and Foreign Airlines U.S. passengers continue to increase from 2009." April 3, 2012.

occurred in 2010, there were no fatalities.² In the same years there were no fatalities in commercial aviation, there were 32,788 fatalities on U.S. highways.³ This high level of safety in the U.S. aviation system is the result of decades of hard work and vigilance by Congress, the FAA, industry, labor, and other stakeholders. The safety of the aviation system is the top priority of the Committee, FAA, industry, and other stakeholders. Pilots, passengers, government agencies, and Congress have worked together to develop and implement standards, regulations, and laws to ensure the safety of the aviation system. It has been through legislative, regulatory, industry, and safety advocacy efforts that the U.S. aviation system has reached its high level of safety.

Although the U.S. aviation system is very safe, there is always room for improvement where safety is concerned. Both the Government Accountability Office (GAO) and the Inspector General of the Department of Transportation (DOT IG) have conducted audits and studies reviewing FAA's oversight activities, including reviews of terminal area safety, operational errors, safety management systems, oversight of repair stations, and pilot training requirements that result from the Aviation Safety and FAA Extensions Act. (H.R. 5900, P.L. 111-216) Each of these areas is outlined below.

Terminal Area Safety

"Terminal areas" refer to the areas around an airport that extend from the airfield or surface to 10,000 feet vertically and 40 miles in any direction.⁴ These areas include runways, taxiways, ramps, and airspace managed by air traffic control towers. Incidents can occur in any of these areas and it is the shared responsibility of airlines, airports, and air traffic control to oversee operations. In response to a rise in runway incursions (the unauthorized presence of an airplane, vehicle or person on the runway) the FAA began a "Call to Action" on runway safety in 2007.⁵ The FAA, Occupational Safety and Health Administration (OSHA), airports, and airline industry agreed to a "Call to Action" plan on runway incursions. The FAA and industry have implemented new safety approaches and milestones for safety initiatives. In addition to the "Call to Action", the FAA and industry have implemented new technologies, such as Airport Surface Detection Equipment, Model X (ASDE-X). ASDE-X, which provides air traffic controllers with a visual representation of runway and taxiway traffic, has been installed as of January 2012 at the busiest 35 major airports. This new technology has assisted air traffic controllers in the situational awareness and oversight of safety operations at airports.

In addition to accelerated deployment of technologies, actions taken as a result of the "Call to Action" range from improving airport layouts, better markings, new terminology, improved training, and development of best practices to be shared throughout the airline industry and FAA. While the FAA met its interim goals to reduce the total number of runway incursions

² National Transportation Safety Board, Aviation Statistics, Table 6 "Accidents, Fatalities, and Rates, 1991 through 2010, for U.S. Air Carriers Operating Under 14 CFR 121, Scheduled Service (Airlines)".

³ National Highway Traffic Safety Administration, Press Release. "Traffic Fatalities in 2010 Drop to Lowest Level in Recorded History." April 1, 2011.

⁴ U.S. Government Accountability Office, *Aviation Safety: Enhanced Oversight and Improved Availability of Risk-Based Data Could Further Improve Safety*, GAO-12-24, October 2012, p. 3.

⁵ U.S. Government Accountability Office, *Aviation Safety: Enhanced Oversight and Improved Availability of Risk-Based Data Could Further Improve Safety*, GAO-12-24, October 2012, p. i.

in 2009 and 2010, GAO found the number of incursions at towered airports has trended upward in recent years.⁶ In addition, the GAO found that the FAA does not have comprehensive data regarding safety incidents, such as runway overruns or those in ramp areas. Finally, the FAA does not have data collection processes, risk-based metrics, and assessment frameworks for analyzing other safety incidents that are not runway incursions or operational errors.⁷ While the FAA has shifted its oversight approach from reactive to proactive, the GAO concludes that in order to be successful in this goal the FAA must extend oversight of terminal areas to incorporate ramp areas, develop risk-based measures for runway safety incidents, and improve information sharing about incidents.⁸

Operational Errors

As aircraft fly through the National Airspace System (NAS), pilots are given instructions of precisely where to fly by air traffic controllers in facilities across the country. To ensure the safety of the NAS, the FAA has developed separation minima between aircraft. If pilots deviate from an air traffic controller's instructions and violate the required separation standards, the FAA classifies the incident as a "pilot deviation". If an air traffic controller fails to issue instructions or gives bad instructions to pilots that results in a loss of required separation, the incident is classified as an "operational error".⁹ According to the DOT IG, "the fact that operational errors pose real safety risks is undisputed."¹⁰

An October 2011 aviation safety review by the GAO uncovered that the rate of reported airborne operational errors has increased considerably in recent years. FAA official statistics on terminal area safety events have traditionally been, and still are, reported through the Air Traffic Quality Assurance (ATQA) database. ATQA data is derived from reported incidents by FAA air traffic controller supervisors, support specialists, managers, and from other sources, including incident investigations. The 2011 GAO review of the FAA's ATQA database show that over the last three years—

- the rate of airborne operational errors in the terminal area nearly doubled, increasing 97%;
- the rate of operational errors in the TRACON environment more than doubled, increasing 166%;
- the rate of operational errors in the tower environment increased by 53%; and
- the rate of the most severe airborne operational errors (true near misses) more than doubled.¹¹

From 2007 to 2011, the FAA categorized operational errors in the database based on severity. "Category A" operational errors were those in which greater than 66 percent of the

⁶ U.S. Government Accountability Office, *Aviation Safety: Enhanced Oversight and Improved Availability of Risk-Based Data Could Further Improve Safety*, GAO-12-24, October 2012, p. 23.

⁷ U.S. Government Accountability Office, *Aviation Safety: Enhanced Oversight and Improved Availability of Risk-Based Data Could Further Improve Safety*, GAO-12-24, October 2012, p. 2.

⁸ U.S. Government Accountability Office, *Aviation Safety: Enhanced Oversight and Improved Availability of Risk-Based Data Could Further Improve Safety*, GAO-12-24, October 2012, p. 44-45.

⁹ U.S. Government Accountability Office, *Aviation Safety: Enhanced Oversight and Improved Availability of Risk-Based Data Could Further Improve Safety*, GAO-12-24, October 2012, p. 8.

¹⁰ Testimony of The Honorable Calvin L. Scovel, III before the Committee on Commerce, Science, and Transportation of the United States Senate, *Further Steps Are Needed to Address Challenges With the Management and Operations of FAA's Controller Workforce*, May 24, 2011, p.4.

¹¹ GAO-12-24, October 2012, p. 28-30.

required separation standards were lost. Errors with a loss of separation between 25 and 66 percent of required separation were categorized as “Category B” errors, and those with a loss of required separation between 10-25 percent were categorized as “Category C” events. Incidents with a loss of separation of less than 10 percent of the required separation standard were categorized as “proximity events”.¹² Category A and B errors are the most serious events.

In fiscal year 2011, the FAA began tracking operational errors with the System Risk Event Rate (SRER) tool. This new method of tracking operational errors focuses on a 12-month look-back at the most serious loss of separation events per one thousand total loss events. The FAA has set a target of 20 serious loss events per every 1,000 loss events.¹³ So rather than a simple count of how any event is categorized by severity, the FAA has opted to track and present to the public a rate of serious events relative to the total number of safety events in the system. This presentation of safety data is relatively new, and at this time it is unclear how it improves the public and Congress’s understanding of the safety of the National Airspace System. While the FAA further develops this new measure of the rate of serious operational errors, the Office of Management and Budget has required the FAA to continue to keep records and track operational errors under the “Category A-B-C-Proximity Event” classification for two years. This will allow everyone to make comparisons and better understand what information the new approach provides.

The FAA is expanding its use of both voluntary reporting systems and automated reporting systems to better understand the extent of operation errors in the NAS. Before these systems were developed, controllers’ operational errors would only be known by management if the controller reported the error, or if a facility manager reported the event. The Department of Transportation’s Office of Inspector General has criticized the FAA’s oversight of operational errors, saying that the old self-reporting process was “subject to intentional manipulation” by controllers and facility management alike.¹⁴

The FAA has developed the Traffic Analysis and Review Program (TARP), an automated recording system to report loss of separation events. Under TARP, the position information from towers and TRACONS are automatically reviewed by computers, and incidents where losses of separation occur are captured without relying on the reporting by an air traffic controller or supervisor. Although the TARP tool is equipped to capture operational error information 24 hours per day, seven days per week, the FAA currently plans to audit TARP reports for only 2 hours per month at most facilities.¹⁵

An additional tool the FAA is implementing to more fully understand the occurrence of operational errors is a voluntary safety reporting program for air traffic controllers called the Air Traffic Safety Action Program (ATSAP). ATSAP is intended to be a voluntary safety reporting system for air traffic controllers to report unknown safety incidents without risk of punitive

¹² GAO-12-24, October 2012, p. 30.

¹³ GAO-12-24, October 2012, p. 31-32.

¹⁴ Testimony of The Honorable Calvin L. Scovel, III before the Committee on Commerce, Science, and Transportation of the United States Senate, *Further Steps Are Needed to Address Challenges With the Management and Operations of FAA’s Controller Workforce*, May 24, 2011, p. 3.

¹⁵ GAO-12-24, October 2012, p. 18-19.

action. The idea is to increase the reporting of events that might otherwise not be known to air traffic controller supervisors or managers, and thus not likely to be reported through the ATQA database.

New reporting systems, like TARP and ATSAP, increase the number of “reported” incidents, and give FAA a fuller picture of what is happening in the National Airspace System. However, despite FAA claims, the new reporting systems do not account for the increases in operational errors cited above by the GAO. The orders implementing the automated reporting system, TARP, had not yet been signed during the timeframe GAO reviewed.¹⁶ In addition, the reports filed under the voluntary program, ATSAP, do not count toward the mandatory reporting, ATQA, totals cited above.¹⁷ In fact, since a voluntary report satisfies the requirement to report, one might expect fewer total reports through the mandatory reporting system.¹⁸ But since the voluntary reports do not contribute to the mandatory reporting count, the implementation of voluntary reporting systems alone cannot account for an increase in the mandatory reports cited by GAO.

In addition, while the goal of the voluntary safety reporting program for air traffic controllers, ATSAP, is in line with other popular and successful voluntary safety reporting systems used by the FAA to improve aviation safety, its implementation has raised concerns identified by the DOT OIG. While the program encourages reporting without the risk of punitive action against controllers for reporting mistakes, the FAA has seen abuse of the program. For instance, according to FAA records, a controller who was heard over the radio frequency watching movies while on duty in a Cleveland, Ohio air traffic control facility avoided disciplinary action by filing an ATSAP disclosure. The FAA accepted the ATSAP filing, and the controller returned to operational duty without punishment.¹⁹

ATSAP disclosures also protected controllers who did not report fit for duty. Secretary of Transportation Ray LaHood commented last April that “there is no excuse for air traffic controllers to be sleeping on the job,”²⁰ and in another interview, “we’re not going to pay controllers to nap.”²¹ However, despite the Secretary’s commitment to improve behavior in air traffic control facilities, the FAA accepted two air traffic controllers’ ATSAP disclosures after being caught asleep while on duty in air traffic control facilities. In both cases, the controllers involved avoided disciplinary action as a result of their ATSAP disclosure. In neither case was the ATSAP report the sole source of discovery of the incident. Because ATSAP disclosures protect the employee from disciplinary action, in one case, the proposed disciplinary action of removal was rescinded, and the controller was returned to operational duty.²² Of nine cases involving air traffic controllers sleeping while on duty between January and April 2011, only one air traffic controller was terminated for his or her misconduct.²³

¹⁶ US DOT, Federal Aviation Administration Order JO 7210.633, effective date January 30, 2012.

¹⁷ GAO-12-24, October 2012, p. 35.

¹⁸ GAO-12-24, October 2012, p. 35.

¹⁹ FAA ATC Disciplinary Cases All Update 3-2-12.

²⁰ CBS News, “Another napping air traffic controller in Miami”, April 16, 2011.

²¹ CBS News, “LaHood: We won’t pay air traffic controllers to nap”, April 18, 2011.

²² FAA ATC Disciplinary Cases All Update March, 2, 2012.

²³ *Ibid.*

Long standing voluntary disclosure programs, such as the Voluntary Disclosure Reporting Program for maintenance safety issues and the Aviation Safety Action Program for airline pilot disclosures, have led to significant aviation safety advances. As a result of these programs, the FAA has gained access to new safety data that would have otherwise gone unknown, and is in a position to act on safety issues before an accident should occur. Over the years, steps have been taken to safeguard these programs from abuse, and as the ATSAP program develops, it will be critical that the FAA takes similar measures. Of particular interest will be the relative standards between the voluntary reporting programs' requirements for acceptance into the safety programs, with the resulting immunity from punishment enjoyed by the employee hanging in the balance.

Repair Stations

Aeronautical repair stations provide maintenance of aircraft for major U.S. airlines, and are a critical part of the aviation safety system. According to the DOT IG, between 2000 and 2009 airlines spent \$1.1 billion on outsourced maintenance of aircraft in the U.S. and abroad rather than perform the maintenance in house. The DOT IG anticipates that the repair station industry will grow by 4.4 percent in the next ten years.²⁴ In 2003, the DOT IG issued recommendations to the FAA to strengthen FAA oversight of repair stations.²⁵ While the FAA made procedural changes in response, according to DOT IG, the FAA has not yet addressed the most significant and longstanding recommendations. In its most recent audit work, the DOT IG has found that while the FAA has implemented a risk-based system to oversee repair stations, the DOT IG found that the FAA has not fully implemented the system. While the FAA has taken steps to improve oversight of repair stations, the DOT IG has found that the FAA still needs to address consistency in the interpretation of FAA guidance to maintenance providers, training of inspectors, and the FAA's provision of explanations to implement changes in maintenance regulations to repair stations. In addition, the DOT IG outlined several concerns regarding the FAA's Organization Designation Authorization (ODA) program, which standardizes FAA's oversight of organization designees.²⁶ As the FAA does not have the manpower to oversee all parts of the aviation system, it is given authority to delegate certain functions to individuals or organizations. Through the ODA process, the FAA approves a company's process to choose personnel to perform maintenance and repair work. This has resulted in less FAA involvement in the approval of personnel.²⁷

The FAA Modernization and Reform Act of 2012 (H.R. 658, P.L. 112-95), which was signed into law on February 14, 2012, contained two provisions to address FAA's oversight of repair stations. The first provision addresses the FAA's safety oversight of foreign repair

²⁴ Department of Transportation Inspector General, Audit Announcement: *Follow up review of FAA's Oversight of Foreign and Domestic Repair Stations.* December 2010, p. 1.

²⁵ Department of Transportation Inspector General, Audit Announcement: *Follow up review of FAA's Oversight of Foreign and Domestic Repair Stations.* December 2010, p. 1.

²⁶ Department of Transportation Inspector General, AV-2011-136. *FAA needs to strengthen its risk assessment and oversight approach for organization designation authorization and risk-based resource targeting programs.* June 29, 2011, p. 2.

²⁷ Department of Transportation Inspector General, AV-2011-136. *FAA needs to strengthen its risk assessment and oversight approach for organization designation authorization and risk-based resource targeting programs.* June 29, 2011, p. 3.

stations certificated by the FAA. Foreign repair stations considered under the law are repair stations located overseas that perform work on U.S. certificated aircraft. It requires the FAA to inspect foreign repair stations annually, but in a manner that is consistent with U.S. obligations under international agreements. It also allows additional FAA inspections based on identified risks. The second provision addresses non-certificated repair stations and directs the FAA to require that essential maintenance, regularly scheduled maintenance, and work pursuant to required inspection items be performed by Part 121 carriers, Part 145 repair stations, or contractors meeting the requirements of Part 121 or 145 certificate holders. Part 121 air carriers are responsible for ensuring that all maintenance, whether performed by the air carrier itself or performed by another entity under contract with the carrier, is conducted in accordance with the air carrier's maintenance program. Responsibility for oversight by Part 121 carriers is not meant to change the permitted work of the Part 145 repair stations. In particular, Part 145 stations can continue to supervise and oversee the activities of individuals that perform contract maintenance when it is necessary to obtain technical expertise. These provisions provide improved FAA oversight of repair stations, both foreign and domestic.

Safety Management Systems and Data Collection

In order to further improve safety, the FAA is more intently focusing on a data-driven “risk-based approach” to address safety issues before accidents occur. This approach is dependent on the FAA being able to collect the necessary data and to analyze it properly in order to obtain a true understanding of operations and to prevent accidents and incidents. The FAA intends to implement its risk-based approach by using safety management systems (SMS). According to the FAA, “SMS is the formal, top-down business approach to managing safety risk, which includes a systemic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.” (Order VS 8000.367) SMS is a structured process that obligates organizations to manage safety with the same level of priority that other core business processes are managed. This applies to both internally at the FAA and external at aviation industry organizations (Operator & Product Service Provider). SMS gives airline operators the data needed to isolate trends that may be precursors to incidents and accidents and allows them to develop and implement risk mitigation strategies.²⁸ Although the FAA has not yet issued a final rule on SMS, air carriers have already voluntarily begun to implement SMS. The level of voluntary air carrier participation in the SMS pilot program is high, with 83 percent of all Part 121 air carriers participating in the 2007 SMS pilot program.²⁹ While this new program has great potential to improve safety, the airline industry is concerned that small air carriers will be unable to implement the FAA’s anticipated SMS requirements given the cost of the system. In addition, air carriers also have privacy concerns regarding the data collected in a SMS.

In recent years, the FAA has begun to implement systems to gather data regarding operations in the National Airspace System (NAS) to take proactive steps to treat systematic and

²⁸ Testimony of The Honorable Calvin L. Scovel, III before the Subcommittee on Aviation Operations, Safety, and Security, United States Senate, *Progress and Challenges in Responding to Key Provisions of the Airline Safety Act*, March 20, 2012, p. 4.

²⁹ Testimony of The Honorable Calvin L. Scovel, III before the Subcommittee on Aviation Operations, Safety, and Security, United States Senate, *Progress and Challenges in Responding to Key Provisions of the Airline Safety Act*, March 20, 2012, p. 4.

reoccurring troubles before an accident occurs. The FAA has done this so that it can identify hazards, assess and mitigate risk, and measure performance.³⁰ According to the GAO, the FAA is in the process of developing a plan that will address how data fits into its new oversight method, but the plan does not 1) contain a description of the data that will be required to conduct proactive data analysis; 2) list the skills personnel will need for analysis and ensure data quality; and 3) describe the steps needed to address continuing data quality problems. As data is collected it will only be effective if the FAA can properly and effectively analyze it. The GAO has expressed concern that the FAA has not effectively begun to analyze all the data it collects. According to the GAO, if FAA does not collect the necessary data, the FAA will receive an incomplete picture or information and the new proactive, risk-based approach will be challenged.

Airline Safety and FAA Extension Act

On February 12, 2009, Colgan Air Flight 3407 crashed in upstate New York, killing all on board and one person on the ground. This tragic event focused attention on safety concerns related to pilot training, fatigue, flight and duty time, and access to pilot employment histories by airlines. In response to the findings of the NTSB investigation and other investigations on the accident, Congress passed the Aviation Safety and FAA Extension Act (H.R. 5900, P.L. 111-216). Specifically, H.R. 5900 requires additional training and flight hours for pilots, development of new procedures to address pilot fatigue, and an FAA operated database of pilot employment records. H.R. 5900 requires multiple rulemakings by the FAA. While the FAA is on track to meet many of the requirements of H.R. 5900, it is behind on some of the requirements of the legislation.³¹

In December 2011, the FAA issued a final rule on Flightcrew Member Duty and Rest Requirements. This rulemaking was required by H.R. 5900 to address concerns related to pilot fatigue. The final rule on flight and duty time will take effect in two years and includes the following key elements:

- The FAA limits flight time to eight or nine hours depending on the start time of the pilot's entire duty period.
- The rule sets a 10-hour minimum rest period prior to the flight duty period, a two-hour increase over the previous rules, and mandates that a pilot has an opportunity for eight hours of uninterrupted sleep within the 10-hour rest period.
- The new rule addresses potential cumulative fatigue by placing weekly and 28-day limits on actual flight time and the amount of time a pilot may be assigned any type of flight duty. It also requires that pilots have at least 30 consecutive hours free from duty on a weekly basis, a 25 percent increase over the previous rules.
- The FAA expects pilots and airlines to take joint responsibility when considering if a pilot is fit for duty, including fatigue resulting from pre-duty activities such as commuting. If a pilot reports they are fatigued, the airline must remove that pilot from duty immediately.

³⁰ U.S. Government Accountability Office, *Aviation Safety: Enhanced Oversight and Improved Availability of Risk-Based Data Could Further Improve Safety*, GAO-12-24, October 2012, p. 8.

³¹ Testimony of The Honorable Calvin L. Scovel, III before the Subcommittee on Aviation Operations, Safety, and Security, United States Senate, *Progress and Challenges in Responding to Key Provisions of the Airline Safety Act*, March 20, 2012, p. 1.

- An airline may develop an alternative way of mitigating fatigue based on science and data validated by the FAA. Such a program must be monitored by the FAA.

As noted above, there is opposition to the Administration's decision to exempt all-cargo operators from the requirements of the final flight and duty time rule. The Independent Pilots Association (IPA), the union representing UPS pilots, has filed a lawsuit against the FAA. The Cargo Airline Association has intervened in the lawsuit to defend the FAA's decision-making. This matter is still pending before the court. In addition, the Flight 3407 Families also oppose the "all-cargo" exemption. On April 16, 2012, a bill was introduced in the House of Representatives which would direct the Secretary of Transportation to apply the new flight and duty time rule to all-cargo operations "in the same manner as they apply to passenger operations." (H.R. 4350)

To address concerns that airline pilot commuting played a role in the Colgan accident, H.R. 5900 also required the National Academy of Sciences to study pilot commuting to assess its impact on fatigue. The NAS completed this study and found that long commutes across multiple time zones may worsen fatigue, however it noted that there was not enough data to determine the impact of commuting in fatigue and whether or not it should be regulated. While pilot commuting done incorrectly has been identified as a possible cause for fatigue there has not been sufficient data to fully understand the true impact it has on a pilot's ability to do their job.³² In its audit, the DOT IG recommended that the FAA request airlines to collect data on pilots commuting to determine if changes to flight duty and domicile regulations are required.

Lastly, the H.R. 5900 requires that the FAA develop a centralized electronic pilot records database to provide airlines with access to a pilot's prior employment records. According to the DOT IG, while the FAA met the initial milestone of the law, it still has several challenges in developing and utilizing the database. The first challenge is that the FAA must decide the level of detail that it wants to obtain from an air carrier pilot training record. The labor industry is concerned with the inclusion of comments and evaluations made by a pilot examiner, as required by the Act. The FAA must gather historical records and keep them standardized among a variety of sources which will be difficult. The second challenge is that the FAA is not expected to issue a final rule for another two years and it must determine how to transition to the new database. Lastly there are multiple issues for the FAA to address in accessing records from the National Driver Register and incorporating the data into the database.³³

Pilot Training

The training and education of commercial airline pilots is a critical part of the safety of the U.S. aviation system. In the wake of the tragic Colgan Flight 3407 crash, Congress passed the Aviation Safety and FAA Extension Act (H.R. 5900, P.L. 111-216) which contained several new training requirements for pilots. These requirements include additional training on stall

³² Department of Transportation Inspector General. AV-2011-176. *FAA and Industry are Taking Action to Address Pilot Fatigue, but more Information on Pilot Commuting is Needed*. September 12, 2011, p. 10.

³³ Testimony of The Honorable Calvin L. Scovel, III before the Subcommittee on Aviation Operations, Safety, and Security, United States Senate, *Progress and Challenges in Responding to Key Provision of the Airline Safety Act*, March 20, 2012, p. 8.

recovery, an increase of flight hours required for first officers, pilot mentoring and leadership training, and inclusion of training on flight simulators.³⁴

H.R. 5900 requires the FAA to increase the minimum number of flight hours required for a first officer from 250 to 1500.³⁵ While the FAA has issued two proposed rulemakings for this requirement it has not yet issued a final rule.³⁶ There is some concern that this increase in required hours will make it hard for regional airlines to find qualified first officers.

Since many pilots who fly for commercial airlines receive training from one of the country's 3,400 pilot schools, it is important that the schools provide them with effective training. All pilot schools must provide classroom and flight training to educate pilots on aeronautical knowledge and flying skills. To achieve a pilot's license, all students must pass two FAA tests: a knowledge-based exam and a practical test. When the GAO looked at pilot training at schools in the U.S. they found that the training varied in quality, but all students are expected to pass the same tests.³⁷ According to the GAO, the airline industry encourages the FAA to revise regulations on pilot training for commercial airline pilots, including a suggestion for developing a different training track required for pilots who do intend to fly for an airline. The GAO found that the FAA's pilot training requirements for certification of commercial pilots are not aligned with airline operations and do not emphasize skills that airlines consider important for greater aviation safety. Furthermore, they advised the FAA to change current pilot training regulations to emphasize decision making, use modern technology, improve situational awareness and understand risk management.³⁸

Conclusion

The United States aviation system is the safest airspace system in the world. It operates at a high level of safety as a result of decades of collaboration among the government, industry, labor, and other stakeholders. While, overall, the system is very safe there are areas highlighted by recent events and government audits where safety can be improved. Identifying these areas enables Congress, the FAA, industry, and other stakeholders to take the necessary steps to further improve the safety of our aviation system.

³⁴ Airline Safety and Federal Aviation Administration Extension Act of 2010, Pub. L. No. 111-216, August 1, 2010.

³⁵ Airline Safety and Federal Aviation Administration Extension Act of 2010, Pub. L. No. 111-216, August 1, 2010.

³⁶ Testimony of The Honorable Calvin L. Scovel, III before the Subcommittee on Aviation Operations, Safety, and Security, United States Senate, *Progress and Challenges in Responding to Key Provision of the Airline Safety Act*, March 20, 2012, p. 5.

³⁷ General Accountability Office, Testimony before the Subcommittee on Aviation Operations, Safety and Security, of U.S. Senate, *FAA has an Opportunity to Enhance Safety and Improve Oversight of Initial Pilot Training*, March 20, 2012, p. 3.

³⁸ General Accountability Office, Testimony before the Subcommittee on Aviation Operations, Safety and Security, of U.S. Senate, *FAA has an Opportunity to Enhance Safety and Improve Oversight of Initial Pilot Training*, March 20, 2011, p. i.

Witnesses:

Panel 1:

The Honorable Margaret Gilligan
Associate Administrator for Aviation Safety
Federal Aviation Administration

The Honorable David Grizzle
Chief Operating Officer
Air Traffic Organization
Federal Aviation Administration

Mr. Jeffrey B. Guizetti
Assistant Inspector General for Aviation and Special Programs Audit
Inspector General of Department of Transportation

Dr. Gerald L. Dillingham
Director, Physical Infrastructure Division
Government Accountability Office

Panel 2:

Mr. Tom Hendricks
Senior Vice President for Safety
Airlines for America

Mr. Scott Foose
Senior Vice President- Operations & Safety
Regional Airlines Association

Captain Sean Cassidy
First Vice President
Airline Pilots Association

Mr. Gary M. Fortner
Senior Vice President
Vice President of Quality Control, Fortner Engineering
Aeronautical Repair Stations Association