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REGIONAL AIR CARRIERS AND PILOT WORKFORCE ISSUES

(111–41)

HEARING

BEFORE THE

SUBCOMMITTEE ON AVIATION

OF THE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
HOUSE OF REPRESENTATIVES

ONE HUNDRED ELEVENTH CONGRESS

FIRST SESSION

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U.S. House of Representatives
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Washington, DC 20515

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June 10, 2009

SUMMARY OF SUBJECT MATTER

TO: Members of the Subcommittee on Aviation

FROM: Subcommittee on Aviation Staff

SUBJECT: Hearing on "Regional Air Carriers and Pilot Workforce Issues"

PURPOSE OF HEARING

The Subcommittee on Aviation will meet on Thursday, June 11, 2009, at 10:00 a.m., in room 2167 of the Rayburn House Office Building to receive testimony regarding regional air carriers[1] and pilot workforce issues.

BACKGROUND

On February 12, 2009, at about 10:17 p.m., a Colgan Air Inc., Bombardier Dash 8-Q400, N200WQ, d.b.a. Continental Connection Flight 3407, crashed during an instrument approach to runway 23 at the Buffalo-Niagara International Airport, Buffalo, New York (Flight 3407 was en route from Newark Liberty International Airport (EWR), New Jersey).

As the flight crew approached the Buffalo airport, they discussed the build-up of ice on the windshield. The flight was cleared to 2,300 feet, and two minutes later, the airplane reached this assigned altitude. Over the next two minutes, power was reduced to near flight idle, the airspeed rapidly slowed from about 180 knots to about 135 knots, the autopilot was active in altitude hold mode, and the engine torque was at minimum thrust. The crew lowered the landing gear and about 20 seconds later, the first officer moved the flaps from five to ten degrees. Shortly afterward, the

[1] Regional air carriers provide short- and medium-haul scheduled service generally connecting smaller communities with larger cities and hub airports. They typically operate turboprops and jets with between 9 to 110 seats and partner with mainline air carriers for contract or pro-rate flying.

stick shaker[2] activated, and the autopilot disengaged. The flight data recorder information indicates that the crew added power to about 75 percent torque and that the captain moved that control column aft, increasing the aircraft's pitch attitude.[3] This action was accompanied by the airplane pitching up, rolling to the left, then rolling to the right, during which the stick pusher[4] automatically activated and the flaps were retracted. The airspeed continued to decrease and, after further pitch and roll excursions, the airplane pitched down, entering a steep descent from which it did not recover.[5]

The crash site was approximately five nautical miles northeast of the airport in Clarence Center, New York, and mostly confined to one residential house. The four crew members and 45 passengers were killed and the airplane was destroyed by impact forces and post crash fire. There was one ground fatality. The captain was Marvin Renslow and the first officer was Rebecca Shaw.

The National Transportation Safety Board (NTSB) held a 3-day public hearing on Flight 3407 from May 12-14, 2009. The investigation is ongoing, and while the NTSB has not yet made any conclusions or determined the probable cause of the accident, the investigation is focusing on a number of areas including: 1) flight crew experience and training; 2) remedial training programs; 3) commuting policies and practices; 4) fatigue management; and 5) violations of sterile cockpit and the impact on situational awareness.

The NTSB hearing identified the need to closely examine the regulations governing pilot training and rest requirements and the oversight necessary to ensure their compliance. This is a particular concern at regional carriers since the last six fatal part 121[6] accidents involved regional air carriers; part 121 operators include major commercial air carriers flying under the strictest set of Federal Aviation Administration (FAA) operating regulations. The NTSB has cited pilot performance as a potential contributory factor in three of those accidents.

As the major airlines continue to cut their capacity in response to the current economic downturn, regional airline operations constitute an increasingly important proportion of operations. Today, regional flights represent one half of the total scheduled flights across the country, and regional airlines provide the only scheduled airline service to more than 450 communities. Additionally, regional airlines provide passenger air service to communities without sufficient demand to attract mainline service.

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[2] A stick shaker is a stall warning system supplies the flight crew with warnings of an impending stall (i.e., a sudden reduction in lift forces generated by the airflow over an aircraft wing, usually occurs when forward speed is low and/pitch attitude is high) through an audio warning and a mechanical shaking of the control column.

[3] It should be noted that the appropriate response to a stall warning or stick shaker is to increase airspeed by decreasing the aircraft's pitch attitude and increasing engine power.

[4] At stall, the stick pusher applies a nose down pitch force to push the control columns to decrease the airplane's angle of attack to prevent further degradation into stall and to begin recovery to normal flight.

[5] Hearing Officer Lorenda Ward, NTSB, Public Hearing in the Matter of the Colgan Air, Inc. Flight 3407, Bombardier DHC8-400, N200WQ Clarence Center, New York, February 12, 2009 at 15 (May 12, 2009) (DCA-09-MA-027).

[6] Part 121 is the rules that scheduled commercial air carriers fly under.

I. Training-related Issues

A. FAA Certification Requirements, Airline Training programs and Flight Crew Experience

To fly for an airline, a pilot must have a commercial pilot's license, at a minimum. To obtain a commercial pilot's license, a candidate must have at least 250 hours of flight time. Some airlines may also require an a pilot applicant to obtain an Airline Transport Pilot's (ATP) certificate to be hired, which enables a pilot to act as pilot in command of an air carrier aircraft, and requires a minimum of 1,500 flight hours. Further, for airline pilots to be a pilot in command of aircraft larger than 12,500 pounds, or any jet aircraft, they must complete specialized training for the specific aircraft and test for a type rating in that aircraft (there is no minimum hour requirement associated with this rating).

Minimum Regulatory Requirements for Pilot Certification[7]

1. Private Pilot **(Minimum of 40 hours at certification)**	**a. Aeronautical knowledge**	Complete a comprehensive ground school and pass a written test composed of at least the following: aircraft systems, weight and balance, aeronautical charts, Federal Aviation Regulations (FAR), airport operations, national air space, emergency procedures, communications, and navigation requirements. The ground school must be conducted by an authorized instructor.
	b. Flight proficiency	Minimum 40 hours: composed of at least 20 hours from an approved instructor, 10 hours of solo, 3 hours of night time, and 5 solo hours of cross country. Must then pass a flight check administrated by the FAA or designated evaluator.
2. Commercial Pilot **•(Minimum of 250 Hours)**	**a. Aeronautical knowledge**	FARs, accident reporting procedures, aerodynamics, meteorology, weather reports and forecast, safe operations of the aircraft, weight and balance, performance charts, aircraft limitations, aeronautical charts, navigation, aeronautical decision making, aircraft systems, maneuvers procedures and emergency operations, night and high altitude operations, and operations in the national airspace system.
	b. Flight proficiency	Minimum of 250 hours to include day, night and flight by reference to aircraft instruments. Pass a flight check administrated by the FAA or designated evaluator.
3. Instrument Pilot	**a. Aeronautical knowledge**	Must complete ground training on instrument flight conditions and procedures. Pass an aeronautical test composed of the following: FARs, air traffic control system, instrument procedures, instrument flight rules (IFR) navigation, instrument approach procedures, use of IFR charts, weather reports and for casts, recognition of critical weather situations, aeronautical decision making, and crew resource management.
	b. Flight proficiency	Minimum of 50 hours cross country as pilot in charge. Forty hours of actual or simulated flight time, 15 hours with an authorized instrument instructor. Pass a flight check administrated by the FAA or designated evaluator.

[7] Each of the listed ratings requires the satisfactory completion of the previous rating. In other words, it is not permissible for an individual to receive a commercial certificate without first completing the requirements of the Private Pilot Certificate outlined in paragraph 1.

4. Airline Transport Pilot (Minimum of 1,500 Hours)	a. Aeronautical knowledge	FARs, meteorology, knowledge of effects of weather, general weather and Notices to Airmen (NOTAM) use, interpretation of weather charts, maps and forecasts, operations in the national airspace system, wind sheer and micro burst awareness, air navigation, air traffic control procedures, instrument departure and approach procedures, enroute operations, airport operations, weight and balance, aircraft loading, aerodynamics , aircraft performance, human factors, aeronautical decision making, and crew resource management (CRM). Must pass an FAA test on these subjects.
	b. Flight proficiency	1,500 hours total time. 500 hours cross country, 400 hours night time. Pass a flight check administrated by the FAA or designated evaluator on the maneuvers required by the FAA's ATP Practical Test Standards.

Source: FAA

Once a pilot has been hired by an airline, he or she is required to undergo training provided by the airline that has been approved by the FAA, and must meet certain minimum requirements. An airline's training program is divided into several categories of training that are specific to the airline, and which may include initial training for new hires, initial training on equipment, transition training, upgrade training, recurrent training, and requalification training.

FAA regulations also provide different instructional minimum hour requirements for aircraft with different engine types. For example, pilots of piston engine aircraft are only required to have 64 hours of initial ground training, and those flying turbo-propeller powered aircraft must have 80 hours.

Airline Training Minimum Hour Requirements

Training Type	Piston Engine	Turboprop	Turbojet
Initial Ground Training	64	80	120
Pilot-In-Command Initial In-Flight Training & Practice	10	15	20
Recurrent Ground Training	16	20	25

Source: DOT IG

While airline training programs must be approved by the carrier's FAA inspector, the Department of Transportation Inspector General (DOT IG) has noted that the lack of more specific requirements in the regulations may hinder an FAA inspector's ability to determine whether air carriers' established programs will ensure crewmembers are "adequately" trained. The DOT IG intends to analyze the degree of variance of air carrier training programs in upcoming work for the House Transportation and Infrastructure Committee.

With respect to the Colgan crash, the May NTSB hearing revealed that Captain Renslow obtained his private pilot license in June 1990, and his commercial pilot license 12 years later in June 2002. He was hired by Colgan in September 2005. He also held an ATP and ratings in both the Saab 340 and Bombardier Dash 8-Q400. He received his type rating in the Dash 8 in November 2008. Captain Renslow had a total flight time of 3,379 hours, with 1,030 as Pilot in Command and 110.7 in the Dash 8.[8]

[8] NTSB, *supra* note 4, at 19.

In addition, the NTSB hearing also revealed that First Officer Shaw obtained her private pilot license in December 2003, and her commercial license in September 2005. She was hired by Colgan in January 2008. She received Second in Command privileges on the Dash 8 in March 2008. She reported 2,244 hours total pilot time, with 774 hours in the Dash 8.[9]

According to Colgan, when Captain Renslow was hired, the airline required a minimum flying time of 600 hours total and 100 hours multi-engine. Colgan witnesses testified last month that Colgan now requires a minimum of 1,000 hours total and 100 hours multi-engine to be hired.[10]

While both major and regional airlines must meet the same FAA minimum safety and flight hour requirements, it has been reported that major airlines generally require pilot applicants to have more flight time and experience than applicants for regional airlines. According to the Regional Airline Association (RAA), the average minimum hours required for hiring across the regional airline sector is 1,305. One media report suggests that, on average, major airlines require pilot applicants to have around 4,000 hours.[11] According to the Air Transport Association (ATA), ATA carriers require for a minimum of 1,000 to 1,500 hours total time, ATP, or Commercial/Instrument/Airplane Multi-engine rating. However, over the last few years, ATA notes that its members have actually been hiring pilots with about 4000 hours, which is far above their own minimum requirements.

B. Stall Recognition and Recovery (including stick shaker and stick pusher training)

FAA regulations require airline pilots to receive both academic ground training and hands-on flight training in the operation of stall warning systems, which includes a stick shaker. In addition, FAA regulations require pilots to receive hands-on flight training and to demonstrate proficiency in executing "approach to stall" (i.e., when the aircraft is on the verge of stalling) recovery procedures. According to Colgan, Captain Renslow and First Officer Shaw received both academic and flight simulator training on stick shaker operation and approach to stall recovery.

While FAA regulations require pilots to be trained in approach to stall recovery procedures, they do not require training to recover from a full aerodynamic stall. FAA officials maintain that training "approach to stall" recovery procedures teaches pilots to react to an impending stall before the aircraft enters a full stall; in other words, training a pilot to react to a potentially hazardous situation before it becomes more hazardous. However, some airline pilots groups have stated that limiting pilot training to "approach to stall" could leave a pilot with nothing to fall back on (no redundancy) in the event that approach to stall recovery attempts, for whatever reason, fail. For several years, the NTSB has advocated that stall recovery training be expanded to include recovery from a fully stalled condition.[12]

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[9] *Id.*

[10] Mary Finnigan, Colgan Air, Inc., VP of Administration, NTSB, Public Hearing in the Matter of the Colgan Air, Inc. Flight 3407, Bombardier DHC8-400, N200WQ Clarence Center, New York, February 12, 2009 at 311 (May 13, 2009) (DCA-09-MA-027).

[11] Bill Anderson, *Regional Err-Lines – Big Company Logos Disguise Little Carriers*, N.Y. Post, May 18, 2009, at 10.

[12] Comment of Mark V. Rosenker, Acting Chairman of the NTSB, for the FAA Notice of Proposed Rulemaking (NPRM) titled, "Qualification, Service and Use of Crewmembers and Aircraft Dispatchers" (May 7, 2009) (Doc. ID FAA-2008-0677-0067.1).

In response to the NTSB, the FAA states that it will review the "Recognition of and Recovery from Approach to Stall" training requirement to include training where each pilot would, at least once, delay the recovery from the approach to stall warning until either the aerodynamic stall occurs, or when appropriate, until the "stick pusher" activates and releases.

There is currently no explicit FAA training requirement regarding the proper reaction to stick pusher activation. In 2007, the NTSB recommended that the FAA convene a multidisciplinary panel of operational, training, and human factors specialists to study and submit a report on methods to improve familiarity with, and response to, stick pusher systems and, if warranted, establish training requirements for stick pusher-equipped aircraft. According to Colgan, Captain Renslow and First Officer Shaw received academic stick pusher training, but not simulator training. Colgan states that stick pusher simulator training is not a standard practice in the airline industry. Since the Flight 3407 crash, Colgan has incorporated stick pusher familiarization in its simulator training.

C. The January FAA Crew Training NPRM and Upset Recognition and Recovery

On January 12, 2009, FAA issued an NPRM to overhaul specific crew training requirements.[13] According to the FAA, the January 2009 NPRM is the first comprehensive upgrade of training requirements in the past 15 years. This proposal will establish new requirements for traditional air carrier training programs to ensure that safety-critical training is included. The rulemaking is part of the FAA's efforts to reduce fatal accidents in which human error is a major contributing cause. Some of the training requirements proposed are to require: training and evaluating flight crewmembers in a complete flight crew environment; the use of flight simulation training devices (FSTD) for training, testing, and checking flight crewmembers; additional training and practice in the use of crew resource management (CRM)[14] principles; training in an FSTD with a complete flight crew.

FAA's regulations do not require specific training for recovery from upset conditions (i.e., when an airplane in flight unintentionally exceeds the parameters normally experienced in line operations or training).[15] However, the FAA commissioned the development of an Airplane Upset Recovery Training Aid (Aid), which the FAA first published in 1998. This Aid was updated in August 2004, and again in October and November 2008. The Aid is a comprehensive document that includes definitions, characteristics, techniques, considerations, and exercises, all focused on academic understanding and practical simulation that provide individual pilots with the knowledge and tools necessary to recover should an upset situation occur.

In addition, the FAA's January 2009 NPRM strengthens upset recovery training requirements by adding an "Upset Recognition and Recovery" section that sets out the awareness

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[13] Qualification, Service and Use of Crewmembers and Aircraft Dispatchers, 74 Fed. Reg. 1280 (proposed Jan. 12, 2009) (to be codified at 14 C.F.R. pts. 65, 119,121 et al.).

[14] CRM focuses on improving communications between the pilots and crew, while taking into account human factors, hardware, and information. CRM also focuses on situation awareness, communication skills, teamwork, task allocation, and decision making within a comprehensive framework of standard operating procedures with the goal of preventing accidents and dealing with stressful situations by improving performance through enhanced coordination.

[15] More specifically: (1) pitch attitude greater than 25 degree, nose up; (2) pitch attitude greater than 10 degree, nose down; (3) bank angle greater than 45 degree; and (4) within the prior parameters, but flying at airspeeds inappropriate for the conditions.

expected of each pilot and what actions each pilot will be expected to learn and be able to perform should an upset occur. This training would be required for each pilot completing initial, transition, conversion, upgrade training, and at each level of requalification training at an airline. Each pilot would be exposed to this training again on each recurrent training cycle.

D. FAA Disapprovals

Part of a pilot's training includes "check rides." A checkride is a portion of an aircraft pilot's certification examination, or an endorsement for additional flight privileges, where the candidate being examined flies an aircraft with a FAA Designated Pilot Examiner to demonstrate expertise in the skills that are required for the certification. At the end of the check ride, the pilot either passes or fails. Last month's NTSB hearings revealed that Captain Renslow had four FAA certificate disapprovals due to failed checkrides during his career. Three occurred before he was hired at Colgan, and included failed checkrides for his private pilot instrument, his commercial pilot and his commercial multi-engine certificates. At Colgan, when he was upgrading to captain on the Saab 340, and which included evaluation for obtaining his ATP certificate, Captain Renslow was initially disapproved.[16]

Although the FAA does not require it, Colgan's employment application requires applicants to disclose all checkride failures. According to Colgan, Captain Renslow disclosed only his instrument checkride failure, but not his commercial pilot or multi-engine failures. Colgan notes that Captain Renslow passed six checkrides in the sixteen months prior to February 12, 2009. First Officer Shaw failed her initial certified flight instructor checkride before joining Colgan.[17] According to Colgan, she disclosed this information and did not fail any checkrides while at Colgan.

Under the Pilot Records Improvement Act of 1996 (PRIA) (P.L. 104-264), air carriers must obtain the last five years' performance and disciplinary records for a prospective pilot from their previous employer. These records include information regarding initial and recurrent training, qualifications, proficiency, or professional competence including comments and evaluations made by a check airman (i.e., a person qualified and permitted to conduct flight checks).

PRIA also requires carriers to obtain records for a pilot from the FAA. FAA records regarding pilot certification are protected by the Privacy Act of 1974. However, PRIA requires carriers to obtain a limited waiver from prospective pilots allowing for the release of information concerning their current airman certificate and associated type ratings and limitations, current airman medical certificates, including any limitations, and summaries of closed FAA legal enforcement actions resulting in a finding by the FAA Administrator of a violation that was not subsequently overturned.

Although PRIA does not require carriers to obtain a release from prospective pilots for the entirety of the pilot's airman certification file, including Notices of Disapproval for flight checks for certificates and ratings, FAA guidance suggests to potential employers that they may find this additional information helpful in evaluating the pilot. To obtain this additional information, a carrier must obtain a Privacy Act waiver from the pilot-applicant.

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[16] NTSB, *supra* note 4 at 19.
[17] *Id.* at 20.

Requirements of the Pilot Records Improvement Act of 1996

Air carriers must obtain from the FAA, records concerning:	➢ Current airman certificates (including airman medical certificates) and associated type ratings, including any limitations to those certificates and ratings; and ➢ Summaries of legal enforcement actions resulting in a finding by the Administrator of a regulatory or statutory violation that was not subsequently overturned.
Air carriers must obtain from any air carrier that has employed the individual as a pilot in the last five years, records on the applicant pertaining to:	➢ Compliance with applicable training and checking requirements; ➢ Drug and alcohol testing; ➢ The individual's performance as a pilot that are maintained by the air carrier concerning the training, qualifications, proficiency, or professional competence of the individual, including comments and evaluations made by a check airman; ➢ Any disciplinary action taken with respect to the individual that was not subsequently overturned; and ➢ Any release from employment or resignation, termination, or disqualification with respect to employment.
Air Carriers must obtain from the National Driver Registry (from the chief driver licensing official of a State):	➢ Information concerning the motor vehicle driving record of the Individual.

(Source: FAA)

In 2005, the NTSB recommended requiring airlines to obtain any Notices of Disapproval for checkrides for certificates and ratings for all pilot applicants, and evaluate this information before making a hiring decision. Some have suggested that the FAA maintain a centralized electronic database that enables airlines to view a pilot applicant's entire airman certification file, however doing so may require additional statutory authority.

In 2005, the NTSB also recommended that the FAA conduct a study to determine whether the number of checkrides a pilot can fail should be limited. The FAA states that it conducted a study in 2004 to determine if there is a correlation between flight test failures and the airman being cited in an FAA enforcement action. According to the FAA, a review of a total of 15,024 disapprovals against the FAA Enforcement Information System showed a very low correlation, less than one percent. According to the FAA, while any single case may have little significance, multiple cases may be an indicator of a lack of the required skills, knowledge, or compliance disposition to be a safe pilot.

According to the FAA, another concern that has been raised by training experts and FAA inspectors about establishing a hard limit on the number of test failures is that, as this limit is approached, examiners will be extremely reluctant to find an applicant unsatisfactory. This could result in applicants passing flight checks who otherwise would not, with net negative safety consequences.

E. Remedial Training Programs

As a result of a December 2003 Federal Express crash at Memphis involving a pilot that failed numerous proficiency checks, the NTSB recommended requiring all part 121 air carriers to establish programs for flight crewmembers who have demonstrated performance deficiencies or experienced failures in the training environment. These programs require a review of the

crewmember performance history at the company and administer additional oversight and training to ensure that performance deficiencies are addressed and corrected.

In 2006, the FAA responded by issuing Safety Alert for Operators (SAFO) 06-015, which recommended that all part 121 carriers identify pilots with training deficiencies, such as multiple failed checkrides, and implement remedial monitoring and training programs.

Many air carriers have voluntarily incorporated remedial training modules to supplement their approved training programs. These modules have been developed through close collaboration between pilot groups and managers. They are carefully designed and implemented in ways that are mutually desirable, and have proven to be effective in addressing and correcting below-standard pilot performance. Colgan's FAA Principal Operations Inspector (POI) testified before NTSB in May that Colgan had made partial progress in this area.[18]

F. Flight Schools

There are different types of flight schools that offer pilot certification that fall under three separate FAA regulations: (1) part 61 schools,[19] where flight instructors at the school must be FAA-certified and end-of-course evaluations are typically provided by FAA-designated examiners, the curriculum is usually based on a manufacturer's recommended curriculum, and the school itself is not FAA-certified; (2) part 141 pilot schools, which require the instructors, school and curriculum to be FAA-approved; and (3) part 142 training centers, which are typically part of a part 121 airline, are used to train the airline's employees; the curriculum, instructors and evaluators must be FAA-approved. A part 142 training center also offers additional training for pilots employed by the airline to prepare them to test for certificates and ratings.[20] A few examples different types of flight schools include:

- Offering commercial pilot certification in 120 days in a full-time program. A few airline pilot groups have criticized these schools as "pilot factories" and claim that students are instructed to the level of being able to pass a certification test. According to FAA, these programs are not the "norm" and it would be virtually impossible for someone to obtain a commercial certificate in 120 days with zero prior experience.

- Universities and colleges, offering associate, bachelors, masters, and even doctoral degrees in a variety of aviation subjects. A four-year bachelors degree program offers both flight training and a great amount of academic coursework in aeronautical science, in subjects such as engine function and design, aerodynamics, meteorology, and CRM. Many believe that these programs produce a better-rounded pilot that develops strong decision-making and leadership skills, in addition to "stick and rudder" skills. A four-year degree program costs

[18]Douglas Lundgren, FAA, POI for Colgan Air, Inc., NTSB, Public Hearing in the Matter of the Colgan Air, Inc. Flight 3407, Bombardier DHC8-400, N200WQ Clarence Center, New York, February 12, 2009 at 481 (May 13, 2009) (DCA-09-MA-027).

[19] Entities that hold a part 61 certificate can range from a single flight instructor with a single aircraft to a large, multi-aircraft, with multi-instructor operation. FAA does not keep a record of part 61 flight schools. Most student pilots begin training at a part 61 flight school since it is less expensive.

[20] Part 142 training centers are required to incorporate advanced training devices and simulators in their training programs; this is not a regulatory requirement for part 141 flight schools, however, many do use these devices.

upwards of $35,000 per year. According to the FAA, the graduates of these universities and colleges finish with about 210 flight hours.[21]

- Another model is that of Gulfstream Airlines and its Training Academy. Under this program, a pilot must enroll already certified with private, instrument, commercial, and multiengine ratings. The course offers advanced training, the opportunity to build the pilot's flight hours, and the possibility of becoming a first officer with Gulfstream Airlines. The cost of this program is about $30,000 and the pilot is paid an hourly rate (about $8 an hour) to fly 250 hours with the airline.[22]

European flight training programs offer a different model than U.S. flight schools. The European model provides more robust academic instruction and written examination during flight training and certification. Pilots in the United States typically start their training on small, single-engine airplanes in visual conditions, and then progress to instrument training and multi-engine airplanes before being hired by an airline. Many European airlines and some Asian countries use a model called "ab initio training" (i.e., starting from the beginning). Under this model, a potential pilot applies to the airline with no previous flying experience or training. The applicant undergoes a serious of mental and psychological testing, and if they pass they are hired and "apprenticed" by that airline. The training may be completed by the airline itself or at a number of ab initio training schools in the United States, Europe and Asia. The trainee pilot is trained for only one type and model of aircraft.

II. Fatigue

Under current FAA rules, pilots and airlines are responsible for ensuring that pilot flight time limitations are not exceeded. FAA regulations impose an eight-hour limit for a pilot flight time during a 24-hour period, provided the pilot has had at least eight continuous hours of rest during the 24-hour period. If a pilot's actual rest is less than nine hours in the 24-hour period, the next rest period must be lengthened to provide for the appropriate compensatory rest. Pilots must be relieved of duty for at least 24 consecutive hours during any seven consecutive days. The rules do not address the amount of time pilots can be on duty (standby time) or flight time that results from operational delays.[23]

- Pilots flying domestic 14 C.F.R. part 121[24] operations may fly up to 30 hours in any seven consecutive days (actual flight time), 100 hours per calendar month (actual flight time), and 1,000 hours per calendar year (actual flight time).

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[21] Embry-Riddle Aeronautical University, a four-year institution, reports that of its 2006 graduates, 90 percent went onto employment and, of that, 41 percent worked as a commercial pilot for an airline one year following graduation. The University reports that the majority of its Aeronautical Science students that go into airline employment as a pilot begin at a regional airline.

[22] Lance Wallace, *Gulfstream Training Academy Provides Alternative*, Flying Magazine (April 2009).

[23] Airline rules may be stricter than FAA regulations if the issue is part of a collective bargaining agreement.

[24] 14 C.F.R. § 121 refers to aircraft having a passenger-seat configuration of more than 9 passenger seats (excluding crew) or having a payload capacity more than 7,500 pounds.

- Pilots flying domestic 14 C.F.R. part 135 [25]operations may fly up to 34 hours in any seven consecutive days (actual flight time), 120 hours per calendar month (actual flight time), and 1,200 hours per calendar year (actual flight time).

The NTSB has long been concerned about operator fatigue, and placed it on its Most Wanted list in 1990. According to the NTSB, over the past 15 years, it has linked fatigue to more than 250 fatalities in aviation accidents. There are currently two open aviation recommendations concerning pilot fatigue. The NTSB has recommended that FAA revise current flight and duty limitations to take into consideration the latest research findings in fatigue and sleep issues, as well as length of duty day, starting time, workload, and other factors; and develop and use a methodology that will continually assess the effectiveness of fatigue management systems implemented by operators.

In 1995, the FAA proposed to amend existing regulations to establish new duty period and flight time limitations, and rest requirements for flight crewmembers in parts 121 and 135. This rulemaking was based on recommendations from an Aviation Rulemaking Committee (ARC). It included a 14-hour duty period, 10 hours of rest, increased flight time to 10 hours, and addressed other related issues. According to the FAA, the pilots commented that 10 hours of flight time was too long, and the operators believed 14 hours of duty time was too short. To date, the regulations have not been revised. However, in 2000, FAA issued an interpretation of the flight and rest rules for domestic operations, which clarified that a flight cannot be started if the pilot has not had a minimum of eight hours of rest in the 24 hours preceding the end of the flight.[26]

In 2008, the FAA held a Symposium on Aviation Fatigue Management to discuss the latest in fatigue science and management. Dr. John A. Caldwell, a fatigue management consultant for the U.S. Air Force and Army, reported that his research found that 80 percent of regional pilots surveyed said that they had nodded off during a flight, and that scheduling factors such as multiple take-offs and landings every day were top contributors to operational fatigue.[27] The FAA is currently looking to incorporate information on fatigue from the Symposium into an Advisory Circular.

Concerns have been raised regarding pilot fatigue leading up to the Flight 3407 accident. According to the NTSB, Captain Renslow flew to EWR on February 9th from his home in Lutz, Florida. He began a two-day trip the next morning and First Officer Shaw commuted overnight via two flights from her home near Seattle, Washington. At the time of the accident, Colgan had provided its pilots with fatigue policy information. According to Colgan, there were eleven standby pilots available at EWR to fly if either pilot was fatigued. The FAA POI for Colgan was aware of

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[25] 14 C.F.R. § 135 refers to aircraft having a passenger-seat configuration of up to 9 passenger seats (excluding crew) or having a payload capacity of up to 7,500 pounds.

[26] The FAA notes that it is also working with the International Civil Aviation Organization (ICAO) to develop a Fatigue Risk Management System (FRMS) to regulate flight and duty time. FRMS would provide an alternative to existing flight and duty limitations, and would move towards a risk based approach to improve flight crew alertness. FRMS would require the company to manage fatigue with input from all company personnel, including management, flight crewmembers, maintenance personnel, schedulers, and dispatchers.

[27] Dr. John A. Caldwell, *Effects of Fatigue on Operational Performance*, Archinoetics, LLC, presented at the FAA Fatigue Management Symposium: Partnerships for Solutions (June 17, 2008).

the company's fatigue policy, and was generally concerned about fatigue in similar regional airlines, but could not identify any specific concerns at Colgan.[28]

An issue that has also been raised is commuting. Many pilots across the country commute to their base of operations to begin flying sometimes taking multiple legs to arrive in time for their flight. There are no FAA restrictions placed on pilots regarding the popular practice of commuting but pilots must meet schedule requirements of the flights they bid to fly. According to FAA, it is the responsibility of the pilot to report to work well-rested and to report fatigue.

With respect to Colgan, the Colgan EWR regional chief pilot said there were no restrictions placed on pilots regarding commuting, but pilots have to meet schedule requirements.[29] The company has a commuting policy in its Flight Crewmember Policy Handbook. The policy states that "a commuting pilot is expected to report for duty in a timely manner."[30] The policy protects pilots from disciplinary action if they are unable to report for duty due to unforeseen flight schedule disruptions up to two times in any 12 month period.[31]

III. Relationship between Legacy and Regional Air Carriers

Media sources speculate that legacy air carriers are shifting aircraft to international routes and relying on regional air carriers for more domestic flying.[32] Regionals are operating in bigger markets, not just from small cities to larger hubs, and moving away from smaller aircraft with 50 or fewer seats. In the last few years, the legacy air carrier and regional air carrier relationship has shifted from a partnership to more of a client/vendor relationship.[33]

According to RAA, approximately 90 percent of regional airline passengers travel on regional airline flights that are scheduled, processed, marketed, ticketed, and handled by the mainline airline partner through marketing partnerships called code-sharing. Under this scenario, the mainline airline partner enters into a contract of carriage with the passenger for a flight operated by a code-sharing regional partner. There are two basic types of compensation for such service. The first, prevalent among larger regional airlines, occurs when a mainline and regional airline enter into a "fee for departure" or "capacity buy" agreement, where the mainline receives 100 percent of the revenue from flights and compensates the regional airline according to a predetermined rate for flying a specific schedule.

A second arrangement, common to smaller operators, occurs when mainline airlines pay regional airlines a portion of passenger ticket revenue. This is referred to as "pro-rate" or "shared

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[28] NTSB, Human Performance Group Chairman's Factual Report (April 23, 2009) at 32.
[29] *Id.*, at 26.
[30] Information is contained in chapter 1, "Human Resources Procedures," under a section titled "Commuting Policy" on pages 1-5 and 1-6. The revision current at the time of the accident was dated March 2008.
[31] According to NTSB's investigation, 93 of the 137 Colgan pilots based at Newark, them commuted from other areas of the country due in part to the high cost of living in the area.
[32] Andrew Compart, *Regionals Reconsidered: U.S. Providers Change Course, While Trying to Keep the Fundamentals Intact*, Aviation Week & Space Technology, May 18, 2009, at 47.
[33] *Id.*

revenue" flying. Both arrangements include operational standards as well as incentives rewarding excellent performance, but all of these agreements are unique to the individual contracts between regional and mainline air carrier contracts. Compensation rates and revenue shares are likewise unique to individual contracts and differ from partnership to partnership.

According to the Air Transport Association (ATA), codesharing arrangements are typically entered into to create new service, improve existing service, and increase efficiencies, which may benefit the participating airlines and passengers. ATA maintains that the airline performing the air transportation is the FAA certificate holder that is ultimately responsible for safety. In 1995, the FAA issued regulations that the same level of safety be used for all air carriers with 10 or more passenger seats and all turbojets operated in scheduled passenger service must operate under FAA's part 121 regulations.

With respect to Colgan,[34] it operates under two types of agreements with its partners: "pro-rate" code share agreements that provide for a sharing of passenger fares between Colgan and the major carrier, and capacity purchase agreements whereby the major carrier contracts with Colgan to operate in certain markets within the major carrier's network for a fixed fee. The pro-rate code share agreements are essentially joint marketing agreements whereby the major carrier allows Colgan to operate in certain markets under the major carrier's brand. Colgan, in turn, operates in smaller markets that cannot be economically served by a major carrier with larger aircraft, and provides a connection for local passengers into the major carrier's network. Colgan retains the fares of all of the local passengers in these small markets, and Colgan and the major carrier "pro-rate" the revenue for all passengers that connect between Colgan's operations and that of the major carrier. Passenger tickets for all of Colgan's flights are sold through its major partner's ticketing and distribution systems. Colgan receives its share of revenue from its partners at least once a month through the Airline Clearing House, although some of its partners provide estimated advance payments throughout the month. Colgan is responsible for all of its operating costs and all aspects of its operation under these pro-rate code share agreements.[35]

Colgan operates the Q400 aircraft as a Continental Connection carrier under a capacity purchase agreement with Continental Airlines. Under this operating contract, Colgan is responsible for acquiring and financing the Q400 aircraft and operating the aircraft within the Continental network at the direction of Continental Airlines. Continental selects the markets and provides an operating schedule to Colgan Air. Colgan is responsible for hiring and training all flight crews, for maintaining the aircraft, and for operating the schedule provided by Continental. Continental Airlines markets the flights under its brand name and retains all passenger revenue. Continental pays Colgan contractual amounts based on the level of activity that Colgan completes (i.e., number of departures, number of hours operated each day, number of aircraft covered under the agreement). Colgan receives weekly estimated payments from Continental, and the two parties reconcile to the actual amounts due under the contract once per month. Continental also provides fuel to Colgan at no expense under the capacity purchase agreement and reimburses Colgan for certain market-based expenses such as landing fees and airport facility charges.

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[34] Colgan Airline provided the information in this section regarding its agreements with mainline carriers as a case study of such agreements.

[35] Colgan has pro-rate code share agreements with Continental Airlines in Houston, United Airlines at Washington, D.C.'s Dulles International Airport, and US Airways in the Northeastern United States.

All of Colgan's agreements provide extensive rights to its partners to inspect and review all aspects of Colgan's operations to ensure that they meet the major carrier's standards for safety and operating performance. Colgan regularly communicates with its partners to discuss its operating performance, safety programs and initiatives, the performance characteristics and maintenance requirements of Colgan's aircraft, and other business aspects of the relationship. Colgan's operating agreements with its partners also require Colgan to comply with all federal aviation regulations and operating requirements promulgated by the FAA, the DOT, and any other regulatory authority in the United States.

In addition, Colgan completes (and in some instances, is required to complete) operational safety audits conducted by third parties and reports the results of all such audits to its partners. For instance, upon agreement with Continental Airlines to operate the Q400 aircraft, Colgan underwent an extensive operational safety audit by the International Air Transport Association. This is a bi-annual audit conducted by the largest airline industry organization in the world. This operational safety audit must be completed by all IATA members, which include all major airlines in the United States. Colgan successfully completed its audit last year and is on registry with IATA until its next review.

IV. Airline Pilot Pay and Workforce Issues

Pilots are paid at an hourly rate, which varies among airlines, and is based upon the size and type of aircraft, whether the pilot is captain or first officer, and seniority. On average, pilots at regional airlines are paid at lower rates than pilots at major airlines. At Colgan, Captain Renslow, 47, made about $65,500 per year and First Officer Shaw, 24, made $23,900 per year.[36] It is reported that pilots working for major carriers flying large jets earn, on average, about $125,000 per year;[37] whereas Colgan Air states that its captains and first officers earn about $67,000 and $24,000 respectively, to fly the Bombardier Dash 8-Q400,[38] a narrow body turboprop. According to the RAA, salaries per year for a captain range from $70,000-$82,000 and the first officer salary range from $26,000-$39,000 per year based on an informal survey of 14 regional airlines. Under FAA regulations, pilots may not fly as a crewmember for more than 1,000 hours in a year.[39]

Many pilots with fewer flight hours (i.e., closer to FAA minimum requirements) begin their careers as flight instructors, or at a regional airline or cargo airline to build their flight hours so that they can accumulate enough to apply for a job at a major carrier.

Pilot groups have expressed concern that pay and benefits have declined over years based on concessions made to keep airlines afloat during difficult economic circumstances. Over the years, airlines and their employees have been adversely affected by economic stresses, including bankruptcies, mergers and acquisitions, high oil prices, acts of terrorism, deteriorating

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[36] Initial reports of the pilots' pay were based on a statement by Mary Finnigan, VP of Administration for Colgan Air at the NTSB hearing on May 13, 2009. Colgan has subsequently said that those numbers were incorrect and it provided corrected information for the NTSB hearing record, which reflects the numbers cited above.

[37] Sholnn Freeman, *Panel on Fatal Crash Looks at Pilots' Pay, Commutes*, Wash. Post, May 14, 2009, at A02.

[38] Q400 pilots at Colgan Air receive per diem amounts averaging approximately $3,000 annually to compensate them for additional expenses when they are traveling.

[39] 14 C.F.R. § 121.481-121.485 (2008).

management/labor negotiations, and furloughs. Pilot groups have raised concern that this combination of factors will hinder the industry from attracting the "best and brightest" professionals.[40] Since airline deregulation in 1978, more than 20 airlines have filed for Chapter 11 bankruptcy protection.[41] According to ALPA, 3,800 ALPA pilots are currently on furlough with an additional 1,000 to 1,500 anticipated by the first quarter of 2010.[42] Airline traffic is expected to rebound with the overall economy, so it is likely that demand for airline pilots will also increase in the future.

V. Other Issues

One issue that has been raised is the discussion that took place between the pilots prior to the Colgan crash. Commonly known as the "sterile cockpit rule," FAA regulations require flight crewmembers to refrain from nonessential activities during critical phases of flight,[43] all ground operations involving taxi, takeoff, and landing, and all other flight operations below 10,000 feet except cruise flight.

According to the NTSB, Colgan's sterile cockpit procedures are covered during ground school indoctrination training. However, investigators reviewed the slides presented during this training and could not find any that specifically referenced sterile cockpit.[44] The cockpit voice recorder (CVR) transcript of the last minutes of the Colgan flight documents non-essential conversation between the accident flight crew when sterile cockpit procedures should have been in effect. For example, there was a three minute discussion on the crew's experience in icing conditions and training; this conversation occurred just a few minutes before the stick shaker activated and while the crew was executing the approach checklist.[45]

In 2007, NTSB recommended that FAA work with pilot associations to develop a specific program of education for air carrier pilots that addresses professional standards and their role in ensuring safety of flight, including associated guidance information and references to recent accidents involving pilots acting unprofessionally or not following standard operating procedures.

In response to this recommendation, the FAA notes that CRM training is currently required by FAA for all pilots. Enhancing crew performance is the objective of CRM, and professional standards and their role in ensuring safety of flight is central in the CRM training message. Recent accidents and failures to follow standard operating procedures are two of the most persistent sources of content in CRM training practiced today. Additional training and practice in the use of CRM principles is a component of the FAA's January 2009 NPRM.

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[40] *See US Airways Flight 1549 Accident: Hearing Before the Subcomm. on Aviation*, 111th Cong. (2009) (Statements of Captain Chesley B. Sullenberger, III and First Officer Jeffrey Skiles).

[41] Sam Wilson, *US airlines hit turbulence – again*, MoneyWeek, http://www.moneyweek.com/investment-advice/us-airlines-hit-turbulence---again.aspx

[42] ALPA reports that their pilots are predominately furloughed from carriers like UAL, NWA, AAL, American Eagle, and cargo carriers Atlas, DHL, Airborne. This does not include pilots on military leave, pilots of airlines that are not members of ALPA (e.g., US Airways), or the airlines that have recently ceased operations, such as ATA and Aloha. ALPA estimates that if those numbers were added, there are approximately an additional 2,800 unemployed pilots.

[43] 14 C.F.R. § 121.542 (2008).

[44] NTSB, *supra* note 4, at 22.

[45] *Id.* at 23.

WITNESSES

MEMBER PANEL

The Honorable Louise McIntosh Slaughter
Congresswoman
New York, District 28

The Honorable Christopher John Lee
Congressman
New York, District 26

PANEL I

The Honorable Mark V. Rosenker
Acting Chairman
National Transportation Safety Board
Accompanied by:
Mr. Thomas E. Haueter
Director, Office of Aviation Safety
National Transportation Safety Board

The Honorable J. Randolph Babbitt
Administrator
Federal Aviation Administration

The Honorable Calvin L. Scovel, III
Inspector General
U.S. Department of Transportation

PANEL II

Mr. John Michael Loftus
"Families of Continental Flight 3407"
Father of Madeline Loftus/victim of Flight 3407 crash
Former pilot with Continental Airlines

Captain John Prater
President
Air Line Pilots Association, International

Mr. Roger Cohen
President
Regional Airline Association

Mr. Daniel Morgan
Vice President
Safety & Regulatory Compliance
Colgan Air, Inc.

Mr. James C. May
President and CEO
Air Transport Association

Dr. R. Curtis Graeber, Ph.D.
Fellow
The Flight Safety Foundation

Dr. Frank Ayers
Chairman, Flight Training Department
Professor of Aeronautical Science
Embry-Riddle Aeronautical University

REGIONAL AIR CARRIERS AND PILOT WORKFORCE ISSUES

Thursday, June 11, 2009

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON AVIATION,
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
Washington, DC.

The Subcommittee met, pursuant to call, at 10:00 a.m., in Room 2167, Rayburn House Office Building, Hon. Jerry F. Costello [Chairman of the Subcommittee] presiding.

Mr. COSTELLO. The Subcommittee will come to order. The Chair will ask all Members, staff and everyone to turn electronic devices off or on vibrate.

The Subcommittee is meeting today to hear testimony on the regional air carriers and pilot workforce issues. I intend to give a brief opening statement. I will call on the Ranking Member Mr. Petri to give his opening statement or remarks. And then I intend to call our first panel up, let Congresswoman Slaughter testify quickly, and then we will come back to Members to give their opening statements after your testimony. We understand that Congresswoman Slaughter has a conflict and has to be out of here by 10:30, so we are going to accommodate your schedule.

I welcome everyone to the Aviation Subcommittee hearing on regional air carriers and pilot workforce issues today. On February 12, 2009, a Colgan Air Bombardier Dash 8, doing business as Continental Connection Flight 3407, crashed en route to Buffalo-Niagara International Airport. All 45 passengers and the 4 crew members died as well as 1 person on the ground.

Mr. Mike Loftus' daughter Madeline was a passenger on flight 3407. I am pleased he is here joining us today to offer his testimony. On behalf of each and every Member of this Subcommittee, I extend our sincere condolences to everyone as well as the family members and friends who lost loved ones in this tragic accident.

The National Transportation Safety Board held a 3-day public hearing on May 12, 13 and 14 on the Colgan aircraft flight crash 3407. The investigation is ongoing, and the final conclusions and outcomes are not expected to be made for many months. We need to let the NTSB investigation run its course. We will hear from the NTSB this morning. However, the NTSB hearing identified the need to closely examine the regulations governing pilot training and rest requirements and the oversight necessary to ensure their compliance, with a particular focus on regional airlines.

While we do not have all the facts, I am concerned that these issues could be symptomatic of larger trends driven by economic

pressures within the airline industry. We are in an economic downturn that has placed enormous pressures on airlines to cut costs. Airlines cannot control the cost of fuel or the cost of the aircraft, but they can control what they pay their pilots, how they train their pilots, what the training will cost, and when the pilots can fly.

Due to cost concerns, major airlines have cut their own domestic capacity and have outsourced air transport services in many cases to the lowest bidder, to smaller, lower-cost regional airlines, and then they keep the passenger ticket revenue. Approximately 90 percent of regional airline passengers travel on flights that are scheduled, processed, marketed, ticketed and handled by major airlines through code share arrangements. To win the contract to fly for the major carriers, the regional airlines have gone to great lengths to provide their services at the lowest possible cost.

With today's economic and outsourcing business practices, pilots with decades of experience are laid off from the major carriers, but cannot afford to work for one of the regional carriers because they are faced with starting over as a first officer making less than $25,000 a year.

The economic incentives to outsource to cheaper contractors must not outweigh the value of having experienced pilots in the cockpit. Today regional airlines are viewed by pilots as an entry-level stepping stone. They do not pay as well as the major airlines, and they do not require as many flight hours to get hired. However, regional airlines have been involved in the last six fatal airline accidents, and pilot performance has been implicated in three of these accidents. There must be one level of safety between major and regional airlines mandated rather than just recommended by the FAA.

I believe we need to take an industrywide look at strengthening pilot training requirements. In theory, FAA training programs certify that every airline, both regional and major, train its pilots to the same standard. I think the FAA regulations are too broad, and the minimums are too low. We must find a solution to fix this so everyone is on the same level, not just in theory but in practice.

I have requested that the inspector general for the Department of Transportation review the FAA's regulatory requirements for airline pilot training programs and report back to this Subcommittee.

It is important to note that many of the training issues that surfaced during last month's NTSB hearing are not new. We have seen them surface in other accidents; for example, as a result of the December 2003 Federal Express crash at Memphis involving a pilot that failed numerous proficiency checks. The NTSB recommended requiring airlines to establish remedial training programs for pilots who have demonstrated performance deficiencies.

In 2006, the FAA responded by issuing guidance recommending that airlines implement remedial training programs. NTSB will testify today that despite the FAA's recommendation, Colgan did not have the remedial training program in place.

While I applaud the Obama administration's call to action earlier this week, I do not believe that we can rely on airlines to voluntarily comply with industry's best practices. As we now know from

testimony at the public hearings, Colgan had not fully implemented industry best practice safety initiatives, such as flight operational quality assurance programs, before the accident. We need to require all regional carriers to implement the best practice safety initiatives that are common among the major carriers. Further, the major carriers need to take more ownership of the regional carriers' training programs and implementation of best practices.

I also want to have a frank discussion regarding airline pilot pay. I have met with a number of pilots, a number of groups. I understand their concerns that pay and benefits have declined over the years due to bankruptcies, mergers, acquisitions, oil prices, 9/11, failed labor negotiations and furloughs. Airline pilots are highly skilled safety professionals. They are responsible for people's lives. Airline pilots deserve the respect that their profession once had, and they should be paid far more than $25,000 a year, which is what the first officer of Flight 3407 was paid.

Low pilot pay is symptomatic of other troubling pressures and trends within the industry. Some regional airlines are paying pilots the absolute minimum that the market will bear with no relation to the lives they are responsible for or the value or seriousness of the work they perform. It is detrimental to the overall self-image and morale within the airline pilot profession, which is reflective, in some instances, by poor professionalism. While low pilot pay may keep airline costs down, it does not serve the public well. Moreover, low pay drives away qualified and experienced pilots. There was a time when a high percentage of our commercial pilots were former pilots in the U.S. military. That is not the case today. Far fewer military pilots, when they retire, are applying to the airlines when they retire because of the low pay of the regional carriers.

The NTSB is also looking at fatigue with regard to the Colgan accident. Fatigue has been on the NTSB's most wanted list since 1990 and continues to be identified as an issue in many accidents. The FAA has yet to update its rules governing crew rest requirements taking into consideration the latest research on fatigue. Nor has the FAA developed and used a methodology that will continually assess the effectiveness of fatigue management systems implemented by operators. This is simply unacceptable. I have asked the inspector general to conduct an extensive review of fatigue issues, and I look forward to hearing how he intends to move forward with this audit.

After this hearing I intend to draft legislation to address some of the concerns and issues that we will discuss today.

Finally, this hearing is not intended to condemn the major airlines or all regional carriers. It is intended to identify problems in the system that need to be addressed to improve and enhance safety.

Before I recognize Mr. Petri for his opening statement, I ask unanimous consent to allow 2 weeks for all Members to revise and extend their remarks, and permit submission of additional statements and materials by Members and witness. Without objection, so ordered.

At this time the Ranking Member Mr. Petri is recognized.

Mr. PETRI. Thank you very much, Mr. Chairman, for having this important hearing. And in light of Representative Slaughter's time pressure, and in light of the presence of our Ranking Minority Member of the Full Committee, I ask that Mr. Mica precede me.

Mr. COSTELLO. The Ranking Member Mr. Mica is recognized.

Mr. MICA. Thank you.

First of all, I want to thank our Chairman Mr. Costello for holding this meeting.

Mr. Petri and I have been concerned about the performance and the accident rates of our regional commuter carriers. We have some incredible expertise on this panel. Mr. DeFazio was a distinguished Ranking Member. You have had the Chair. We have another Ranking Member Mr. Ehlers, and Mrs. Capito have a great wealth of expertise on this panel. And I think that we have a responsibility to make certain that if there are deficiencies in the operation of our regional carriers, that actions are taken to correct those deficiencies.

I understand, too, that Ms. Slaughter is here, and our sympathies certainly go out to Ms. Slaughter and those from the Buffalo area or anyone who lost loved ones in the tragic Buffalo commuter airline disaster and to the others who have suffered similar losses.

We will hear from our FAA Administrator. He has only been on the job less than 2 weeks. However, I have to express my concern that FAA as an agency has been immobilized, and for 2 years we haven't had an Administrator. When I came to Congress, we had five Administrators in about 6 years. We put in place a mechanism to change that. It is difficult enough when you have an agency with an administrator, let alone an agency that is so important and critical to safety, and not have a confirmed administrator in place. So I can't criticize in any way Mr. Babbitt. He has only been on the job 2 weeks, and these problems have festered the last several years.

There is something wrong when we have planes, commuter planes, falling out of the sky. There is something wrong when we have repeated accidents. The Chairman just spoke. We have had six very serious loss-of-life, fatal commuter crashes. The potential factors outlined as the reasons why we had those crashes all dealt with pilot performance. Well, I won't say all of them, I will say at least four of the six.

Now, we instituted when I became Chairman a risk-based system. And certainly that risk-based system would be geared to looking at where we have had problems. And if we have commuter airline crashes, and we have pilot performances as a key issue in creating some of the factors that led to those crashes, the system—there is something wrong in not addressing those deficiencies.

It is my understanding that—and let me go back to—I think Peter was involved in this—our FAA reauthorization, the last time, I think that Mr. DeFazio will recall that we saw NTSB come forward with recommendations that were not instituted. They would make a recommendation, and then it would just sort of fall off the cliff or would stay on the shelf. Now, we put into law a mechanism that required that those recommendations be reported back to Congress that were not addressed, and I found out yesterday that the

DOT and FAA were to have had, in February, to Congress, their recommendations on deficiencies in aviation, and we still don't have those before Congress. There is either something wrong with what we passed, and we need to make certain that those recommendations do come to Congress, and that either FAA, DOT or the administration, someone, acts on those. And when you have repeated fatal crashes, and we have a risk-based system, we have a requirement for reporting those incidents, and nothing is done, there is something wrong.

So, Mr. Chairman, you just said that we will pass legislation, and I will join you. Let me say in closing also the FAA and, I think, the Chairman of NTSB has said he has recommended that we open up the performance records of pilots beyond 5 years. Now it is limited to 5 years, and then a pilot has to give a waiver, and I understand the regionals often don't even ask for that. But those records must be opened on their performance and I think also on their training and their certification to be behind the yoke of an aircraft or in the pilot or copilot seat so that we know that people with qualifications and training are there; we know that where we have identified deficiencies in a pilot's ability to perform or to be certified, that that is known.

So I will join you, our side of the aisle, Mr. Petri and I will join you. If we have to take corrective action by legislation, we will put in place whatever measures. If we have to go back, Mr. DeFazio, and change what we put into law to require that those recommendations by NTSB are not just left on the shelf—and I was stunned that FAA and DOT still have not gotten what should have been in February before us, to us, and this is June.

So again, in the spirit of cooperation, a spirit that we need to stop this carnage in the air, I look forward to working with you and pledge our support.

Thank you. I yield back.

Mr. COSTELLO. I thank the Ranking Member for his comments, and we will make two comments concerning points that you made. The last reauthorization, I don't necessarily think we need to change the law. I think we know what the problem is. It is within the FAA. And we need to address that, and we hope that the new Administrator will, in fact, address the issue. I understand, and when he testifies, we will have an opportunity to talk to him about what he intends to implement as far as tracking NTSB recommendations at the FAA and reporting to Congress.

Secondly, we do intend to work in a bipartisan manner to address a number of issues that need to go into legislation. We have a number of recommendations by the NTSB. We have other recommendations that are made by the FAA to the airline industry that have not been complied with. As opposed to making recommendations, we need to put some of these things into law so they are mandatory and not discretionary.

So with that, I would recognize and ask Congresswoman Slaughter to please come to the table, and we will be joined by Congressman Christopher John Lee as well.

And at this time, the Chair will recognize the first panel, hear from Congresswoman Slaughter and Congressman Christopher John Lee. And then after their testimony, we will go back to open-

ing statements by any Member who wants to make an opening statement.

At this time the Chair recognizes the Chairwoman of the Rules Committee in the House, the distinguished gentlelady from the 28th District of New York, the Honorable Louise Slaughter.

STATEMENT OF THE HON. LOUISE McINTOSH SLAUGHTER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Ms. SLAUGHTER. Good morning, Mr. Chairman, and I thank you for your gracious invitation to be here this morning. I did hear so much in both opening statements that made me feel quite elated, if we can use that word on such a sad day.

It is a very important hearing that you are having today, and some of the family members from the Buffalo crash are here, and among them are Karen and Susan Eckert. sisters of a woman named Beverly Eckert, whom we all learned to know and to love, because Beverly lost her husband in 9/11 and was one of the family members working there, and devoted herself to airline safety.

This Committee is very special to me. It was the first Committee I sat on. I sat where Mrs. Capito is, and Peter DeFazio and I were elected the same day, and he is very special to me all by himself. Peter and I have a caucus. You may not be surprised to learn it is called the ″cantankerous caucus.″ There are only two of us on it.

As we are all acutely aware, one of the worst plane accidents in the recent U.S. history occurred earlier this year on the night of February 12 just outside of Buffalo, New York. We lost so many lives that night, and we continue to pray and to think often of the people whose grief and loss are immeasurable. And we have to learn from this tragedy in order to prevent the future loss of life.

Now, beginning on May 12, the NTSB conducted 3 days of hearings on Colgan Air Flight 3407, and we were shocked and saddened about what we learned about regional carriers. There are still many unanswered questions and lots of work to be done to ensure the safety of passengers and crew when traveling on regional airlines, and as Members of Congress, it is our responsibility and our mission.

Much of what we have learned about regional airline industry training and standards is shocking. And we want to immediately attack that, and I am so pleased to hear this morning that that will be done. The regional airlines' training programs are clearly inadequate. It is unacceptable for flight academies such as Florida-based Gulfstream Academy, to advertise that they can train amateur pilots who have aspirations to fly for a major carrier in only 3 months for as much as $30,000 in tuition.

Passengers deserve only the best-trained pilots, and I commend Secretary LaHood and Administrator Babbitt for recently ordering the FAA inspectors to ensure that regional carrier training programs are complying with the Federal regulations. And we must demand that all pilots receive extensive and thorough training as well as enforce the high standards for the regional carrier industry. I think ″enforce″ is the operative word here.

I was amazed to learn how little pilots are paid upon graduating from flight academies. The first officer was paid $16,000 a year. If

that isn't a minimum-wage job, I really don't know what is. In addition to that, she had to pay her own way back and forth to work. I have learned, and I believe this is so, that if she was not flying, her wages did not take place at all. She was not paid for anything except flight time. Any time to and from work was not considered.

And there is a joke that goes around among some of the pilots. It says what do you call a regional first officer without a girlfriend? And the answer is homeless. Now, that is not funny when regional carriers account for half of the country's scheduled airline trips.

Thousands of lives are at stake daily, and these pilots must be compensated properly to ensure that we attract the people who can fly the planes adequately, and this leads me to the issue of fatigue, which you have spoken of. It was certainly a major factor in Buffalo's tragedy because both pilots had had no rest. They were not paid sufficient money to be able to get a hotel room or stay overnight to sleep, and slept sometimes in their cars or in the pilots' lounge, where I understand it is perfectly illegal, but they do it nonetheless. Now, it is no wonder that they were found sleeping in the crew lounges. But we must demand compliance with the orders that we have for sufficient rest in order to remain alert and react properly. I am one of the thousands of people who believe that that was complied with and just assumed that it was.

But I was stunned to learn that the pilots of Flight 3407 had failed five tests, including two with Colgan. Even more disturbing is that the airline was not aware of the three other failures, and Mr. Mica referred to that, something we absolutely cannot allow. We must have more transparency. It is unacceptable. We have to provide the airlines access to a pilot's entire flying history, and it should be made readily available on the Internet. Passengers shouldn't have to guess whether a pilot is competent and rested and even well, because I understand that in some cases they don't get to take off a day if they are ill. They fly, or no pay.

Like many of my colleagues, I fly weekly on regional airlines. I purchase my ticket from U.S. Air, but the plane is operated and maintained by Wisconsin Air. The information is not provided at the point of purchase, let alone prior to boarding the plane, and I am sure that 90 percent of the persons believe they are flying U.S. Air. We have to require airlines to disclose to consumers the operator of the flight prior to purchasing their ticket so they have the opportunity to make well-informed choices.

Most recently an FAA investigation accused Florida-based Gulfstream Airlines of overworking their pilots and breaking airline maintenance rules. And former pilots for Gulfstream report watching seeing pieces fall from their airplanes and say that records were routinely changed or even erased. They had even complained that they had installed on those planes unapproved air conditioner compressors. These types of practices must come to an end, and regional airlines must be held accountable for negligence.

I think we have only scratched the surface of ″anything goes,″ and safety can sometimes be second to profit. We must address these critical issues to ensure our safety when boarding a regional airline. It is our responsibility and duty to help restore the public's faith through introducing strong and meaningful legislation which has to require compliance with standards, and an FAA that can as-

sure us that they are able to certify those standards are being met. There are many charges of a too cozy relationship between airline owners and the FAA.

And I would like to mention, too, I would like to see a little more teeth in what the NTSB does with their painstaking work and the recommendations. Now, I understand they are only recommendations, and they may or may not be followed. I would like to see a little bit of work done on that as well. I know that they do not want to be regulators, nor do we want them to be, but the suggestions that they make after the kind of work they do should be given a priority. Lives depend on it.

Thank you all, Members of this Committee, for allowing me to come today, and I look forward to working with you with some legislation that can make us all feel safer and bring to some fruition the dream of the families and the parents of the children who died on that airplane that it won't be happening again. Thank you very much.

Mr. COSTELLO. The Chair thanks you. And we will say that we will work closely with you. We have had a meeting earlier in the week, and last week we discussed a number of issues, your interest in bringing forth legislation. We intend to work closely with you, and we thank you for your testimony.

Ms. SLAUGHTER. I feel a great deal of comfort with your expertise and your knowledge of this and your intent in seeing this through. I thank you very much for that, Mr. Costello.

Mr. COSTELLO. Thank you.

The Chair now recognizes the gentleman from the 26th District of New York, the Honorable Christopher John Lee.

STATEMENT OF THE HON. CHRISTOPHER JOHN LEE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. LEE. Thank you, Mr. Chairman. I am pleased, actually being a resident of Clarence, New York, and being directly affected—actually where the plane went down was roughly 3 miles from where I raise my family. So this obviously has a lot of meaning to me; and directly knowing three individuals who were on that Flight 3407. So I am grateful to have the opportunity to speak here today on an issue that is not only important to my constituents, too, but all constituents throughout the United States.

As major airlines have confronted significant challenges in maintaining market share, regional airlines have continued to expand their operations and now, as we know, account for roughly half of the Nation's commercial flights. That includes Continental Connection Flight 3407, which departed Newark, New Jersey, on the night of February 12, 2009, carrying 49 passengers and crew en route to Buffalo, New York.

One of those passengers was a 24-year-old woman by the name of Madeline Loftus. Madeline was returning to Buffalo that night to play in an alumni hockey game at Buffalo State College, and though she had purchased a Continental ticket, she was actually flying on a plane operated by Colgan Air, by a crew hired and trained by Colgan. Madeline died that evening when flight 3407 crashed in Clarence Center New York, just 5 miles from the Buf-

falo-Niagara airport. All 49 passengers on board and 1 resident on the ground were lost.

Today this panel will hear from Madeline Loftus' father Mike, who served for more than 20 years as a pilot on Continental Airlines. Mr. Loftus wants nothing less than to ensure that a tragedy like this never occurs again. And I thank the Committee for allowing him to appear before you today on behalf of the family members of victims 3407.

I also had the opportunity to meet many of the families, and the part that has astounded me is how resolute they are on having something positive come out of this horrible tragedy. And I commend all of them.

As you know, the need for further congressional scrutiny of this accident became rapidly apparent when recent NTSB hearings revealed a number of troubling findings, including the crew's lack of hands-on training and experience in the plane's safety systems. For instance, the crew was trained in the activation of the stick shaker, but not in the next step, activation of the stick pusher.

Questionable handling of failed check rides by Colgan Air, specifically despite the fact that the pilot of flight 3407 had failed two general aviation check ride failures. We now know that Colgan did not attempt to access this information. And I, for one, believe the FAA should have made this a mandatory requirement, not a voluntary requirement.

And nonessential cockpit conversation below 10,000 feet is in violation of the FAA's sterile cockpit rule.

These revelations have left the families to struggle with the harsh reality that this horrific tragedy may have been preventable and far more questions than answers about how all the regional carriers operate.

For my part I am concerned that a culture of cost cutting has pervaded the regional air carriers leaving passengers at risk. That is why I have joined with my colleagues from west New York to push for an independent, comprehensive review of all commercial pilot training and certification programs. The Government Accountability Office study would look at every aspect of these programs, including required training hours, training practices for new technologies, and adequacy of responses to unsatisfactory check rides.

Additionally, we are interested in learning what information is required to be provided by pilots on their job applications, and what ability air carriers now have to verify that data. And while we are pleased that the House has given the go-ahead for this analysis in the form of an amendment to the recently approved FAA reauthorization legislation, it is clear that we should not wait any longer to proceed.

I am submitting into the record today a letter Congresswoman Slaughter, Congressman Higgins and I have written to the GAO instructing them to begin their work at once. I urge this panel to lend its support to this bipartisan effort so we can expose information that will inform future steps taken by Congress to improve pilot training practices and ensure passenger safety and confidence.

I also urge this panel to hold the FAA accountable and demand that it does its part to strengthen oversight of the regional air car-

riers and implement the NTSB's most wanted safety recommendations on flying in icy conditions.

Finally, like many west New Yorkers, as I mentioned, I knew several people who lost their lives on Flight 3407, including a personal friend of mine, an expectant mother whose child would have been just 2 or 3 weeks old at this point in her life.

I just want to say that I am very proud of the first responders, the volunteers and all members of my community for coming together to provide support to those who have been affected by this horrible tragedy.

Again, I am grateful for the Committee's time here today, and I hope this hearing is just the beginning of a prolonged effort to ensure justice is brought forward and increased safety for our families. So thank you.

Mr. COSTELLO. The Chair thanks you for your testimony, and we look forward to working with you on legislation.

The Chair now recognizes the gentleman from Oregon Mr. DeFazio.

Mr. DEFAZIO. Thank you, Mr. Chairman. Thank you for convening this important hearing, and hopefully we will get results and changes this time. The scheduling of this hearing caused me to go back and review some of my history with this issue starting in a 1992 hearing on these issues of crew training and fatigue. And Mr. Babbitt actually testified during that hearing. And I will be following up on some of the issues he raised at that time now that he is in charge and hopefully can fix the problems that he identified at that time, which I believe led directly to the crash of this plane and the deaths of many innocent people.

We need to set some standards here. We have got to stop the race to the bottom. We have an industry that is in economic distress, and we have a race to the bottom. We have been talking about this for a very long time, and it is time for action.

I just find it extraordinary, Mr. Chairman, that the FAA has set such a low bar for minimum standards, 250 hours for a first officer. Now, of course, it is up to the airline to determine how many more hours they would require for initial hire, and it is also, unfortunately, up to the airline to determine what kind of training they will provide to that person once they are hired, although the FAA does oversee or confirm the training that the airline would provide.

None of that is right. We need to set a much, much higher minimum bar. And that will get to the root of a lot of these problems. This is a fairly serious undertaking, flying an airplane, particularly in difficult conditions. We would think that it would be perhaps looked at as seriously as training to be a nail technician. In the State of Oregon, you have to have 600 hours of training to be a nail technician. You have to have 1,350 hours to be a barber, but you can't use chemicals. And then when we get to the point of being able to color people's hair, it requires 1,700 hours of training. But the FAA has set the bar at 250 for pilots, and they leave it up to the these regional airlines to determine how many more hours they might require for an initial hire.

That has to change. And if we set the bar a good deal higher, then, of course, compensation will follow. If compensation follows, we won't find young women living with their parents in Seattle,

red-eyeing across the country, and sleeping in the crew room, and then trying to fly a plane in conditions that she did not have adequate experience to deal with. This has got to stop. It has to stop. And this hearing has to be the beginning of that change at last.

We will hear from the NTSB. The issue of crew fatigue has been on their most wanted list for 19 years. The FAA proposed a rule in 1995. We don't have it yet. Why? I am told, well, there are big disagreements between the pilots and the airlines. And we will hear from the Regional Airline Association. They will say no pilot would ever fly fatigued. All they have to do is call in and say it. But Mr. Babbitt testified in 1992, no, in fact, there is intimidation, harassment and firing if you call in fatigued.

Now, if they can't agree on a rule, it might be because the pilots think that the current rules cause people to fly fatigued, and the airlines say, well, this would cost us money. So if we want to follow the rules that the airlines say they follow, which is it is always up to the pilot, then the airlines should have conceded to the pilots, we should have adopted a fatigue rule. And we shouldn't be sitting here today with this hearing. But we are.

So, Mr. Chairman, I hope this is a new beginning with a new administration, a new Administrator, and a very assertive Chairman that we finally get these things done. Thank you, Mr. Chairman.

Mr. COSTELLO. The Chair thanks you, Mr. DeFazio, and now recognizes the Ranking Member of the Subcommittee Mr. Petri.

Mr. PETRI. Thank you again for holding this hearing, Mr. Chairman. And I just need to emphasize that our Committee's highest priority is aviation safety, and that comes before everything else. And that is what we are attempting to—that emphasis is what we are attempting to underline by having this hearing and to actually do what we can to actually improve safety.

It is only fair to say that the American aviation industry is, in fact—especially the large commercial aviation industry—is about the safest in the world. But that is no reason for relaxing, and it is no reason for not reviewing and improving procedures everywhere that we can. And I know we are committed to that goal.

According to the Department of Transportation Office of Inspector General, since 2003, there have been six fatal commercial passenger accidents, and all have involved regional carriers. So it is imperative that we fully explore the issues related to the safety of regional carriers as we are doing in this hearing. Four of those, as has been pointed out, where evidently, at least in part, pilots' performance as a potential factor in the fatal accident.

The National Transportation Safety Board has made recommendations on icy conditions, runway safety and recording devices. And in light of their recommendations, I look forward to hearing from today's witnesses. It is important that we hear from those who are directly involved, and that the witnesses have the opportunity to share their expertise and insights on how to address this important but complicated aviation safety issue.

A number of my constituents have contacted me, and I will be asking some questions that they have suggested as well, because this is something that affects, obviously, the traveling public and all of us as citizens.

With that I will put my full statement in the record. I just want to thank Mr. Loftus in particular, who is here testifying on behalf of the Families of Continental Flight 3407. I know that your and other members' insights will be important to this Committee, and we appreciate the effort you have put into being here today.

Thank you, Mr. Chairman.

Mr. COSTELLO. The Chair thanks the Ranking Member.

I would remind Members that we have 11 witnesses scheduled to testify. We have our first panel of two witnesses. Members have gone, the Members panel, and now we have a government panel. So I would encourage Members, strongly encourage Members, if they would, to submit their statements for the record. If, in fact, someone wants to make an opening statement, feels strongly about it, I will recognize you. But I would strongly encourage you to put statements in the record so we can get to our witnesses and have ample opportunity for all of you to be able to ask them questions.

With that, the Chair now will go to our panel of witnesses before us. The Chair now recognizes Mrs. Schmidt, who wants to be recognized.

Mrs. SCHMIDT. Mr. Chairman, thank you, and I will be brief. I want to thank you for holding this hearing. I want to thank our Ranking Member of the Full Committee Mr. Mica, and our Ranking Member of the Subcommittee Mr. Petri for this important hearing.

So much has been said about Continental Flight 3407. It is a tragic and heartbreaking accident. And I think it is important that we do not prejudge what the NTSB is going to say when it completes its investigation. But regardless of the conclusions it winds up drawing, Congress and the airline industry should take a hard look at regional carriers. And based on what we have learned so far, we really need to review pilot experience, fatigue, training and the safety standards.

I also think it is fair to recognize that air travel is the safest it has ever been, and still I am sure my colleagues in the industry would agree that one preventable accident is just too many. And so if we can take some reasonable measures and precautions to make air travel even safer, it is not that we should, we absolutely must.

I look forward to hearing from everyone, but, most importantly, Mr. Loftus, who lost his wonderful 24-year-old daughter Madeline, because, you see, I was touched in my own district. I represent two wonderful people, Robert and Denise Perry of Loveland, Ohio, whose 27-year-old son Johnathan was among the passengers. And he was their love and their life, and that mother goes to bed every night with empty arms simply because pilots made a mistake.

I continue to be awed by the strength and the perseverance of folks like Robert and Denise and their hope when they came to me and said, ″Make something positive come from this.″ It is our duty to do that. And so I want to thank you, Chairman Costello, for giving us this opportunity to make something positive out of this. And I look forward to this important hearing.

Mr. COSTELLO. The Chair thanks the gentlelady, and now we will introduce our panel of witnesses before us: The Honorable Mark Rosenker, who is the Acting Chairman of the NTSB. He is accom-

panied by Mr. Tom Haueter, who is the Director, Office of Aviation Safety, with the NTSB; Mr. Randy Babbitt, who is the new, as you heard, FAA Administrator; Mr. Calvin Scovel, III, who is the inspector general with the U.S. Department of Transportation.

As all of you know, gentlemen, you have testified before the Subcommittee before. We would make you aware that your entire statement will appear in the record. We would ask you to summarize your statement.

And the Chair now recognizes the Honorable Mr. Rosenker.

TESTIMONY OF MARK V. ROSENKER, ACTING CHAIRMAN, NATIONAL TRANSPORTATION SAFETY BOARD, ACCOMPANIED BY THOMAS E. HAUETER, DIRECTOR, OFFICE OF AVIATION SAFETY, NATIONAL TRANSPORTATION SAFETY BOARD; J. RANDOLPH BABBITT, ADMINISTRATOR, FEDERAL AVIATION ADMINISTRATION; AND CALVIN L. SCOVEL, III, INSPECTOR GENERAL, U.S. DEPARTMENT OF TRANSPORTATION

Mr. ROSENKER. Good morning, Chairman Costello, Ranking Member Petri and distinguished Members of the Subcommittee. I would like to begin my testimony with a short summary of the NTSB's investigative actions to date regarding the accident involving Colgan Air Flight 3407. I want to emphasize this is still an ongoing investigation. There is significant work left for our investigators. My testimony today will therefore be limited to those facts that we have identified to date, and I will steer clear of any analysis of what we have found so far and avoid any ultimate conclusions that might be drawn from that information.

On February 12, 2009, at about 10:17 p.m. Eastern standard time, Colgan Air Flight 3407, a Bombardier Dash 8 Q-400 crashed during an instrument approach to runway 23 at Buffalo-Niagara International Airport in Buffalo, New York. The flight was operating as a Part 121 scheduled passenger flight from Liberty International Airport, Newark, New Jersey. The 4 crew members and 45 passengers were killed. The aircraft was destroyed by impact forces and postcrash fire. One person in a house was also killed, and two individuals escaped from the house with minor injuries.

On May 12, 2009, the NTSB commenced a 3-day public hearing on the accident in which we explored airplane performance, cold weather operations, sterile cockpit compliance, flight crew training and performance, and fatigue management. I would like to note that all of these issues are pertinent to every airline, operation, major air carriers as well as regional air carriers.

Our investigation continues, and every day we make progress.

Now I would like to discuss some of the Board's important safety recommendations. The NTSB has issued numerous recommendations to the FAA on stall training, stick pusher training, pilot records, remedial training for pilots, sterile cockpit, situational awareness, pilot monitoring skills, low-air-speed alerting systems, pilot professionalism and fatigue, and aircraft icing. Two of these issue areas, aircraft icing and human fatigue, are on the Board's most wanted list.

While there are currently more than 450 open recommendations to the FAA, on January 12, the Agency took action on some of those recommendations when they published an NPRM addressing

pilot training and qualifications. The notice also proposes to amend issues including the requirement of flight training simulators and traditional flight crew member training programs and adding training requirements in safety-critical areas.

The NPRM addresses issues raised in numerous safety recommendations that the NTSB has issued to the FAA. In 1995, the NTSB issued recommendations to the FAA to require an airline to evaluate an applicant pilot's experience, skills and abilities before hiring the individual. The following year Congress enacted the Pilot Records Improvement Act, PRIA. PRIA required any company hiring a pilot for air transportation to request and receive records from any organization that had previously employed the pilot during the previous 5 years; however, PRIA does not require an airline to obtain FAA records of failed flight checks. The Board has recognized that additional data contained in FAA records, including records of flight check failures and rechecks, would be beneficial for a potential employer to review and evaluate. Therefore in 2005, the NTSB issued another recommendation to the FAA to require airlines, when considering an applicant for a pilot position, to perform a complete review of the FAA airman records including any notices of disapproval for flight checks.

In response to this NTSB recommendation, the FAA stated that notices of disapproval for flight checks for certificates and ratings are not among the records explicitly required by PRIA, and, therefore, to mandate that air carriers obtain such notices would require rulemaking or a change in PRIA itself. To the credit of the FAA, on November 7, 2007, an advisory circular was issued informing carriers that they can ask pilots to sign a consent form giving the carrier access to any notices of disapproval.

The recommendation is currently classified "Open-Acceptable Alternate Response." However, to date, the FAA has not taken rulemaking action or asked Congress to modify the Act.

Mr. Chairman, this concludes my testimony, and I will be glad to answer any questions.

Mr. COSTELLO. The Chair thanks you, Mr. Rosenker, and now recognizes the FAA Administrator Mr. Babbitt.

Mr. BABBITT. Thank you, Chairman Costello, Ranking Member Petri and the distinguished Members of the Subcommittee. Thank you for inviting me here today to discuss regional air carriers and pilot workforce issues.

Let me begin by saying that we at the FAA deeply mourn the tragic loss of Colgan Air Flight 3407. This is an agency that is dedicated to aviation safety, and any loss that we incur is felt keenly by all of us. Likewise, our sympathies also go out to the families and loved ones of the passengers and crew of Air France flight number 447.

This is my first appearance at a hearing before this Subcommittee since I was sworn in as the FAA Administrator, and I want to advise you that I certainly look forward to working with you, Mr. Chairman, and the entire Subcommittee as we move forward. We have a very ambitious agenda ahead of us at the FAA, and I intend to work very hard to achieve those safety goals.

Since the mid-1990s, there has been a requirement for one level of safety that all regional carriers must operate under the same

rules and at the same level of safety as the major airlines, their counterparts. And I am proud to say when I was president of the Airline Pilots Association, I led the efforts in coordination with the FAA to make those changes. All air carriers that operate today with 10 or more seats are required to operate at and meet the same level of safety standards and the same level of safety oversight across the board.

When the NTSB conducted its public hearing last month on the Colgan Air crash, several issues came to light regarding pilot training and their qualifications, pilot crew fatigue, and the consistency of safety standards and compliance between air transportation operators. Given that the NTSB has not yet concluded its investigation, I cannot speak at this point on the potential findings. My written testimony does provide details, which I will submit, as to the current requirements with regard to pilot training, pilot records and flight-time and duty-time limitations.

But I can tell you that on Tuesday, Secretary LaHood and I announced that we have ordered FAA inspectors to focus their inspections on training programs in order to better ensure that all airlines, including regional airlines, are complying with Federal regulations. We are also taking the step of gathering representatives from the major air carriers, their regional partners, aviation industry groups and labor here in Washington, D.C., on June 15 to participate in what we are calling a Call to Action, and the sole focus will be to improve airline safety and pilot training. This review will address those issues, pilot training, cockpit discipline and other issues, that are associated with flight safety.

And while we await the findings of the NTSB's investigation of the Colgan Air crash, the Secretary and I believe that there is no time to lose in acting on the information that we already have and is available to us. So on June 15, our summit is designed to foster actions-- immediate actions-- and voluntary commitments that we will get from the carriers. And they are to focus on four key areas: First, air carrier management responsibilities for crew education and support; second, professional standards and flight discipline; third, training standards and performance; and fourth, mentoring relationships that exist or should exist between mainline carriers and their regional partners.

The Colgan Air accident and the loss of Air France 447 remind us that we can never rest on the laurels of our safety record, and that we must remain alert and vigilant and aware of the challenges that are in our aviation system. We have got to continue to work to enhance the safety of this system. This is a business where one mistake is one mistake too many.

So, Chairman Costello, Ranking Member Petri, Members of this Subcommittee, this concludes my prepared remarks. I would be happy to answer any questions.

Mr. COSTELLO. The Chair thanks you for your testimony and now recognizes the inspector general for the Department of Transportation General Scovel.

Mr. SCOVEL. Chairman Costello, Ranking Member Petri, Members of the Subcommittee, we appreciate the opportunity to testify today regarding regional air carriers and pilot workforce issues.

Safety is a shared responsibility among FAA, manufacturers, airlines, and airports. Together, all four form a series of overlapping controls to keep the system safe. The past several years have been one of the safest periods in history for the aviation industry; however, the tragic accident in February of Colgan Flight 3407 underscores the need for constant vigilance over aviation safety on the part of all stakeholders.

Last month the NTSB held a preliminary hearing into the cause of the Colgan accident in which some evidence suggested that pilot training and fatigue may have contributed to the crash. As a result, Mr. Chairman, you requested that our office begin an extensive review into some of the issues that were brought to light during that hearing. We have already begun work on this review.

Today I would like to discuss some of the operational differences between mainline and regional air carriers and then move on to weaknesses in FAA's oversight of the aviation industry.

First, it is important to note that regional flights represent one-half of the total scheduled flights in this country. And regional airlines provide the only scheduled airline service to over 400 American communities. Therefore, it is critical that there truly be one level of safety for all carriers.

Our preliminary audit work has identified differences in regional and mainline carrier operations and potential differences in pilots' training programs and level of flight experience. For example, regional carriers typically perform short and medium hauls to hub airports. This could result in many short flights on the same day for a pilot with a regional carrier. Multiple studies by agencies such as NASA have concluded that these types of operations can contribute to pilot fatigue, but FAA has yet to revise its rules regarding crew rest requirements.

As for FAA's role in determining whether both mainline and regional air carriers have developed programs to ensure that pilots are adequately trained and have sufficient expertise to perform their responsibility, we find these issues to be particularly acute for regional carriers. As you know, the last six fatal accidents involved regional carriers and the NTSB cited pilot performance as a potential contributory factor in four of those accidents.

Moving to my second point, weaknesses in FAA's oversight of the aviation industry. Our past work has shown serious lapses in FAA's safety oversight and inconsistencies in how many of its rules and regulations are enforced. The hearing in April 2008 before the Full Committee highlighted such weaknesses in FAA's risk-based oversight system, known as ATOS, and air carrier compliance with safety directives.

While our work identified safety lapses in Southwest Airline's compliance, many stakeholders were concerned that they could be symptomatic of much deeper problems with FAA's air carrier oversight on a systemwide level.

In 2002, we reported that FAA needed to develop national oversight processes to ensure that ATOS is effectively and consistently implemented. Then in 2005, we found that inspectors did not complete 26 percent of planned ATOS inspections. Last year we reported that weaknesses in FAA's implementation of ATOS allowed

compliance issues in Southwest's maintenance program to go undetected for several years.

Our most recent, and still ongoing, work has determined that lapses in oversight inspections were not limited to Southwest. FAA oversight offices for seven other major air carriers also missed ATOS inspections. Some had been allowed to lapse well beyond the 5-year inspection cycle. Additionally, FAA's national oversight of other facets of the industry, such as repair stations, has struggled to keep pace with the dynamic changes occurring in those industries.

Mr. SCOVEL. These facilities are rapidly becoming air carriers' primary source for aircraft maintenance.

We have found that FAA relies heavily on air carriers to provide oversight of those repair stations. However, that oversight has not always been effective. In 2008, we reported that air carriers did not identify all deficiencies at repair stations and did not adequately follow up on deficiencies identified to ensure that problems were corrected.

This is of particular concern for regional carriers who rely heavily on repair stations. According to data provided to the Department, regional carriers send as much as half of their maintenance to repair stations. NTSB's investigation into the crash of another regional carrier, Air Midwest Flight 5481 in January, 2003, identified serious lapses in the carrier's oversight of outsourced maintenance.

Let me conclude, Mr. Chairman, by reiterating that we will continue to do our part in advancing the Department's goal of one level of safety. While all stakeholders are committed to getting it right, including FAA, who has made progress in improving aspects of its safety oversight, our work continues to identify significant vulnerabilities that must be addressed. This will require actions in areas FAA has already targeted for improvement, as well as other areas where FAA will need to revisit differences in standards and regulations and rethink its approach to safety oversight.

That concludes my statement, Mr. Chairman. I would be happy to address any questions you or any other Members of the Subcommittee might have.

Mr. COSTELLO. Thank you, Mr. Scovel.

And as I mentioned earlier that I had a meeting with Administrator Babbitt on some of these issues, I also had a meeting earlier this week with Mr. Scovel.

The Chair now recognizes the distinguished Chairman of the Full Committee, Chairman Oberstar.

Mr. OBERSTAR. Thank you for holding this hearing, Mr. Chairman, your continuing vigilance over aviation safety and the tight rein you are holding on government—and accountability on government agencies and on the airlines themselves.

As I said many, many times, safety begins in the corporate board room. You need a corporate culture of safety permeating the industry. And where that lapses, then the FAA, the National Transportation Safety Board, the Inspector General, and our Committee and our counterpart Committee in the other body must maintain vigilance.

And we have done that. We had a hearing on regional safety when I chaired this Subcommittee 15, 17, 18 years ago. I think you testified at that hearing, Captain Babbitt. And the NTSB has time again issued recommendations and directives—not directive but recommendations for action, and those need to be implemented, and we need the Transportation Safety Board's continued vigilance.

You mentioned as I walking in, Administrator—Captain Babbitt, flight deck management and procedures, and I hope that is a matter we can explore further in the course of this hearing. But it is one that you need to review.

Again, I hope that this meeting you have called that there will be renewed interest in pairing in the flight deck of the pilot and the first officer, matching experience levels, revisiting the experience levels of those who serve on the flight deck in regional airline operations, assuring that there is compatibility and comparability of service.

All too often we have seen in the past and in the tragedy that occurred in Hibbing in my district, we had a very—a relatively senior captain and a very junior first officer who was intimidated by his captain and reluctant to speak up and say, are you—as we know from the voice recorder, didn't say anything while going through a fast rate of descent.

We need to have that ability of that flight deck crew to talk with each other if—for one who sees something that is not quite appropriate to speak up and have—feel the freedom to speak up and understand that he or she has the responsibility to speak up. And I see Chairman Rosenker nodding in agreement, and I appreciate that.

In the 1990s, the Department and the FAA concurred in the industry on a one level of safety. You can't have one for one—Part 121 carriers, Part 135 carriers, and for the air taxi services and for the rest. We need one level of safety. You can begin your tenure as Administrator by ensuring that one level of safety is revived, alive, and well, invigorated and enforced. That is what we are looking to you to do.

Thank you, Mr. Chairman.

Mr. COSTELLO. The Chair thanks you, Mr. Oberstar.

Mr. Scovel, you indicated in your testimony—you heard me mention in my opening statement that, in theory, we have this one level of safety for both the majors and the regionals, but, in practice, it does not exist. And is that what I heard you say when you testified?

Mr. SCOVEL. That is correct, Mr. Chairman.

Mr. COSTELLO. What is your recommendation on what should be done in order to take it from theory to practice to make certain that we in fact do have one level of safety for the majors as well as the regionals?

Mr. SCOVEL. Mr. Chairman, the phrase "one level of safety" to me expresses FAA's, the Department's and the Congress' goal or aspiration for one standard of safety. But, clearly, the record tells us that we haven't reached it yet. One level implies level. It implies attainment or achievement. We are not there yet.

In order for FAA to get there, it needs to pay greater attention, more consistent attention to its safety oversight programs. As our

reports to FAA and to this body including our testimony last year in the Southwest hearing have indicated with the ATOS program, while the risk-based oversight approach to safety is highly recommended and we commend FAA for undertaking that effort, its implementation has been problematic. Our forthcoming report will show that, in addition to Southwest, seven other major carriers have had problems completing their required safety attribute inspections on a 5-year cycle as required by ATOS regulations.

Regionals were recently brought into the ATOS program. Our discussions with FAA inspectors responsible for implementing ATOS at the regionals show that they are struggling with it.

It seems to them that ATOS has been designed to foster safety or account for safety programs in the majors but seems to have less applicability to the regionals. In May, reported on ASAP, sir, a voluntary disclosure reporting program made available for aviation industry employees so that they can report safety problems without fear of administrative or disciplinary action by their employers or FAA.

The majors have told us that ASAP is a key element of their safety efforts.

We reported that ASAP is a missed opportunity for FAA because it is not accumulating and analyzing the data from ASAP for itself with respect to regionals, we have found that 37 percent of the larger regional carriers do not participate in ASAP. If it is a valuable program for the majors, we think it might also be a valuable program for the regionals. We understand it is a voluntary program for carriers, but perhaps with greater FAA attention and accommodation more regionals might be persuaded to join.

Risk-based oversight, sir. With regard to repair stations, we have testified repeatedly in this Committee and also over in the Senate that FAA's implementation of its new risk-based oversight system when it comes to outsourced maintenance remains ineffective. In order to have risk-based oversight, you need to know where the risk is so you can target your scarce inspector resources. In order to do that, you have to acquire data. FAA has been unable to date to devise a mechanism that will induce the carriers to provide data on what maintenance has been conducted, how much, and where it has been performed so that FAA can follow up.

In addition, sir, and in closing, I would commend FAA to look carefully to the outstanding NTSB recommendations, all of which will provide a further roadmap in order to achieve the goal of one level of safety.

Mr. COSTELLO. Thank you.

Administrator Babbitt, I was pleased when the President selected an Administrator who was a commercial pilot, who has testified before this Subcommittee, who has worked with the Congress on many issues in the past, who has knowledge of many of the issues that we are trying to address here in this hearing. However, you are taking over an agency that has a history of becoming more of a bureaucracy than an agency that performs well and responds well to demands of the Congress and the public. So you have a big job ahead of you.

I know that Secretary LaHood and you announced this initiative and that you will be meeting with the regionals and I assume the

majors as well. Tell us about what you hope to accomplish and tell us how you intend to move forward after the meeting.

Mr. BABBITT. Yes, sir.

Mr. Chairman, the purpose here—and let me echo a statement that the Inspector General made: I concur completely with his observation that we have one standard of safety; and we do, in fact, have one standard of safety. What we are seeing, however, and this tragic accident has put a pretty bright light on the fact that we don't have an equivalent level of safety.

We find that some of the carriers are doing a remarkably good job and should be commended for operating well above the bar, well above the minimums required. We know, for example, that one of our major carriers has it as a policy that anyone that provides service to them via a capacity purchase agreement or other commercial arrangement, they require them within a given period of time, that they must have a FOQA program. They must have an ASAP program. They must have a mentoring program.

So the purpose of us bringing these folks together next week is twofold. Number one, let us get down, sit in a room, and be very candid about what are those best practices, what are people doing that is above and beyond and superlative to what is required by the statutes and by the regulations. And let us learn what those best practices are; and then, secondarily, can we implement those quickly? And I intend to use the bully pulpit of this job to the extent that I can to bring people into compliance, which has to be voluntary at this point.

But my motivation is that by the time the NTSB finishes its good work--and it will be good work--We will learn from it. But that is 6 months from now. And if I acted the morning they gave me the recommendations, I am 6 months from promulgating a regulation I can put in force. That is a year from now, and that is too long.

So what I would like to do is take the knowledge that we have already learned from their preliminary investigation, take the knowledge from the industry. People want to do this right. This industry, I marvel at how well it does try to perform. Let us gather that best information. Let us provide mentoring programs.

I can tell you from my own experience as a new pilot, my first trip—I never flew in an airplane where I didn't sit in the right seat with someone who had at least 10 years of experience. That was a wonderful finishing touch to my primary education as a pilot. What I really learned was in line operation from senior captains, people who mentored me. And that is the way the process works.

We have to question how much mentoring is going on, how much professional standards exist when a carrier expands very rapidly. And we can't critique them for it. It is a reality. You get a new contract, you buy five new airplanes, guess what? You hire 50 new pilots.

How do we mentor them? Maybe we need to look to the major carriers and let them share that senior experience with these younger pilots, build that professionalism in and move forward. That is our goal in the short term.

Mr. COSTELLO. What concerns me and I think concerns a lot of people in this room today is the voluntary versus mandatory. And I understand what you are talking about, rule making, but I be-

lieve we need to look at some of these issues and mandate them through legislation. And I hope you will work with us on that.

We intend to move forward to address some of these issues. I mentioned earlier in my opening statement that I intend to look at legislation. Mr. Mica indicated he would like to do it in a bipartisan way. So we are going to work together, Mr. Petri and I and Members of this Subcommittee.

My experience has been too often when you leave it up to the airlines or you leave it up to many agencies that it doesn't get done if it is voluntary, if there are no penalties, if there is no mandate. So that is something that we will be looking at, and we will be looking to take your recommendations as well as Mr. Scovel and Mr. Rosenker.

One final question——

Mr. OBERSTAR. Mr. Chairman, before you leave that point, may I interject a thought?

Mr. COSTELLO. Please.

Mr. OBERSTAR. From that very chair, at that table, a dozen plus years ago, maybe 15, 18 years ago, Don Engen, then Administrator of FAA, had a hearing that we conducted on closing of overwing exits on 747 aircraft which was happening unknown to the Administrator because of the then stovepiping of the regional offices of FAA.

Don Engen, after hearing the testimony of flight attendants who had been engaged in rescue efforts on 747 where the only surviving exit was the overwing exit, said in his very opening remarks, Mr. Chairman, I have sent a message to the airlines and to Boeing now. I can't order them to do it. To do so will take rule making, will take weeks, but I have sent a handwritten note to them right from this table to stop the process now.

That is the kind of decisiveness—you mentioned that you were going to do this. You are not going to wait for the rule making. And you said bully pulpit. You have more than a bully pulpit. You have power. The airlines know they will go against you only at their peril, and we are here to support that initiative, and we expect you to take that kind of leadership.

Mr. BABBITT. I appreciate both your confidence and your support. Thank you, sir.

Mr. COSTELLO. Final question, Mr. Babbitt. We have other Members who want to ask questions, and I will come back hopefully in a second round.

You have heard mentioned earlier that the NTSB recommendations as they come to the FAA, there is a report that is supposed to come to the Congress. It is overdue. It was due in February of this year, and we are now in June. I would ask you to go back in to make certain that that happens, to get it done, and get that report to us.

Finally, tell us—you had indicated that you were setting up a procedure to look at all of the NTSB recommendations and to respond to them. Tell us about the procedure that you intend to implement.

Mr. BABBITT. Yes, sir.

First, at the risk of ratting out my boss, that is a DOT report I believe you are referring to. We have turned over our portion of

that in a timely fashion. But I will look into that, and I understand why. I think there are other modes that have to report into that.

With regard to the NTSB recommendations, I have done a sort of a quick background research, and I will bring you up to date with that.

Let me repeat what I put forward in my confirmation hearing and what I have announced in hearings in another body. It is fairly straightforward, and I hope it is fairly simple and helpful. And that is the NTSB does great work, and they investigate, and they do the full range of their investigation. We should take those—and I intend to take those—recommendations very seriously.

And what I have said and will fulfill is we will act upon those recommendations in one of three ways.

We will adopt them as written as soon as practically possible, number one. There may be occasions where we have another regulation in place or we might have some reason to suggest modification to it. We will adopt it as modified and notify you what modifications we made to the recommendation. And if for any reason we were not to adopt one of their suggestions, I will advise you why we didn't adopt that regulation and the rationale behind it, in concert and coordination with the NTSB.

Let me just recap for you the results. We have indicated, I think, that there are approximately 450 recommendations. That sounds like an astounding number. It doesn't sound quite so astounding when you realize that we have adopted almost 5,000 of the ones they have recommended; and of those 437, a number of them are general aviation related. But when we get all through boiling it down, many of them are in regulatory format now. They are working their way through the process of NPRMs. A number of them we have gone back to the NTSB and working in coordination with them.

And I would note for the record that in my first week and before this hearing was even scheduled I reached out to both of these gentlemen to better coordinate and ask for meetings. It is my goal to work closely with them. They are valuable sources of information, as well as the Subcommittee's staff and team.

So I am looking for input from all sources. But when we get all through boiling this down, there is about 130 left. And, again, I want to know why didn't we adopt them; and I will give you a rationale why we did not.

Mr. COSTELLO. The Chair thanks you and now recognizes the Ranking Member of the Subcommittee, Mr. Petri.

Mr. PETRI. Thank you very much, Mr. Chairman.

As you consider all these suggestions—and I assume some are from the top down and some are from the bottom up and some are from each side, probably—I wondered if I could just—it would help me to understand how you go through the process a little bit if I could extract from a letter of a constituent and ask you to respond, if anyone on the panel who could care to, to this particular constituent's suggestions for some changes.

I am a captain based at Reagan National in Washington, D.C.—but the person lives in Wisconsin—I fly a 50-passenger regional jet. I am a 30-year-old pilot, husband, and father of one. I am a profes-

sionally experienced pilot intent on spending my career flying airplanes.

I have a few concerns about the FAA regulations governing rest and duty times for airline pilots, specifically regional airline pilots. I have suggestions for you.

Duty time needs to change from 16 hours for a regional airline pilot to 12 hours. This change would force the airlines to schedule pilots to fly either during the morning or evening. This will help combat fatigue, which I experience every week. I work out at my hotels, and I pay $2,700 a year for a crash pad in Crystal City to ensure proper rest for myself.

Even with all my precautions, I cannot keep up with the continually degrading schedules. When you are in the airplane for 14 hours a day, you can't help but get tired toward the end of the day. The 30 hours in 7 days need to change to 30 hours in 10 days.

During the past 11 days, I spent one night at home and flew 34 hours. This may not seem like a lot of flying, but flying on the east coast is very demanding, the responsibility to ensure safe travel of 50 people into the world's busiest airports. I can't see myself being able to do this job for very long, given my current workload.

Regional airline pilots should be restricted to six legs of flying a day. At present, we are limited to 8 hours scheduled flying, but we are not limited to how many times we fly. Limiting the number of legs a day will increase safety, decrease fatigue and stress. It is very hard to focus after six legs of flying in a day.

I also wish we could force airlines to build commutable schedules, but that is a pipe dream.

Do you have any reaction to his two suggestions about taking into consideration legs as well as hours and limiting the time to 12 instead of 16 hours?

Mr. BABBITT. I will start off and try to address some of the points made.

One of the things that I consider a top priority—having sat here and testified before the good Chairman Oberstar a number of years ago on this very issue-- one of priorities that I have is to address the flight time/duty time issue. I think one of the difficulties that your constituent has pointed out is the fact that he has selected an arbitrary number.

I think one of the things that we are learning—we are learning it from NTSB, we are learning it from the Inspector General, we are learning it from NASA—we have science today to help us with flight time/duty time calculations; and I think we need to really look at this in the light of science.

There is a big difference between an arbitrary 12 or 14 or whatever the number is, 16 hours. Let us use 14. If you and I went to work together at 7:00 in the morning, we would be tired at 9:00 at night, but we would be okay. But if we went to work at 9:00 tonight, at 11:00 tomorrow morning I wouldn't want to drive in a car with you, much less fly in an airplane. So there is a big difference between what 12 or what 14 hours are we measuring.

There is also a difference when pilots fly. We have rules where you can go beyond with supplemental crews long-haul flights.

And your constituent is exactly correct and I concur with the idea that multiple landings—it is one thing to fly one 8-hour leg

from here to Paris; it is another thing to fly 7 hours and make 14 stops and never leave the State of Florida. And I have done that.

So I know the difference in measuring arbitrary numbers. And I think, as much as I respect what he is trying to achieve, I think we really should bring science and use the best knowledge and create rules that keep people from being fatigued.

The FAA did, I think, a very credible job of trying to address this by having a fatigue seminar. And I think we should go the next step now. Let us take what we have learned in those seminars and let us apply it to proper regulations that will help people, help them become aware of when they are fatigued. That is another leg to it.

Thirty in seven versus thirty in ten, I put it in the same box. One 30 hours, that is Detroit to Narita. Those are two long legs, two landings. That is not the same as 30 hours in the Northeast, shooting approaches to 200 feet in snow. So, again, we need to measure what we are doing and apply the proper parameters for the proper conditions.

Six-leg limit. I think when we looked at flight time/duty time a number of years ago, that was absolutely one of the considerations where you might have—you can say it is okay to fly 10 hours a day with one leg. But if you begin to have multiple legs, maybe you then reduce the cap. And I think he is probably on target there. I am just not sure what the limits should be at this point.

Mr. ROSENKER. If I could add to Administrator Babbitt's position, he is exactly on target. We believe that fatigue is a most insidious condition. Many people are unaware they have this condition; that is the frightening aspect. They make poor judgments which many times results in accidents.

Back in 1995, I believe the FAA attempted to make some changes through an NPRM. It never came to fulfillment.

The reality is that it has been about 50 years since the hours of service has truly been examined. The aviation industry has changed significantly in 50 years. The kinds of aircraft we fly and the kinds of training we get, distances we travel, they are different than they were 50 years ago.

So it is time to make changes, and I look forward to working closely with the Administrator, and I applaud him on his work and his quick action to improve the industry. We continue to talk about it; we must never, ever begin to segregate the regionals from the majors. It is the entire 121 industry that we are dealing with, and we don't make recommendations to segments of the industry. Virtually all of our recommendations go to the industry as a whole. We attempt to ensure that the standard for the entire industry is maintained at the safest level possible. We have a safe industry today, and our objective is to make it even safer.

Mr. COSTELLO. The Chair thanks you, Mr. Petri; and I will recognize the gentleman from Oregon, Mr. DeFazio.

Mr. DEFAZIO. Thank you, Mr. Chairman.

Administrator Babbitt, ever hear the term ″pilot pushing″?

Mr. BABBITT. Yes, sir.

Mr. DEFAZIO. Do you recall or have you reviewed your 1992 testimony regarding intimidation, punitive firing, disciplinary action by airlines when pilots reported fatigue?

Mr. BABBITT. I haven't reviewed my testimony, but I have a recollection of it, sir.

Mr. DEFAZIO. You have the recollection. You said you could bring in an amazing parade of people to testify that this went on in the industry.

Mr. BABBITT. Yes, sir.

Mr. DEFAZIO. But then you said here, people want to do the right thing. I guess I have trouble reconciling pilot pushing, intimidation, punitive firing, discipline for pilots who are trying to follow the law and report themselves fatigued and people want to do the right thing.

I would say there are some in the industry who want to do the right thing; and our current rules, unfortunately, go to the lowest common denominator. Good old Frank Lorenzo dragged down a lot of the industry. You can't compete with people like that, because they are at the bottom of the barrel.

We need to have a uniform higher standard. I just can't believe we still have a standard of 250 hours minimum qualification for a first officer when a nail technician takes 600 hours in Oregon. There is something wrong there. And if the FAA said, no, we are going to make it 750 or whatever would be appropriate, then people can still operate above that, and there would be some that would do that or who are more attractive employers or who pay better, but at least you wouldn't have the bottom-of-the-barrel operators taking the people with 250 hours and paying them just absurdly low wages, so bad that they have to live with their mother, and then stick them up there in difficult conditions.

Can't we consider those sorts of things? I didn't see it in the list of the NTSB's recommendations. I don't know if it has been recommended to establish a higher initial bar.

Mr. BABBITT. Let me, if I may, address two issues.

You raised, first, the pushing. And I would say we have a number of carriers who do that, and the problem is the knowledge level of some of the new pilots.

I can tell you right now a senior pilot in a major carrier, if he was fatigued, he would simply say to the company, listen, we have been on duty 10 hours. It is the wrong 10. We are all tired. We are going to the hotel. And nobody would blink. But you take a pilot who has been 3 months with a brand new carrier, not even covered by any representation, has no——

Mr. DEFAZIO. That is one of the keys which you pointed to in 1992, if they don't have protection.

Mr. BABBITT. That is correct. And they have no whistle-blower protection. They worked very hard to get this job; and they are not about to say, oh, gee, I am a little tired today. I am not going to fly. They may be exhausted, but they are reluctant, and that is an area we all have to focus on.

Second, the quality in the 250 hours, if I could, let me just politely suggest that there may be a difference. Two hundred and fifty hours in the airplane has also been matched by hundreds of hours of ground school training, simulators, all of that type of stuff. We are not talking about 8 hours in a classroom.

Mr. DEFAZIO. But some—and we had Ms. Slaughter reference one particular outfit that does training in Florida and pushing peo-

ple through pretty quickly. The quality of that time varies tremendously. And it just seems to me—and some of the regional airlines require considerably more than 250 hours for hiring, no matter how much ground school people have had. And I am just suggesting that is something additionally that needs to be reviewed.

Did NTSB have any——

Mr. ROSENKER. Mr. DeFazio, I think you are making an excellent point. We don't know yet if 250 hours is the appropriate number. It may well be that something will come from the Colgan accident which may involve a re-examination of minimum requirements. At this point, we have not made any recommendations addressing that issue.

Another point that I would like to make is that hours don't always ensure pilot proficiency. Many times at the Board we have investigated terrible accidents that have been made by high-hour pilots-- those with 12,000 to 15,000 hours-- where the pilot has just made an incredibly amateurish mistake—for a host of reasons.

So, we cannot necessarily equate number of hours flown with high levels of proficiency and skill. We would always want to take a look at the programs they are going through, the continual proficiency checks that they must pass before we can say that these pilots are highly qualified.

Mr. DEFAZIO. I appreciate that.

You did point out in your testimony on the subject of fatigue that Colgan had changed their handbook to say—previous editions said, flight crew members should not attempt to commute to their base on the same day they are scheduled to work, but their current edition at the time of this accident said, a commuting pilot is expected to report for duty in a timely manner.

And I would note that the first officer took the red-eye from Seattle. I have taken that flight. By 6 or 7 o'clock the next night, I am not at my best just making judgments about editing things in the office or something else, let alone flying a plane in icy conditions. I would say it is a fairly similar circumstance, and I have done a lot of this.

I am just trying to point out that some operators are going to take the flexibility that they are given and use it to dive for the bottom. Then they can offer a lower cost product. And the other people who are trying to do a better job and say you should never, ever take the red-eye, come here and fly the same day, spend the day in the crew lounge and fly the same day—If some other operator is doing that, you know, they are probably going to have to pay them more than $23,000 a year so they don't have to live with their mother in Seattle and fly across the country.

I mean, I am trying to point out that we need to establish—I think it is the FAA's duty to establish a higher bar, and then no one is at a competitive disadvantage. And I don't think you will find a single person who would be unwilling to pay an extra 2 or 5 bucks for a ticket because we raised the bar and Colgan Air isn't out there dragging everybody down or somebody else like them—not just to pick on them. Our good old Frank Lorenzo and everybody else that has tried to do that in the industry.

That is all. Thank you, Mr. Chairman.

Mr. COSTELLO. The Chair thanks the gentleman and now recognizes the Ranking Member of the Full Committee, Mr. Mica.

Mr. MICA. Welcome, Mr. Babbitt. I am so pleased that we do have a confirmed administrator and one with your high credentials. I guess we are going to lose Mr. Rosenker as the Chair. So I compliment you on the great job you have done at NTSB and will continue to do. But we appreciate your past service and your beginning service, Mr. Babbitt.

A question for both of you. Well, actually, it will include our representative IG panelist. Are our regional airlines safe, Mr. Babbitt?

Mr. BABBITT. Yes, they are.

Mr. MICA. Thank you.

Mr. Rosenker?

Mr. ROSENKER. I would agree with the administrator. They are, sir.

Mr. MICA. Mr. Scovel?

Mr. SCOVEL. Mr. Mica, I have no evidence that they are unsafe.

Mr. MICA. Thank you.

Well, I think that is important. I guess 25 percent of the passengers I guess—or flights rather—flights, not passengers—are on regional airlines. We need to reassure the public.

And it is my understanding you testified at the beginning—I heard your remarks, Mr. Babbitt—that we had the same standards in place for both our large commercial aircraft as also for our regional carrier; is that correct?

Mr. BABBITT. Yes, sir. They all operate under Part 121, and they meet those standards.

The point I was making was——

Mr. MICA. I think we have to reassure the public. And, of course, as I point out to folks, that today more than 100 people will die in automobile accidents and every day, 365 days a year. So while we have had some tragedies, we have an incredible record with our large commercial aircraft domestically.

And I have a quick question about the problem that we may have with the Airbus in a second. But, Mr. Rosenker, you recommended—or NTSB recommended I think more than 3 years ago—I have got a copy of the recommendation—that we actually open up some of the records beyond 5 years of the performance. I was shocked to hear that, again, that some of the mechanism that I thought Mr. DeFazio and I put in place some years ago to continue to call those recommendations to the attention of both Department of Transportation, FAA and also Congress—because, ultimately, we are responsible if an agency isn't acting. Do I need to change what we put in law? What is the problem with not getting your recommendations acted upon, Mr. Rosenker?

Mr. ROSENKER. Sir, I wish I had a silver bullet to be able to tell you that, if we did this, all of the NTSB recommendations would be enacted.

Mr. MICA. But I have your recommendation here. I have the number of flights that—commuter flights that we have lost with fatalities. Obviously, there is some disconnect. Because I said earlier, I have commuter—an unfortunate number of fatal crashes. You have a recommendation. Four of the six recommendations related

to pilot performance. And I can't get a simple recommendation from you into a rule or a law.

Mr. ROSENKER. If we are talking about some open recs that we have related to the Colgan Buffalo accident, I can share with you approximately where we are. The stick pusher recommendation and the upset training are going to be handled and implemented when the NPRM is fully implemented. It is being covered by the January NPRM.

Mr. MICA. What about the records recommendations?

Mr. ROSENKER. We are talking about the records. That has been on our recommendation list for a number of years.

Mr. MICA. 2005?

Mr. ROSENKER. 2005, yes, sir.

Mr. MICA. But we still don't have implementation. What is——

Mr. ROSENKER. There are some regulatory concerns, and there has——

Mr. MICA. There is an also a privacy concern I know, too, as far as pilot certification issues.

But I think, again, when we are putting someone behind the yoke or in control of an aircraft, the airlines should be able to access—the representative from New York, Ms. Slaughter, went beyond what I had recommended, that this should be on line or public information. But at least the person hiring should have access to information about performance and their ability to pass certification tests.

Mr. ROSENKER. We agree with you, Mr. Mica; and, as I say, we put this forth in 2005. An excellent first step is what the Congress did in 1996 when it enacted the Pilot Records Improvement Act (PRIA). The continuation where we find we can get additional information which is being stored at the FAA, that information is extremely valuable. This deals with pass/fail, the kinds of certifications that the candidate has. This would be an extremely valuable source of information when an airline is attempting to evaluate and decide which one of the candidates they should hire. Should they take one who has had five failures, or should they take one who seems to be extremely proficient in going through their instruction programs? So we have made that recommendation.

In reality, an airline can get the material by having the pilot sign a waiver, but it should be a requirement. It should be made significantly easier to obtain this information.

Mr. MICA. But it hasn't been implemented.

Mr. Babbitt.

Mr. BABBITT. If I may, a little background. I am familiar with the Pilot Records Act, and that Act was born from the lack of information that one carrier hired a pilot not knowing that he had multiple failures in training at another carrier. So the focus was on the entry pilot's activities. And they said, you know what? We should know what he did at the last carrier.

I think what this accident has shone some fairly bright light on is excluded in that, as it was in the subject of the discussion at the time, was the fact that the FAA maintains another database. We maintain all the records of every rating, all the writtens and so forth. Those, too, are maintained.

But the Pilot Records Act, my suggestion would be that we probably need to modify that rule statutorily so that you get both. There are privacy concerns that come into that issue, and I think we do need to look at that. The FAA, of course, has the oversight authority. Once you make that regulation change, then it is the obligation of the FAA to ensure that those regulations are being complied with. But the oversight is that we didn't ask for enough when we wrote the rule.

Mr. COSTELLO. The Chair thanks the Ranking Member and now recognizes the gentleman from Ohio, Mr. Boccieri.

Mr. BOCCIERI. Thank you, Mr. Costello; and thank you to the panel coming here today.

It is becoming clear that the 50 deaths that occurred that night in February were not only tragic but completely avoidable. And I want to focus on three things, Mr. Chairman. I request that the letter that I submitted to Colgan Air and their response and my remarks be submitted to the record.

[The information follows:]

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13 May 2009

Mr. Casey,

Like most of America, I was disturbed to read the recent reports from the National Transportation Safety Board's investigation into the crash of Continental Airlines Flight 3407, operated by Colgan Air. As a pilot and frequent flier, I find it irresponsible – bordering on negligent – that Colgan Air management found it acceptable to put an air crew in charge of passengers' lives with insufficient training to control the aircraft to which they were assigned under the conditions that existed at the time.

As a licensed commercial air carrier, your company has a statutory and moral responsibility to ensure the safety of your passengers. However, based on NTSB reports and public statements by Colgan officials, I am left to assume that your company is not conducting sufficient efforts to investigate the backgrounds and qualifications of your pilots; is requiring only the minimum training and safety requirements spelled out by the Federal Aviation Administration; and is making little to no effort to ensure that pilots have sufficient rest prior to taking control of your aircraft. While your company's guidelines may meet the letter of the law, they clearly do not satisfy the spirit of these regulations or the reasonable expectations your customers have that Colgan Air will make every effort to ensure their safety.

As a pilot with 13 years experience, I found the articles damning in reporting that the pilot was untrained on the aircraft's stall warning recovery procedures for the onboard systems, and that the pilot and co pilot likely did not have sufficient rest before being given control of the plane by your company. Even worse was the anemic defense issued by Colgan Air that, "[a] stick pusher demonstration in an aircraft simulator is not required by the FAA and was not part of the training syllabus." Even the most basic pilot training – from Cessnas to bombers – includes basic

training to correct a stall. It is becoming clear that the 50 deaths that occurred that night in February were not only tragic, but likely avoidable.

Despite your company's obvious efforts to deflect all blame to the air crew, the evidence outlined in the press reports thus far indicates that Colgan Air also deserves a significant amount of scrutiny regarding company policies and practices. Therefore, I request your immediate response to the following questions:

1) Do Colgan Air's minimum flight requirements for air crew exceed FAA guidelines, or simply meet them? Do you still find those regulations to be sufficient?

2) What are Colgan Air's minimum training and qualifying requirements for pilots on their respective aircraft?

3) Given the passive attitude expressed by your company in investigating the background of new pilots, is Colgan Air considering implementing more stringent background checks in the future?

4) In light of the information revealed by the NTSB thus far, is Colgan Air planning to review and update its minimum flight requirements for pilots?

I look forward to your response.

Sincerely,

John A. Boccieri

John Boccieri
Member of Congress

Cc: John Erwin "Jeb" Barrett, Director, Flight Standards
Darrell Mitchell, Director, Crew Training
Daryl LaClair, Director, Safety

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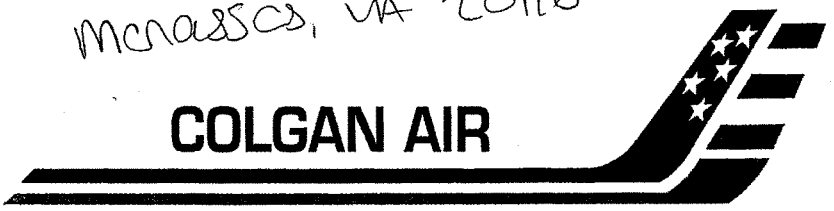

May 21, 2009

Congressman John Boccieri
1516 Longworth House Office Building
Washington, D.C. 20515

FAX: 202-225-3059

Dear Congressman Boccieri,

I respectfully wish to respond to the specific questions in your letter of May 13, 2009, and to address several points in your letter that may have been based on inaccuracies in news reports owing to the media's general lack of knowledge of the airline industry and frequent failure to check facts or report accurate information.

First, I want you to know that the entire Colgan Air Family is profoundly saddened by the loss of life on February 12, 2009. All of our thoughts and prayers go out to the families and friends of those who perished that night, including five Colgan Air employees.

I also want to emphasize that all of us at Colgan have the utmost concern for the safety of air travel. Thus, I find your suggestion that Colgan management was ". . .irresponsible—bordering on negligent. . ." to be inflammatory and insulting to the 1,400 professionals at Colgan who work every day to ensure the safe operation of our airline. As was presented at the hearing, Colgan meets or exceeds every FAA regulation regarding training, duty hours and rest periods. Moreover, the suggestion that Colgan somehow operates at standards less than major airlines is disingenuous. As you know, FAR Part 121 regulations that pertain to the operation of scheduled air carriers are identical for all carriers – regional, national or international.

Congressman Boccieri
May 21, 2009
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One of your concerns was: ". . .insufficient training to control the aircraft. . . "

At Colgan, every pilot receives complete ground training on the Q400 stall system, which includes the stick shaker and stick pusher. Every Q400 pilot is fully trained in a Level D full motion simulator. This training includes the recognition and recovery from near-stall (precursor) indication, the stick shaker for takeoff, landing and clean configurations. Once the stick shaker is activated, the pilot's duties are very specific for each seat. Each pilot is thoroughly trained, followed by a qualification check ride with an FAA-approved evaluator. Few operators in North America conduct stick pusher simulator training. However, Colgan has recently instituted stick pusher demonstrations in a flight simulator in order to exceed FAA requirements.

An additional concern was: ". . .the pilot and co-pilot likely did not have sufficient rest before being given control of the plane. . ."

If there was a fatigue issue with Captain Renslow or First Officer Shaw, it was not due to their work schedule. Colgan's flight crew schedule provided rest periods for each of them that were far in excess of FAA requirements. As discussed at the hearing, Captain Renslow completed his previous duty at 4:04 p.m. on Wednesday, Feb. 11, with his next duty to start at 1:30 p.m. on Thursday, Feb. 12, allowing him 21:30 hours of rest, free from all duty. Captain Renslow's two days of duty prior to Feb. 12 were each less than 10 hours. First Officer Shaw's last duty period ended at 3:15 p.m. on Sunday, Feb 8, with the next duty also scheduled to begin at 1:30 p.m. on Thursday, Feb. 12, allowing her more than three full days of rest. These rest periods far exceed the minimum requirements for rest under FAR 121.471.

While FAA regulations allow airlines to schedule up to 8 hours of flight time in a single duty period, both Captain Renslow and First Officer Shaw were scheduled for 4:38 hours of flight time on Feb. 12, with a 7:38 hour duty day. FAA regulations also allow scheduling pilots up to 30 hours in a seven consecutive day period. Captain Renslow was scheduled for 14:14 hours and First Officer Shaw was scheduled for 20:46 hours in the seven consecutive days up to and including Feb. 12. Further, FAA regulations allow airlines to schedule pilots up to 100 hours in a given month. Captain Renslow flew 41:25 hours in January and First Officer Shaw flew 40:46 hours in January. Finally, FAA Regulations also allow airlines to schedule a pilot up to 1000 hours in a given year. In 2008 Captain Renslow flew 803:58 hours and First Officer Shaw flew 699:32 hours.

While FAA regulations allow airlines to schedule duty periods up to 16 hours, Colgan Air's average pilot duty period from January-April, 2009 was 4:44 hours flown and 8:59 hours of duty day. Colgan Air pilots average 13 days off per month.

Congressman Boccieri
May 21, 2009
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Following are the answers to the specific questions you raised in your May 13 letter:

1) Do Colgan Air's minimum flight requirements for air crew exceed FAA guidelines, or simply meet them? Do you still find these regulations to be sufficient?

   Our minimum requirements for pilots are 1000 hours total time with 100 hours of multi-engine. These hours far exceed the FAA minimum standards of 250 hours for a commercial pilot's license.

2) What are Colgan Air's minimum training and qualifying requirements for pilots on their respective aircraft?

   For upgrade to Captain, the FAA requires an ATP (Airline Transport Pilot rating) with a minimum 1500 hours total time. Prior to Feb. 12, Colgan's requirements were:

SAAB340	2500 hrs total time	1000 hours at Colgan
Q400	3200 hrs total time	1000 hours as PIC (Pilot in Command)

   Subsequently, we have amended these requirements to:

SAAB340	2500 hrs total time	1000 hours at Colgan
Q400	3500 hrs total time	Plus one of the following--
		2000 hours at Colgan
		1000 hours as PIC
		1500 hours in Type

Q400 Training

Flight Safety International (FSI) is a world-renowned pilot training organization and was recommended to Colgan by the manufacturer to provide Q400 training. Colgan Air adopted the proven FAA-approved FSI training program used for years in Q400 training and qualification. Colgan Air then enhanced the program and added company-specific requirements.

Operating Experience

After satisfactorily completing all required training including an FAA regulatory check ride, a pilot must satisfy the operating experience requirements of FAR Part 121, including an FAA observation if required, before being considered fully qualified for revenue service. The pilot must fly with an FAA-approved check airman for all OE (Operating Experience) flights. FAA regulations require 20 hours of OE, and permit a 50% reduction in all OE hours for each landing. For example, by regulation, a pilot with 11 hours and 10 landings could complete OE. At Colgan Air, a pilot must complete the full 20 hours, regardless of the number of landings.

At Colgan Air the pilot must also observe four flights from the jumpseat prior to OE. This is not an FAA requirement. Colgan Air OE hours range from 20 hours to 50 hours depending on pilot training course, (i.e., new hire, transition, or upgrade).

Line Check

FAA regulations require Captains to have a Line Check once each year conducted by an FAA approved check airman on a single flight. At Colgan Air, Captains are given two Line Checks each check consisting of two flights, one flight checking Pilot Flying duties and one flight checking Pilot Monitoring duties. Colgan Air also requires Line Checks annually for First Officers, another example of a pilot evaluation not required by FAA regulations.

As was presented at the hearing, Captain Renslow had successfully completed six checks and three training events in the 16 months before Feb. 12.

Enhanced Maneuver Training and Checking that exceeds FAA requirements

- Realistic stall scenarios in close proximity of airport.
- All three stall series must be checked. No waiver of any stall.
- Upset recovery maneuvers that will be required on all initial and recurrent PC Check Rides
- First U.S. Q400 operator to initiate stick pusher demonstration.

3) Given the passive attitude expressed by your company in investigating the background of new pilots, is Colgan Air considering implementing more stringent background checks in the future?

I respectfully disagree with your characterization of company hiring practices as "passive." Colgan uses the same system for background investigations as all carriers under the Pilot

Records Improvement Act (PRIA), which provides five years of Part 121 commercial airline employment history. Mr. John Ryan, FAA, AFS-610, stated at the Hearing during his testimony on Thursday, May 14 (one day after you wrote your letter to me) that there have only been 'one or two inquiries' from carriers about the optional FOIA (Freedom Of Information Act) process. In fact, Colgan also takes the proactive step of conducting a simulator evaluation for prospective pilot candidates, a process used at few other airlines.

Also, on May 19, 2009, we were advised by the FAA that procedures for use of FOIA are still in development by the FAA and are not yet available for air carriers to use. In the mean time Colgan Air will request pilot applicants to bring their complete pilot records to the interview.

4) In light of the information revealed by the NTSB thus far, is Colgan Air planning to review and update its minimum flight requirements for pilots?

As indicated in the answers above, Colgan will continue to review the job requirements for all employees. The advancement of safety in an airline is a continual process, with constant evaluation of all aspects of the qualifications of our employees and training.

Colgan Air has been – and will continue be – deeply committed to the safety of the traveling public. Along with our partners in the industry and in government, we will learn from the tragic events of that February evening and find ways to enhance safety even further.
Regards,

Buddy Casey

Buddy Casey
President and General Manager
Colgan Air, Inc.

Mr. BOCCIERI. Three things I want to focus on. With 15 years of training with the United States Air Force and thousands of hours as a C-130 pilot, I am baffled by the response and I am baffled by the lack of attentiveness to the recommendations that have been made from the NTSB to the FAA.

Number one, when I buy a ticket from an airline—I buy a ticket from Continental, Delta, whomever—I am buying a ticket with them because I like their training records, their statistics, and I like and respect the fact that they have a certain level of expectations with respect to their pilots. Yet the co-chair agreements that we have right now in practice are for purely marketing reasons, and the FAA even acknowledges in its own admission that it has nothing to do with safety. In fact, they said the co-chair agreements reported that safety was not treated as a major factor in the Department's co-chair approval process and the FAA did not take an active role in approval or oversight of these agreements.

That is a shame, and it is tragic.

Number two, the regional airlines do not have the same standards as the major airlines. The FAA likes to talk about we train like we fly and we fly like we train. But yet when I dug down and found the root of why this aircraft commander, this captain did not apply the appropriate procedures to recover from this stall—it was a full stall, an approach to a stall and a full stall—he did not apply the appropriate procedures.

And when I wrote to Colgan Air, they suggested that every pilot receives complete ground training on the Q-400 stall system which includes a stick shaker, a stick pusher. The training includes the recognition and recovery from near stall, an indication of a stall, the stick shaker for the push-off.

Yet the NTSB said when they interviewed check pilots, interviewed the demonstration or instruction of the aircraft pusher system, it is not part of the training syllabus for initial or recurrent training by Colgan. These pilots did not know how to recover from a full stall. Completely, completely avoidable.

And, in fact, the NTSB said that, in their training requirements, that the FAA should have upset recovery training aides; and the NTSB advised that training and stall recovery should go beyond the approach to a stall to include training recovery from a full stall condition in addition to the cases where the flight data are available, weather flight test incidents, that these data should be used to model stall behavior and facilitate training beyond the initial stall warning. Yet, since 1974, the FAA has not enacted stall recovery, stall training, and stall recovery requirements for a series of accidents that happened back in the 1970s.

Unacceptable. As a military pilot, we would not be able to fly. We would not be able to fly if we were not allowed to recover—or not able to recover from a full stall, approach to a stall and an unusual attitude recovery.

And, in fact, the major airlines—I went to reserve duty this weekend, and I asked a couple of my buddies who fly for the major airlines, and they suggested, oh, we go into all kinds of unusual attitudes, unusual recoveries, full stall recognitions, and they have to recognize the performance and structural integrity of their aircraft when they recover from those procedures.

Yet these have not been enacted.

The third item, why are we permitting our pilots in commercial aviation to fly into severe icing? As an airlift pilot of the United States Air Force, the United States Air Force does not allow me to fly into severe icing. Yet this crew flew into what is arguably considered severe icing, freezing drizzle, freezing rain.

Yet the training manual says that do not—for Colgan Air—suggests—and this is from the NTSB safety report—do not attempt to take off or make an approach to land in freezing rain, sleet or drizzle, wet snow conditions that are beyond the performance limits of the aircraft.

So it is clear that as long as performance indicators of what they do when they crunch their numbers in their charts, before they land based on their weight and atmospheric conditions, they may make a mistake or they may not, but yet they are permitted to fly into freezing rain and severe icing. That is unacceptable.

I think that this panel not only has an obligation but a duty to force the FAA to adhere to every one of the recommendations that they make.

In particular, for the record, I want to cite Alpha-96-120, the advisory of the NTSB that talks about unusual attitudes and recoveries, with respect to this still being an open and unacceptable response by the FAA as it pertains to Part 121. I hope we get down to the brass knuckles with respect to changing this. Because we have families that are sitting over there right now, right now grieving the loss of their loved one because we had inadequate training.

Now, knowing that Colgan Air pilots were not able or trained to recover from a complete stall in an unusual attitude, I ask you, Mr. Rosenker, would you fly on one of these regional airlines if you knew the pilot was not able to recover from a full stall or not trained to recover from a full stall?

Mr. ROSENKER. In fairness, Congressman, if I knew that, I wouldn't.

Mr. BOCCIERI. To Mr. Babbitt, would you fly on a regional airline if you knew that the pilots were not adequately trained to recover from a fall stall?

Mr. BABBITT. I not only wouldn't fly, I would ground it.

Mr. BOCCIERI. Thank you, Mr. Chairman. I think this has brought to light some very serious issues that we need to bring to the attention of not only this Committee but the entire public that flies on these regional airlines. Thank you.

Mr. COSTELLO. I thank the gentleman for his thoughtful comments and questions and look forward to working with you as well as we go forward with legislation to address some of these issues.

Mr. OBERSTAR. Mr. Chairman, may I just observe what a storehouse of knowledge we just heard from the gentleman from Ohio and his experience in military aircraft and icing. It was a textbook case. Thank you for your contribution. It is invaluable.

Mr. COSTELLO. The Chair now recognizes the gentlelady from West Virginia, Mrs. Capito.

Mrs. CAPITO. Thank you, Mr. Chairman and Ranking Member Petri, for holding this very important hearing.

I would like to ask—I will be submitting my opening statement for the record, but I do want to thank, as we have—several of us

have met several of the families who are affected by this deep tragedy; and I want to thank them for their courage, for their knowledge and for them helping to enlighten a lot of us in I think bringing forth many issues today.

My question is kind of bouncing a little bit off of what my colleague from Ohio was talking about. Originally, when the original accident—this accident occurred, it was referred to as the Continental connection flight. Very quickly, it became Colgan Air. And in the NTSB report I think it is referred to almost unanimously or always as Colgan Air but maybe began as Continental. And my guess is—and many of us have said this—that the passengers who buy the tickets think they are buying Continental.

I fly US Air and fly Colgan Air every week. I think—what is the responsibility or the relationship between the major carrier/contract carrier when it comes to safety? Is it totally separate? Because I am kind of hearing conflicting opinions here.

You are saying it is the same safety standard, but then Mr. Rosenker wanted to reinforce that we must keep these on the same level, which tells me there is a belief that they are not. Could you talk about that relationship a little bit?

Sure. Whoever wants to take it.

Mr. BABBITT. Both the carriers in this case were operating under Part 121 of the Federal regulations. However, there may have been—and we are certainly going to await—both some findings from the NTSB and the Inspector General who has been directed to look into aircraft training, airline training. So we are going to look to both of those.

We are also not going to just simply wait. We are bringing in these folks that represent major carriers, regional carriers, and the pilots and unions involved in these to better understand what are the gaps. Are there gaps, in fact, between what is going on at these various carriers? That is what we want to look into.

The standards are there. They are embodied in Part 121. And the regulations that guide both of these carriers are clear. But what we have seen and I have been referring to here, we are finding that some people have raised the bar considerably; and if that is the case, then we want to ask if we now have an expectation that why isn't everyone raising that bar?

Mrs. CAPITO. Just in terms of the resources that are available for safety training, whether it is a regional, whether it is a major, I am assuming the major has more resources available for training. Is that a reasonable assumption?

Mr. BABBITT. Well, I think what you see at major carriers, the tenure and longevity of the people that have the safety training departments, their experience over the years has allowed them to build on a base that is more robust. If a carrier is newer, comes into being later, they get certified, they operate legally, but they don't have the experience. There are no 25-year pilots at some of these carriers.

And what we are looking to do when we bring everybody together is, is there a way to ″cross pollinate″? For lack of a better term? Can't we take that experience and lessons learned in other cases and let them use it, give them the benefit of that knowledge and expose them to it? That is our goal now.

Then we will have, optimally, 6 months to a year of experience of seeing this; and, at that time, we fully expect to get some additional recommendations from the NTSB. We will already have some operating experience with trying to do just those things. I indicated in earlier comments that we know full well that some of these carriers demand that the regional partners have some of these safety attributes that they have themselves.

Mrs. CAPITO. I think people flying assume that is what is actually occurring, and I think that is one of the astounding things that we have discovered here today.

I didn't mean to interrupt you. I want to ask one other question, because my time is getting short.

When you have a mechanical failure on a plane or a mechanical issue with a plane, it is mandatory that it is upgraded, recalled, stopped, thank goodness. But it is my understanding that if there are some pilots that need additional training or they have had issues with falling short—we have already heard they failed some of the tests—that there is no mandatory requirement that they go back to remedial training. It is just suggested.

If that is the case, we have got to change that. I think that is no less important, whether the plane can fly or whether the pilot can fly under optimal conditions. I don't know if you have a response to that.

Mr. Rosenker, I cut you off on the first question.

Mr. ROSENKER. I will let the Administrator answer that question, and then I will follow up with the original question.

Mr. BABBITT. There are a number of elements involved in training. A pilot may take—and remember that these are probably the most tested people in the world-- they take two physicals a year and three rides. One of them is a proficiency check, one of them is a check ride, and then they get a random line check. Three times a year, their performance is observed.

In the proficiency training, if there is a pilot, and his training pilot said, look, you can do this particular element better, let us have a little more training for you tomorrow, that pilot can't fly. That pilot is now grounded.

Mrs. CAPITO. Is that mandatory grounding?

Mr. BABBITT. Yes. The pilot has not passed his check ride, so he is grounded.

Mrs. CAPITO. So the pilot that we have been talking about, if he didn't pass his check ride, he was unable to fly again until he passed the test?

Mr. BABBITT. That is correct. So we would go back and revisit that element, give him additional training to make them proficient. When that proficiency is demonstrated, then he passes the check riding and he is okay. It is just like fixing the part.

I remind people that this is a complex profession. I also remind people that Tiger Woods takes golf lessons every week.

Pilots get training all the time. We learn things all the time. We have better techniques to teach them. We have better equipment to teach them in. The fidelity of a simulator today is vastly improved, and I have seen it grow over time.

As we learn these things, we apply them. Sometimes there is a gap. Sometimes it takes our good friends at the NTSB to point that

gap out. And we say, wait a minute: we should change the regulation and take it up to the next level of safety.

Mr. ROSENKER. If I could follow up to the Congresswoman's question about the relationship between the major and the regional carriers. It defies logic, at least the way I look at it, that when you put a brand, when you put a logo, when you paint the aircraft with your colors, that all you would be interested in is the financial aspects of when the ticket money is being deposited in the bank. I believe we are going to be uncovering a good deal of information concerning relationships like this through our investigation.

What is important to note is that the minimum standards are there. Are the minimum standards adequate? Should we be raising those standards? And can we look at the best practices? These are some of the aspects I believe the Administrator and the Secretary are going to consider next week.

Again, it is going to take time for us the NTSB to finish this investigation. We look forward to being completed in about the first quarter. But we believe there will be a good number of recommendations coming from it that, and if implemented by our colleagues at the FAA, they will do a great deal to prevent this kind of accident from happening again.

Mr. COSTELLO. The Chair thanks the gentlelady and now recognizes the gentleman from Illinois, Mr. Lipinski.

Mr. LIPINSKI. Thank you, Mr. Chairman, and thank you, Ranking Member Petri, for holding today's hearing and your continued leadership in working to ensure safety and the integrity of our Nation's air transportation system.

Administrator Babbitt, I want to welcome you and congratulate you. I am looking forward to working with you here.

While so far we have rightfully focused on pilot workforce issues, another possible issue in the Colgan Air tragedy may have been the weather. I would like to focus on a broader issue involving weather and air traffic. Specifically, I want to discuss a plan submitted by the National Weather Service to the FAA in December. This plan proposes closing the center weather service units located within a 20 air route traffic control centers in the continental U.S.

As you know, this plan was developed by the National Weather Service in response to the Bush administration's request to cut costs at FAA; and it calls for the National Weather Service to send the 20 FAA facilities forecast from two central units located in Maryland and in Kansas City. So I know I am not alone in worrying that, if this plan is implemented, air traffic controllers at the air route traffic control centers will no longer have the immediate expertise of on-site meteorologists to advise them on where route aircraft experience difficulties when weather conditions play a critical role in that decision. As we have talked about that certainly—we don't know if that had an impact here, but weather certainly was an issue in this crash. So I think clearly we need to carefully evaluate this proposal.

Now, you probably haven't had time to consider the proposal in detail. You haven't been in this job for very long yet, but I know back in 1996 when you were head of the Airline Pilots Association, you strongly opposed eliminating or weakening the center weather service units.

I understand 13 years is a long time and things do change, but I would like to know what your thoughts are now that you can share on how this proposal will impact redundant safety systems and how do you plan to assess performance of the new centers? Because I have great concerns—a question about how the proposed centralized forecasters can have intimate knowledge of local microclimates and air traffic patterns.

But since we are running short on time here, I know, let me also throw this in there and get your response. I think probably the most important question here is, if you have any doubts about the performance of the proposed system, would you be willing to put on hold this development until those concerns can be addressed? Because I know that the leadership at the Department of Transportation has taken a closer look at the Bush administration plans to consolidate FAA engineering activities and was wondering if that was also a possibility if you did have concerns about this.

Mr. BABBITT. Sure. I appreciate your recognition of my short tenure. I have, in fact, had a little bit of an understanding on this. Just a couple of quick observations.

The local knowledge issue, these meteorologists providing information at the centers are no matter where they are, they are looking at the weather all over the United States. Flights are going everywhere. They don't just stay in that area, number one.

Number two, one of the restraints that we have today is most of these are manned for 16 hours a day. That leaves us with a third of the day with no meteorologist, and what they do today is call into other areas.

So while I completely respect the point you are making, and I certainly will look into it, my understanding is the idea that centralizing into a couple of locations for the purpose of having redundancy if we had a communication failure or something like that, you would always have the other center, but you would also get a much more robust, 24-hour-a-day availability for meteorology advice and forecasting and so forth.

Mr. BABBITT. I would also note most of the major carriers today-- while in the era a long time ago when I was hired, we did have meteorologists at every pilot domicile, and you met physically with the dispatcher, you met physically with the meteorologist before your flight—there was some resistance to it, but at the end of the day they did—and I think today every major carrier has centralized meteorology. It is more efficient, it gives you redundancy, it gives you a broader depth.

So that said, I will certainly look into if you have got additional information. I think the Department of Commerce actually has that as opposed to the DOT. But it is, again, my understanding that the FAA buys those services from the Department of Commerce. So we will certainly look into it and be respectful. If there is a better way, I am all for it.

Mr. LIPINSKI. I appreciate that you keep a close eye on this and make sure that we are doing the right thing and are ensuring safety. Thank you.

Mr. COSTELLO. The Chair thanks the gentleman from Illinois.

Let me inform everyone that we have two votes pending on the floor. We have about 5 more minutes left before we have to leave

to vote. I will recognize the gentlelady from Ohio for her questions, and then after her questions we will recess for approximately 30 minutes for us to get the two votes out of the way, and we will reconvene the hearing at that point.

The gentlelady from Ohio Mrs. Schmidt is recognized.

Mrs. SCHMIDT. Thank you, and thank you, Mr. Chairman, because if I appear passionate with this issue, it is because in addition to losing Johnathan Perry from Loveland, Ohio, a community I grew up in and still live in, the Wolinksys, who live on Long Street in New York, spent almost a decade in Loveland, went to the same church that I grew up in. And so this is really a very personal issue for me.

And, Mr. Babbitt, I want to ask you a question and then the panel one, and I will try to be brief. Chairman—or Ranking Member Mica talked a little bit about the issue of privacy and also the issue of pilot training and access to that information. And it is my understanding that if a pilot fails a number of safety tests with one airline and then switches to another airline, the new employer does not necessarily know that the pilot has failed those tests, and there is no uniform database that allows airlines to review the past performance of pilots on all safety tests.

I am wondering how do we make this safer? Would it be acceptable and useful and not violate the 1974 right of privacy policy that you alluded to on page 7 of your testimony—would it be acceptable if we create a safe and secure private database, not open to the public, but open to the airline industry, so that when a pilot crosses to another industry, that they can access that data and see what tests they have passed and what tests they have failed, and not just put an arbitrary date of 5 years on them, but their lifetime scoring so that the airlines can adequately review their performance tests?

Mr. BABBITT. I think your point is a good one. They do—in fact, when a pilot applies at another carrier, they can get his training records from the carrier.

Mrs. SCHMIDT. Is it mandatory, or is it always accessible?

Mr. BABBITT. They have to. But that is only their training records from the previous carrier. That is my understanding.

Now, the bright light that is being put on here is there is no requirement. There is a suggestion and an advisory circular from the FAA that you should ask the pilot. And I have asked, based on what I have just learned in the last week from the NTSB investigation—I have asked counsel at the FAA would it be discriminatory? One of my concerns was you are trying to hire me as a pilot, and you ask me, may I access your database records at the FAA, and I say no. Is that discriminatory for you not to hire me? It would certainly raise my eyebrows if I were you and I refused to give you access to my records. I would want to know why.

And so I agree that we perhaps need to find a vehicle, A, is it legal, and, B, do we have to change a statutory requirement to get to those, provided the adequate protections for personal information.

Mrs. SCHMIDT. Thank you.

And this is to anyone on the panel that can answer this. There has been some talk about the salaries, and some of these salaries

are at 20-, $23,000. Who sets the salaries for these pilots? Is it negotiated by a union? Is it the airline industry? How does this pay grade occur? Do you have that level of expertise, or do we wait for the next panel?

Mr. BABBITT. I have a little background in that area.

Mrs. SCHMIDT. That is why I kind of looked at you.

Mr. BABBITT. I sensed that.

The first year of employment is typically set by the carrier. It is not negotiable. The employee is a pilot. He or she is at will. They have no protection. They typically are not even eligible to belong to a union or be represented. After that, usually 1 year, 18 months into their employment, somewhere in that range, then they became covered by a collectively bargained agreement.

Mrs. SCHMIDT. Thank you.

Mr. COSTELLO. The Chair thanks the gentlelady and announces that we will recess until approximately 12:30.

And let me thank the members of this panel for being here this morning to offer their thoughtful testimony. I have other questions that I will submit to you in writing and ask that you respond.

Mr. COSTELLO. We look forward to working with you on this critical issue as we move forward with legislation. So we thank you for testifying.

This panel is dismissed. We would ask that the second panel be at the witness table at approximately 12:30. Thank you.

[Recess.]

Mr. COSTELLO. The Subcommittee will come to order.

The Chair would introduce now the second panel of witnesses. First, Mr. John Michael Loftus. Mr. Loftus is testifying today on behalf of the families of Continental Flight 3407. He is a former pilot with Continental Airlines, and, of course, his daughter Madeline, as I mentioned earlier, was on Flight 3407.

Mr. Loftus, again, we offer our condolences to you and to the other family members who are here. We appreciate the fact that you are willing to testify and to give your perspective before our Subcommittee.

Next, Mr. John Prater, Captain John Prater, who is the president of Air Line Pilots Association, International; Mr. Roger Cohen, president of the Regional Airline Association; Mr. Daniel Morgan, vice president of safety and regulatory compliance with Colgan Air; Mr. James May, president and CEO of the Air Transport Association; Dr. R. Curtis Graeber, fellow with the Flight Safety Foundation; and Dr. Frank Ayers, chairman of the flight training department, professor of aeronautical science at Embry-Riddle Aeronautical University.

Gentlemen, thank you all for being here today to testify before the Subcommittee. Let me say that your entire written statements, your testimony, will be submitted in the record. And we would ask you to summarize your testimony so that we have an opportunity to ask questions.

At this time the Chair now recognizes Mr. Loftus.

TESTIMONY OF JOHN MICHAEL LOFTUS, FAMILIES OF CONTINENTAL FLIGHT 3407, FATHER OF MADELINE LOFTUS/VICTIM OF FLIGHT 3407 CRASH, FORMER PILOT WITH CONTINENTAL AIRLINES; CAPTAIN JOHN PRATER, PRESIDENT, AIR LINE PILOTS ASSOCIATION, INTERNATIONAL; ROGER COHEN, PRESIDENT, REGIONAL AIRLINE ASSOCIATION; DANIEL MORGAN, VICE PRESIDENT, SAFETY AND REGULATORY COMPLIANCE, COLGAN AIR, INC.; JAMES C. MAY, PRESIDENT AND CEO, AIR TRANSPORT ASSOCIATION; R. CURTIS GRAEBER, Ph.D., FELLOW, THE FLIGHT SAFETY FOUNDATION; AND FRANK AYERS, CHAIRMAN, FLIGHT TRAINING DEPARTMENT, PROFESSOR OF AERONAUTICAL SCIENCE, EMBRY-RIDDLE AERONAUTICAL UNIVERSITY

Mr. LOFTUS. Mr. Chairman, Subcommittee Members, thank you for the opportunity to speak before your Subcommittee today. My name is John Michael Loftus. I am here today on behalf of Families of Continental Flight 3407 both as a father and as a former pilot with Continental and Continental Express for over 20 years.

My daughter Maddy was on board Flight 3407 February 12, 2009. Madeline was a beautiful 24-year-old woman just starting down the pathway of her adult life. She had just finished her education and had returned to New Jersey, to home, where she had landed an excellent job in an outstanding pharmaceutical advertising agency. She was surrounded by family and friends who loved her.

As she boarded Flight 3407, she was so excited about going back to Buffalo State College to an alumni hockey game, so excited to see her old teammates and friends and to pursue one of the loves of her life, hockey. In other words, she was poised to begin the rest of her life. But that night on board Flight 3407, all her hopes and dreams and plans for the future career, love, marriage, motherhood, were brutally extinguished, and we are left here sitting today asking why.

I don't think we can ever make sense of the tragic loss of Maddy and the other 49 people on board that flight that night, but we can and we must do everything in our power to ensure that it never happens again.

I speak to you not only as a grieving parent, but I also bring my aviation background, having been a commercial pilot for 26 years and 22 years of flying experience with Continental and Continental Express. If.

I could leave you Members with two things, two thoughts today, they would be there is no substitute for experience in the air, and the importance of pilot training, especially in emergency circumstances, cannot be overstated.

My experience in the cockpit involved many difficult flying conditions. I flew into thunderstorms, low ceiling, dense fog and many winter seasons involving icing conditions. The key to my success was being able to gain the knowledge by flying with other, more experienced pilots who had dealt with these same difficult flying conditions longer than I.

. When I flew for Continental Express as a regional pilot, I had the benefit of having the access to the same training and pilot resources that the pilots at Continental, our major carrier, had. How-

ever, as a third tier of regional airlines sprung up, I saw the industry devolving into two levels of safety, one for the majors and a second for the regionals. Small regional carriers like Colgan Air have less resources for training. Pilots could not benefit from the existing training department, the extensive training department, with decades of institutional knowledge.

These are just a few of the insights that I have gathered during my years as a commercial pilot that relate to some of the safety issues that have been exposed by the tragedy of Flight 3407. More important than just identifying the problems, however, our family members implore you to push for solutions.

First, we need to take an industrywide look at the experience requirements in terms of hiring, upgrading and the pairing of pilots together in the cockpit. In the case of Flight 3407, the fact that the pilot had failed check rides in 2006 and 2007 while at Colgan, yet still was upgraded to captain in 2008, and was paired with a young first officer who was uncomfortable with her icing training, reflect the improvement that needs to be made in this area.

Second, we need to revamp the approach to training; more importantly the difference of not just what is trained, but how it is trained. That is where the wide gap exists between the majors and the regionals. Regional pilots typically have less experience, fly more legs in a day, and often face more difficult low-altitude weather conditions, and yet they are not receiving the high level of training their counterparts receive at the major carriers.

So what we need is for the major carriers to play a more hands-on role in the design, execution and oversight of the training programs utilized by the regional partners. When our loved ones bought tickets under the Continental name, that is what they were entitled to.

Finally, we need to require, not just recommend, that all regional carriers implement best practice safety initiatives that are commonplace among today's major carriers: FOQA, LOSA and ASAP. There is no reason for the state-of-the-art safety tools not to be made available to the regional pilots.

Unfortunately, as a veteran of the industry, I have often heard it said that most aviation regulations and procedures are written in blood. My Maddy and 49 other people who died that tragic night in February have given their blood, and now we believe they are owed solutions. We are asking you to invest time, effort and resources to make the necessary changes in the airline industry. You are the only ones who can bring together all the stakeholders, the regionals, the majors, the unions, the manufacturers, the FAA, and the interests of the flying public. You alone can marshal the forces of the government to ensure we receive one level of safety that all Americans deserve.

Although some of the voices in the industry may complain about the economic costs to safety improvements, we are here to tell you that no price tag can match the price that we have paid with the loss of our loved ones. It is our responsibility to ensure that no other Americans will have to pay this price in the future. When you are faced with the tough decisions, please think of your son, daughter or loved one flying on a turboprop airplane, the last flight of the night in the dead of winter in Minnesota, Illinois, Wisconsin,

Upstate New York, and please ask yourself how much is their life worth?

I miss my daughter every day. Her mother, brother and sister miss her terribly, too. My wish is not to have to see another father, mother, husband, wife or child sitting before this Committee and asking the same questions. Let us join together and commit to solve these problems and these issues now. Thank you.

Mr. COSTELLO. Mr. Loftus, thank you.

Captain Prater.

Mr. PRATER. Thank you, Chairman Costello. Good afternoon to the Committee.

As Captain Loftus and I go back over 20 years, as Congresswoman Schmidt recognized, accidents are personal, and they are personal to those of us who fly the airplanes. I, too, knew Maddy as she tried to teach me how to ice skate.

We commend this Committee for calling this hearing and looking at the importance of these vital issues. And we look forward to participating with the FAA in their call to action summit next week to address the issues in much more depth. While this summit is a good start, these issues are complex, and long-term solutions need to be identified. And we encourage the continued attention and participation of this Committee.

In recent years the major airlines have come to rely heavily on code share arrangements with so-called regional airlines to connect large, midsized and small cities in the U.S., Canada and Mexico to their international hubs. This has resulted in the exponential growth in the regional sector of the industry.

Still, the major carriers exert a great deal, total economic pressure on the regional airlines to provide their service at the lowest possible price. They control ticket pricing and schedules and regularly move flying between their regional partners. Some major airlines have even begun outsourcing their flying to regionals and laying off their own pilots, losing decades of experience in the process. These experienced pilots cannot afford to work for one of these so-called regional carriers as a newly hired first officer. As a result, many of the smaller regional carriers hire pilots at the FAA minimum standards and do not employ adequate screening processes during hiring that identify that ideal candidate.

As was brought out during the NTSB's recent hearing on the tragic accident in Buffalo, many pilots who fly for regional airlines are not getting adequate training or enough rest. Airlines are requiring pilots to work longer days, and more of them, each month. Fleet and base changes are forcing pilots to decide between commuting or possibly taking a huge pay cut to train on new equipment.

The consequence is the quality of airline pilot careers has been greatly diminished, and the severe erosion of benefits and quality of life are motivating the experienced pilots to move to other professions.

Current training practices do not take into account the drastic change in pilot applicants' experience. Instead, they assume that pilots are far more experienced than they may actually be. ALPA believes there must be a new focus on standardization, and even on some fundamental flying skills. To meet this challenge airlines

and other training providers must develop methodologies to train for that lack of experience and to train for judgment.

Current training practices may also need to be adjusted to account for the source and experience level of that new pilot entering into initial training at his or her airline. ALPA also believes there should be more stringent academic requirements to obtain both commercial and airline transport pilot ratings in preparation to start a career as an airline pilot. The FAA should develop and implement a structured and rigorous ground school and testing procedures for pilots who want to qualify to fly for Part 121 airlines. ALPA also recommends that airlines provide specific command and leadership training courses for new captains to instill in them the necessary skills and traits to become a real leader on the flight deck.

Airlines should also implement mentoring programs for both captains and first officers as they first enter operations in their new crew positions to help them apply the knowledge and skills to line operations, and to supplement their own limited experience by learning from their experienced peers.

Flight experience and pilot capabilities cannot be measured by mere flight hours. Screening processes should be established prior to initial pilot hiring to ensure that new-hire airline pilots are indeed the best and brightest as far as abilities, airmanship, professionalism and performance.

Turning to another area of concern, this Committee has listened to me and my predecessors since 1990 on pilot fatigue. I won't mention anything longer except to say we have talked long enough. It is time to implement science-based regulatory changes.

Other means to enhance safety and improve airline operations are the data collection and the analysis programs such as FOQA and ASAP share that information across the industry and then modify and take indeed the best practices and implement them.

In order to allow these programs to grow and make the reports more readily obtainable, we will need additional legislative protections to be put into place that will limit the use of ASAP and FOQA data in civil liability cases. Restrictions need to be strengthened to ensure the data is used for safety purposes only.

I will close with many major carriers have implemented these type of programs. We want them to spread and be protected. The best safety device on any airplane is a well-trained, well-rested, highly motivated pilot. A strong safety culture must be instilled and consistently reinforced from the highest levels within an airline and among its code share partners. This type of organizational safety culture will encourage the highest levels of performance among professional pilots, improve airline operations, and, most importantly, advance aviation safety so we are not back here again in the future. Thank you.

Mr. COSTELLO. Thank you, Captain Prater.

The Chair now recognizes Mr. Cohen.

Mr. COHEN. Chairman Costello, Ranking Member Petri, and Members of the Subcommittee, I am Roger Cohen, and I am president of the Regional Airline Association. And I want to express our deepest sympathies for the lives of the passengers and the crew of

Flight 3407 that were lost and for their families affected by the crash, and that we share in their grief.

I also want to express, not only for our member airlines, but for the 60,000 highly trained professionals in our industry, our total and unwavering commitment to safety and to work towards ensuring that this postaccident process does not have to be repeated ever; to take whatever steps are necessary to make certain that our flight crews and our airplanes are as safe as humanly possible.

The safety of the Nation's skies is a shared responsibility, and our challenge for the Federal aviation safety agencies, for the airlines, for our employees is to review all of the issues with but one single objective, and that is to prevent any future accidents. And as we do that, it is important to keep our perspective to reassure the American public that flying is extremely safe. In fact, until this recent tragedy, commercial airlines had gone the longest period in aviation history without a fatal accident.

Working collectively, airlines have steadily improved our safety record over the course of many decades of safety initiatives, investigations and reviews of accidents and incidents, large and small. Nevertheless, we can do better. And our industry's overarching goal has been and always will be zero accidents and zero fatalities.

Mr. Chairman, today we want to better define today's regional airlines to clear up any misconceptions, but more importantly, we would like to talk about the steps regional airlines have already taken and the actions we plan to take to further intensify this commitment to safety and accident prevention. As has been described, our airplanes typically carry up to 100 passengers. More than 50 percent of the scheduled flights in the United States are on regional airlines, and most notably, three out of every four communities in this country with scheduled service are served exclusively by regional airlines.

Our airlines largely operate in seamless partnership with the major airlines. Regional airlines provide the crew and the aircraft, while major airlines set the flight schedules, the fares and the customer service standards. Regional airlines and their major airline partners operate as a single integrated system, one ticket, one trip, one safety standard.

All passenger airlines are subject to the exact same FAA safety standards and requirements. It has been this way for more than a decade. But our goal is to prevent accidents, and that is why the Regional Airline Association has embarked upon our strategic safety initiative to underscore our safety culture and to help prevent accidents, and this strategic safety initiative has four elements.

First, we are bringing together our own safety professionals to review all of the procedures and address any issue that could even be perceived, perceived, as a contributing factor to an accident. Second, we are going to conduct a thorough review of fatigue, looking at all the human factors that have been described today in the scientific field to minimize risks associated with fatigue. Third, REA will implement a fatigue awareness management program so that our airlines keep this issue at the top of the mind for both their flight crews and, just as importantly, airline management.

The last element is reaching out in partnership with you in Congress, across the government, and to our fellow stakeholders in

labor and throughout the aviation industry to explore the full range of issues that could help us improve safety and prevent future accidents. And among those are, it has been noted, establishing a single integrated FAA database of pilot records, exploring random fatigue testing, full examination of commuting, extending the period for background checks from 5 to 10 years, analyzing the information from cockpit voice recorders in settings other than accident investigations, and mining this great field of check ride data for trends.

We have already begun implementing this initiative, and we look forward to working with this Subcommittee and keep you informed throughout the process.

Mr. Chairman, thank you, and I will be glad to answer any questions you might have.

Mr. COSTELLO. The Chair thanks you, Mr. Cohen, and now recognizes Mr. Morgan.

Mr. MORGAN. Mr. Chairman, thank you.

Mr. Chairman and Committee Members, I would first like to take this opportunity to express the condolences from all of us at Colgan Air to the families of those who were lost in the tragedy of Flight 3407. We know your grief, and I assure you that we all have a common goal to prevent such catastrophes from ever happening again. The nature of flying airplanes entails risk, and it is the job of all professionals in the airline industry to reduce that risk to an absolute minimum. As such, this process today is vital to that mission.

Mr. Chairman, every aviation accident teaches us something more about how to prevent another tragedy. We all learn from our experiences, and as a result, we constantly improve our industry. Those of us who have long been part of this industry, whether from the airlines, FAA, NTSB or other regulatory entities, and particularly those of us from the safety departments of the business, are always saddened by the loss of any airplane from any airline anywhere in the world. But we also know that we what learn from each event will make us stronger, and indeed it has.

In my 30 years as an airline professional, I have seen the U.S. airline industry endure some remarkable challenges in a constantly changing environment. Our business is incredibly complex. The aircraft, the air traffic systems, the intricacies of regulations all make this a demanding industry. But the men and women I have had the privilege to work with in my career have continuously stepped up to the challenges, and because of what we have learned, we have made the U.S. commercial airline system the absolute best in the world.

I have no doubt that the next generation of airline professionals will continue to face this inexorable challenge of change. I believe it is my job, as well as the job of all of us in this business, to use our experience and the knowledge we have gained in our careers to hand that next generation a safer product and, in so doing, leave a safer industry for the public to enjoy. And that is why I am here with you today to defer the legacy of air travel, safe air travel.

I appreciate the opportunity to come before this Committee today and continue the process of furthering aviation safety. I have also

provided additional remarks and information in my submitted testimony, and I am prepared to address your questions and concerns.

Mr. COSTELLO. The Chair thanks you and now recognizes Mr. May.

Mr. MAY. Thank you, Mr. Chairman. Good morning, or afternoon.

Let me begin by saying that the crash of the Colgan Air aircraft near Buffalo was a tragedy that has produced indescribable heartache for the relatives and friends of victims of that accident. And I personally expressed my condolences to Captain Loftus, and I do so for the rest of the families.

In the airline industry, safety is our highest priority. We work closely with all members of the aviation community to achieve high levels of safety, including regional airlines. It is in that spirit that I appear before you this morning. No accident, as you have heard others say, is acceptable. We have a responsibility to understand through rigorous and searching inquiry the cause of the Buffalo accident and to take whatever corrective measures are needed.

In light of that responsibility, we are very fortunate that there are three expert government forums in which that scrutiny is happening. This is as it should be. The public needs to be confident in our responses to aviation safety issues. The National Transportation Safety Board's ongoing investigation will produce a far more complete picture than we have today of what so tragically unfolded that evening. In this, as is in previous accidents, the Board is the authoritative source for making that determination and recommending corrective actions.

In addition, the Department of Transportation's inspector general recently began an assessment of the FAA's oversight of certification, pilot qualification, training and other issues. When that review was announced, we, ATA, immediately offered our resources and full cooperation to the inspector general. I have met with Inspector General Scovel and his team, and we will do so again. His evaluation and the constructive suggestions that we know will result from it will augment the NTSB's effort.

Finally, next Monday's FAA-sponsored call to action meeting is an immediate, broad-based forum to look at safety issues, including those raised at this morning's hearing. ATA was a major participant in the runway safety call to action held by the FAA 2 years ago that advanced runway safety through the well-informed assessments and concrete recommendations of the participants.

We look forward to being equally engaged with the FAA and other interested stakeholders in the vital work that will begin next Monday. And I think it is actually Tuesday. Although we won't have the results of the NTSB's investigation and the inspector general review for some time, we do expect similar positive results.

I don't believe that any topic, any topic, should be off the table at the call to action meeting. We need to have a full and frank conversation about safety. So let me suggest seven subjects that, for openers, should be considered. First, mandatorily applying the FOQA, Flight Operational Quality Assurance, programs used by major carriers to regional airlines. FOQA works. The collection and analysis of data recorded during flight improves safety.

Second, applying Aviation Safety Action Program, ASAP, which encourages voluntary reporting of safety issues and events that come to the attention of employees to those regional airlines that do not have such a program already.

Third, identifying advanced training best practices of major carriers for use by regional airlines like AQP for training.

Fourth—this has been said by others today—we need to have a centralized database of pilot records to help airlines evaluate the backgrounds of applicants for flight deck positions. We think that the FAA should determine if such a system can be efficiently, effectively implemented.

Fifth, the issue of compliance with the sterile cockpit rule has been raised. Let us see if FAA needs to increase compliance oversight in this area.

Sixth, let us examine flight crew preparedness. In particular we should look at what crew members have done before they have reported to work that may affect their performance in the cockpit.

And seventh, let us also examine crew member commuting and whether it requires additional attention.

Mr. Chairman, we are committed to working with the stakeholders to develop solutions to any safety issues, including those that emerge from these three important governmental initiatives. Thank you.

Mr. COSTELLO. The Chair thanks you and now recognizes Dr. Graeber.

Mr. GRAEBER. Chairman Costello, Ranking Member Petri and distinguished Members of the Subcommittee, my name is Curtis Graeber. I am a fellow of the Flight Safety Foundation and a former NASA scientist.

The foundation is an international organization dedicated to the continuous improvement of global aviation safety, and we appreciate the opportunity to testify about recent scientific progress related to flight crew fatigue.

Unfortunately, fatigue is ubiquitous and unavoidable in aviation. To address it, regulators have traditionally imposed limits governing how long and how often pilots can operate an airplane. Different countries impose different limits usually based on very little scientific knowledge. The FAA's flight-time limitations are no different and have remained essentially unchanged for 50 years.

Several attempts have failed to update the regulations; however, such efforts would likely result in little improvement because they are really attempts to tweak what already exists. More effective tools are needed. Fortunately over the past three decades, there has been an extensive scientific effort to better understand the complex origins of fatigue, its impact on performance and how to mitigate its risk.

In 1980, the Congress directed NASA to undertake a multiyear effort to improve our understanding of crew fatigue and jet lag. The results of this work, as well as other nonaviation studies, can now provide the scientific basis for a paradigm shift in how we manage fatigue risk. This shift is known as fatigue risk management, a systematic approach to addressing fatigue in a comprehensive, proactive manner that does not rely solely on adherence to a set of prescribed hourly limits. In its broadest form, fatigue risk man-

agement takes a systematic, three-pronged approach incrementally to manage fatigue risk: prevention, mitigation and intervention.

The first step, prevention, can be characterized as strategic risk prevention. It includes such measures as scientifically defensible scheduling and education about sleep and fatigue. We believe that this step should also include medical identification and treatment of sleep disorders. However, the FAA's medical examination has no requirement to identify them in pilots. It should.

The second step encompasses risk mitigation at the operational level.

The final step, intervention, recognizes the inevitable fact that crews sometimes experience significant fatigue despite the best efforts to prevent it. It may include interventions such as controlled rest on the flight deck.

A key part of the initial prevention step involves the alternative use of a fatigue risk management system, or FRMS, in place of prescribed flight-duty limits to determine what is "scientifically defensible scheduling." It takes into account known variables that affect sleep and alertness which prescriptive flight-duty limits cannot address.

In contrast to prescriptive limits, an FRMS employs a multilayered, data-driven defense to manage operational fatigue risk proactively. Objective and subjective data related to crew alertness, as well as FOQA data, are routinely collected and analyzed to monitor where fatigue risk occurs and where safety may be jeopardized. The system then allows for generating new scheduling solutions or other strategies to mitigate measured fatigue risk. At the same time, FRMS provides operators with flexibility to seek the most efficient, safe crewing solutions to meet operational needs.

In early 2006, ICAO established a subgroup to develop an international regulatory framework for fatigue risk management. Their starting point was the model developed by the Flight Safety Foundation for ultra-long-range operations beyond 16 hours. ICAO's draft framework recommends incorporating FRMS into an operator's proactive and accountable SMS. The Flight Safety Foundation strongly encourages the industry to adopt a proactive approach of prevention, mitigation and intervention to systematically address fatigue risk management.

The United States aviation community can no longer treat fatigue risk as just another rule that has to be met. We congratulate the FAA for sponsoring a major international symposium on aviation fatigue management last June. Several non-U.S. airlines reported on their successful implementation of FRMS that has resulted in enhanced safety, improved crew satisfaction, greater operational flexibility, and lower costs, including insurance premiums.

The foundation also believes that controlled rest on the flight deck should be made legal for use when necessary for the safety of flight. Its effectiveness was demonstrated dramatically by NASA in 1989 and incorporated into a draft advisory circular in 1993, yet it has never been implemented in the United States. Numerous authorities around the world have approved it. It has been successfully used by foreign carriers since 1994, and, frankly, the oft-repeated excuse that it doesn't pass the 'Jay Leno' test isn't valid anymore.

Finally, the foundation urges the FAA to further develop and implement fatigue risk management on a trial basis, as it is already doing for ultra-long-range flights from the U.S. to Mumbai and to Hong Kong. Together these actions will enable U.S. Commercial aviation to enhance its level of safety with regard to fatigue risk and do so efficiently and proactively. The foundation believes the United States should be leading the world in fatigue risk management instead of following it.

Mr. Chairman, thank you, and I am happy to answer any questions.

Mr. COSTELLO. Thank you, Dr. Graeber.

And the Chair now recognizes Dr. Ayers.

Mr. AYERS. Chairman Costello, Ranking Member Petri, Chairman Oberstar, Committee Members, my name is Frank Ayers, and I have the privilege of managing the training for all the pilots at Embry-Riddle Aeronautical University in Daytona Beach, Florida, who are moving on to the regional and the major airlines. As you may be aware, Embry-Riddle was founded as a flight training school in 1926; in fact, well before many of the major airlines and the regional airlines. In the intervening 83 years, while we have expanded to become a major engineering, business and aviation university, our core capability has always been in producing the best pilots available in the industry.

As I listened to Captain Prater's comments about what a training organization should be, I reflected back on what I see every day at Embry-Riddle, and I think it might inform the discussion of how training is done for young people who move from off-the-street into regional airline cockpits.

First, the program at Embry-Riddle has high selection standards. You have to compete to get into the program, and then you compete against the high academic standards of a 4-year university to remain in the program and to graduate. Competition is good. It is the hallmark of military flight training and other very successful flight training programs around the world.

Additionally, our program is extensively peer reviewed. There are about 30 major universities that band together under an organization called the Aviation Accreditation Board International, and we willingly submit ourselves to peer review of our program. That increases the strength of our program, and it spreads the good word in a collegial atmosphere to other institutions so all the boats rise on the tide at the same time.

Additionally, we think a program that teaches pilots to fly in the regionals and in the majors should be stable financially. In our area alone, we have had three flight training providers go bankrupt or go out of business in the last 6 months; two, in fact, in the last 3 months. Most was significant loss of money to the individual and a loss of training.

We think it is important that students that put down a sizeable amount of money, maybe 60- or $70,000, there is an expectation that they will graduate. Again, in the collegiate aviation training environment, that expectation is that you have an opportunity to compete against the standard to graduate. And we think that is a much better way of doing business than simply cash for training.

A successful aviation training program like ours has a strong academic quotient. In the first 1-1/2 years of a 4-year degree, our students complete all the academic work associated with the FAA-required commercial pilot certificate, and that is the certificate required to become a regional airline pilot. However, the next 2-1/2 years in a bachelor of science degree program heavy on math and physics, our students essentially get the same education that a senior 747 captain has, while certainly not their experience, but they get that same education in jet engine systems, in weather, icing, autopilot usage, all those various functions.

We think it is very important that they be fully prepared to fly jet aircraft.

Additionally, the flight training and simulation program that supports their training should be a modern one. We have chosen at Embry-Riddle to follow Part 142 of the Code of Federal Regulation. We are the only major university and one of the few general aviation training programs that trains under Part 142, which is essentially the way the airlines train.

After the downturn in our business after 9/11, in 2003, our university made a huge investment in technology, almost $10 million in simulators and about $2 million in Automatic Dependent Surveillance Broadcast equipment so that our students would be on the cutting edge of aviation training. By being in Part 142, we do about 35 percent of our training in those simulators where we can train for those emergencies in real time. And we think even though it subjects us to greater FAA scrutiny, it is the way to train. It is what we should be doing.

I would also speak in my remaining couple seconds here for the young men and women that I work with all the time. They would ask that at the completion of this rigorous program that they could make a living wage. I think the combination of the low wage and the commuting situation we have right now is very challenging. If you are a senior captain and can have a home in Florida where I live, it is a really good thing. But if you are a young person making $22,000 a year, it is a lot of expense.

In closing, I would say Embry-Riddle shares the grief in this tragedy. We have a young man—had a young man named Joseph Zuffoletto. Joseph was a pilot for Colgan. He was dead-heading in the back of the aircraft, and he was a graduate of our Prescott program, an outstanding young man and an outstanding young pilot. And we grieve for all the victims of the Buffalo crash because the Embry-Riddle community grieves as well.

We thank you for your attention, and I stand ready for your questions.

Mr. COSTELLO. Thank you Dr. Ayers.

Captain Prater, in your written testimony you talk about the fatigue cushion that was once provided and was negotiated as part of the work rules has virtually been eliminated by the airlines. Tell us why that is.

Mr. PRATER. Chairman Costello, thank you. One of Captain Babbitt's predecessors, I believe it was Admiral Engen, once said, we don't have to change the flight-duty time FARs because the ALPA contracts are more conservative. They are safer than that.

I would say through the processes of bankruptcy, we have lost many of the work rules that used to make our contracts safer. They were above the FARs. I will give you some concrete evidence.

As a new airline pilot back in late 1970s, early 1980s, I would fly approximately and be paid for 75 to 79 hours a month. That took in the credit time, so if my duty day was 15 hours long, I was not paid or credited with just the 3 hours that I actually flew. I was given a credit for, say, 5 hours. That limited me to how many days I worked.

After bankruptcy, at Continental in 1983, we went to basic FAR minimums. It has greatly increased the workloads of pilots. What we have seen in the last round of bankruptcies following 9/11 is that has spread to all corners of the industry.

The regional industry was created to make up for the loss of the national industry. We lost all the airlines like Ozark and North Central. Those airlines were career pilot jobs. They had career contracts. They had pension plans, if you can imagine that. Now those are all gone. They have been replaced because the major carriers are looking for a cheaper way to do business. They created the regional industry, and they are at the very minimums of pay, and they fly right up on the maximum FARs, and we have been unable to change that through collective bargaining. Hopefully we will be able to change that so that we can make it a better job and make it a more stable career. Thank you.

Mr. COSTELLO. So the bottom line is it is all about money.

Mr. PRATER. Not at all. I like to go home every night after my trip. I want to get home. Over half of the founders of the Air Line Pilots Association were pilots in their thirties, died in airplane crashes. Our foundation as a union is based upon professional standards. It is based upon increasing those safety standards. We dedicate ourselves to that, and we charge our members a very high rate to be part of that.

Mr. COSTELLO. I think maybe you may have misunderstood my question or my comment, and it is all about money where the airlines are concerned as far as cutting back on the work rules relative to fatigue cushion and a number of other things.

Mr. PRATER. We are actually proud to work for airlines. We want to do a good job. They are under tremendous competitive pressures. They have gotten too low. The competition has led us to look for every cut in every corner, and I believe that is cutting into the fabric of the safety levels that we see.

Mr. COSTELLO. Captain Prater, how does your—you heard Mr. May talk about a centralized pilot record system, a database, and others have mentioned that as well. How does ALPA feel about a centralized database?

Mr. PRATER. Well, obviously we are much more concerned about the performance day in and day out. As Captain Babbitt said, airline pilots are tested continually. There is a lot of information available to our employers or prospective employers about our performance. But just like hours in a log book, it is what you do today, and you have to prove yourself day in and day out. Whether a young pilot at Embry-Riddle failed a maneuver on his commercial test, such as turns about a point or spiraling maneuvers, and had to retake that provision, that is not that important to an airline.

Now, trend analysis, how many failures, multiple failures on the same maneuver, that would raise the awareness.

But there are no perfect pilots. I don't represent any. I haven't been one. We learn by making mistakes. We are a safe airline crew because we have got a first officer that is trained at that same level and traps my mistake and catches it. That is the foundation of airline safety in the cockpit.

Mr. COSTELLO. Mr. Morgan, you state that Colgan recently increased the minimum flight experience requirements for new pilots and captain upgrade candidates. Tell us what the old standard was and what the new standard is.

Mr. MORGAN. The new standard was implemented in October of last year, and that standard is 1,000 hours for minimum time. The standard prior to that was 600 total time and 100 hours of multiengine time.

Mr. COSTELLO. Why did you find it in essential to increase the minimum standards?

Mr. MORAN. We didn't necessarily find it a necessity to increase the time, but certainly with the market supply of pilots that is out there today, you can go to a higher standard, although we do feel as we move into a larger aircraft, more experience was necessary to do.

Mr. COSTELLO. You indicate also—let us talk a little about bit about the stick pusher training. Colgan required that in an academic sense, but not in a simulator; is that correct?

Mr. MORGAN. That is correct, sir.

Mr. COSTELLO. Why is that?

Mr. MORGAN. The approach to training for the stalls has been long done this way in the industry. But it is more of the recognition and recovery from a stall rather than going full to the stick pusher. This was something that is termed for a long time, I believe, negative training. We wanted to take a positive training step that says we are going to teach you how to recognize that you are approaching a stall; when you reach a stall, you recover from the stall. You should never reach a point where the stick pusher gets activated. Therefore we felt it was appropriate to make you aware that the stick pusher was there, but not to train you, because you should never, ever see it.

Mr. COSTELLO. Mr. Loftus, would you like to comment?

Mr. LOFTUS. Yeah. I think that is a big mistake to make. I can't see their logic behind why you wouldn't demonstrate at least the stick pusher. It takes about 2 minutes to do that in a simulator, to do it properly, to avail the students to at least be aware of what is going to happen. If anyone has ever been in a simulator and experienced that condition, it is like a three-alarm fire, and to be able to think and make the right callouts, it is—I don't know why you wouldn't want to do it.

Mr. COSTELLO. Mr. Morgan, through—as a result of the NTSB 3-day hearings, it was revealed that Captain Renslow had four disapprovals due to failed check rides during his career. Three occurred before he was hired by Colgan and included failed check rides for his commercial pilot instrument, his complete commercial and his commercial multiengine certificate. What did you know at the time? What did Colgan know at the time as far as Captain

Renslow's record when he was hired and then promoted from first officer to captain?

Mr. MORGAN. At the time, sir, what we knew was what we were able to retrieve through the PRIA system and what Mr. Renslow provided to us on his application. We used the 5-year background check as reported under PRIA. We did not have anything that was reported by Mr. Renslow as having any previous failures. The failures that he had achieved or had experienced while he was with Colgan, each of those we followed the process to remove him from flying until he successfully completed that check and moved on up to the next level, as any other pilot would do when they failed a check.

Mr. COSTELLO. The Chair now recognizes the Ranking Member Mr. Petri.

Mr. PETRI. Thank you very much. I thank all of you for your testimony.

I have a lot of questions and little time, so I will do my best to touch on a few highlights. And especially, Mr. Loftus, you bring a concern and knowledge to this, and hopefully it will be very helpful to us as we go forward.

In your testimony you emphasized, as I understood it, two things really, the importance of experience and of training. And really, I guess, being a pilot is—there is kind of a—you learn tricks of the trade, in effect, by working with people who have had the experience and passed that down, as happens in many aspects.

You didn't really talk about fatigue. I know that is an issue in transportation broadly, people driving, whether it is any vehicle, and trying to make sure that that doesn't overwhelm safety. I know that the investigation is still going forward, but do you feel that that was a problem or is really more training?

Mr. LOFTUS. I addressed it in my written statement a little bit. But, yes, I do think it is a common problem; maybe not with more experienced pilots. They know how to manage, they have been there doing it 20 years, so they have learned to manage their time. They are making more money, too. They can afford to buy a crash pad or a hotel room or day room to get their rest when they come in and commute. But many times I have flown repeated hours—my hours at Express, 8, 10 legs a day, and then have to fly Part 91 at night back to a maintenance base, inherently very dangerous. These things need to be addressed.

I think the commuting aspect needs to be addressed outside the bargaining area. I think that is why it took us two tries in the contract. In contract 97 they subsequently got it, at Continental Express, a commuter policy, an effective commuter policy which allows for pilots to get into the base, but it also gives the company some protections, too, and some heads up and things. And I think that would be a good—commuting is going to stay around forever. Pilots are going to live where they want to live. They are going to work where they work, and follow the equipment they want to base by base. But I think an effective commuter policy that works both for the airlines and the pilots would be effective in this avenue instead of regulations. I think no matter what you are going to do, people are still going to live where they want to live. I think a bet-

ter way to attempt it, to solve the problem, would be a commuter policy outside the bargaining area.

Mr. PETRI. The whole plane was lost, the passengers and the crew. They clearly had an interest in trying to operate the plane's safety. They lost their lives as well. I am not an expert, but it makes me think that training and preparation are absolutely key, because the person has every desire to react correctly.

Mr. LOFTUS. One of my favorite sayings was that there was only one person's life that was more important on that aircraft than the passengers, and that was mine. I wanted to be around at the end of the day. I think every pilot has that feeling as well.

Mr. PETRI. One other area I wonder if I could just touch on and that is alluded to quite a bit in the testimony, that is the relationship between the major airlines and the commuter airlines and whether there is adequate provisions for the majors to supervise and ensure the safety of the feeder airlines. And I wonder, Mr. Cohen, if you could address that.

Mr. COHEN. Thank you, Mr. Petri.

There is a number of these programs. All the programs that you have heard about today, ASAP, FOQA, LOSA, those are shared extensively throughout the regional industry as well. The relationship between these carriers that—we have regular meetings with all the mainline people, both directly and under the umbrella of the associations, through the ATA and the RAA. So there is quite an extensive interrelationship. It is one of the reasons we are such enthusiastic supporters of the call to action next week, that we can actually make this even—institutionalize this even more. We are strong supporters of it.

Mr. COSTELLO. The Chair now recognizes Mr. DeFazio.

Mr. DEFAZIO. Thank you, Mr. Chairman.

Captain Prater, I would just like to give you some quotes from some of your predecessors testifying before this Committee from ALPA, Mr. Dwayne Worth: Pilots have been disciplined, including terminated, for calling in fatigued. They have been called in to see the chief pilot, which is, again, a varied response depending upon the nature of the airline, nature of the management team and whether they have the benefit of a union contract. So clearly what we need is a Federal regulation to make that a nonquestion of compliance.

That was 1999. Then, of course, we have the current FAA Administrator from that 1999 hearing, Captain Babbitt: The intimidation factor is clearly there. I could parade a string of witnesses in here that would shock you. There is no private whistle-blower protection. The pilots are intimidated. What quite often will happen is pilots resist that and again I can present hard copy where a pilot is terminated. We use agreements machinery and defend them. In maybe 8 or 10 months a neutral will give him his job back. In the meantime, who paid him? I can assure you that is a lesson to the pilots. They are intimidated by the carrier.

Does this still go on?

Mr. PRATER. Yes. Absolutely. We still have managements that believe they can push pilots by threatening them because the flight must go on the trip must go on or we don't get paid.

I am saying the airlines—some airlines continue to battle practices that were first created in the Lorenzo era, in my time, maybe the Cord era in earlier times. They continue to push pilots. They threaten them with terminations. And we see it. We then win the grievances, and they refuse to reinstate pilots.

So when we look under the covers starting next week with Captain Babbitt, I will parade those people in here where we are still seeing those practices. I will name names to Captain Babbitt at that time and let them deal with it.

I believe that the major airline that sells the ticket must ensure those practices do not exist within any of the carriers that they use, whether they own them or whether they outsource them to other contract carriers. But those practices are alive and well, sir.

Mr. DEFAZIO. What would the representative of the regional transport association say in response to that? Is he lying, making it up?

Mr. COHEN. If those kind of practices exist, they should not exist.

Mr. DEFAZIO. Okay. So we have been hearing this for 17 years. Probably there are hearings before that on this Committee that I don't recall. I have just gone back to review transcripts from 1992.

At least you are a little more in line here, but the RTA representative back then gave me the example of what if you are in Bend, Oregon, and the pilot says he is too tired to fly? I said, great, I will take the bus back over to the valley with him. I don't want to fly if he doesn't want to fly.

The point is, everybody—you, Mr. Morgan and the ATA—all say, well, it is the pilot's call. It is the pilot's call. But we are hearing from Captain Prater it is not the pilot's call if he or she values their job in some of these organizations.

We have got to root this out. I mean, we just have to root this out. I mean, I can't believe—I have been hearing this for 17 years, and we have heard it from the current head of the FAA 17 years ago, and it is still going on.

We have here a blind study. Dr. John Caldwell, a fatigue management consultant for the Air Force and Army, his research found that 80 percent of regional pilots surveyed they had nodded off during a flight and that scheduling factors such as multiple takeoffs and landings every day were top contributors to operational fatigue. Do you acknowledge that we have got a problem here?

Mr. COHEN. Mr. Chairman, Mr. DeFazio, issues of fatigue is right at the top of the list of human factors, that we have said that we need—as Mr. May pointed out, we need to be looking at all of these issues, because it is time to address all of these issues in a holistic way.

Mr. DEFAZIO. My key point over all the years has been—and I made it to the earlier panel. If we adopt a standard that everybody has to follow that prevents these problems, then nobody is at a competitive disadvantage and you don't have to worry about that one bad actor who is trying to drag everybody down.

Hey, I can provide a cheaper flight. How can you do that? Well, my pilots are tired, they are not as well-trained, my planes aren't as well-maintained, the FAA doesn't really impose those things on us.

We have got to get rid of that. That has got to go. If we are assuring people of safety, then that stuff has got to go and nobody is going to be at a disadvantage. Everybody starts at the same place. I would hope the associations support robust changes that will bring about an end to these practices.

Mr. May.

Mr. MAY. Congressman, I think from the ATA's perspective, we absolutely do. We have said in the past—I mean, Dwayne Worth and John Prater and Randy Babbitt have vastly more experience in this industry than I do, so I am not going to sit here and try to suggest they are wrong. But I think there is now a forum, run by one of the three as a matter of fact, that we will all be participating in next week.

I am sure the issue of fatigue and flight and duty time needs to come up, should come up. I think the issues of commuting and the impact that has on readiness, I think the issue of professionalism of pilots needs to come up. All of these issues need to be addressed. They need to be laid on the table. There ought not to be any restrictions as to what subjects are there. And if Captain Prater has specific evidence of pilot pushing by carriers, I think we would welcome seeing that put on the table.

Mr. DEFAZIO. Are you going to do that, Captain Prater?

Mr. PRATER. I would be more than happy to.

Mr. DEFAZIO. Thank you, thank you, Mr. Chairman.

Mr. COSTELLO. Sure. The Chair thanks the gentleman and now recognizes the Ranking Member of the Full Committee, Mr. Mica.

Mr. MICA. Thank you.

I am pleased to see Dr. Ayers here from Embry-Riddle, which happens to be located in my congressional district. It is without question the finest aeronautical institute and university not only in the United States but the world. Everywhere I go I am proud to meet graduates in every field of aviation industry who are absolutely outstanding.

I venture to say—and you don't have to respond to this—that very few of your graduates are involved in some of these issues, because I have never seen anything but, again, the highest standards performed by those graduates who are—first come so dedicated and then are so professional.

I am going to ask my staff to look at the background of some of these flights where we have had fatalities just out of curiosity to see the difference in training. I don't know if you want to comment, Dr. Ayers.

Mr. AYERS. I certainly would. Let me expand upon my statement a little bit.

We think that it is not how many hours a pilot has in their logbook, but what was done, what was examined, what was measured, what was trained in that hour. And we really stand ready as a university with a deep research background to provide some science to some of this discussion so we can see what it really does take.

We think what we have come to—and on the second page of my prepared remarks there is data that shows that our pilots, even with fairly low hours, in the 500-hour range, score in the same area where military pilots do. We are very proud to be in that

group. That is a very high echelon of aviation expertise. So we do think that how we train makes a difference.

Mr. MICA. Mr. Cohen and Mr. Prater, do you favor opening performance records and training certification to, again, the employers without restriction?

Mr. COHEN. Mr. Chairman, Mr. Mica, absolutely. It is the number one thing that we have proposed.

Mr. MICA. How about you, Mr. Prater?

Mr. PRATER. I believe the full background should be available. But that raises another level, sir, and that means that those records have to be kept in some type of standardized basis so we are comparing apples with apples.

Mr. MICA. Very good.

Mr. May, if I had a pound of butter and I spread it over 10 loaves of bread——

Mr. PRATER. The answer is 14.

Mr. MICA. But then if I had a pound of butter and I spread it over 20 loaves of bread, what would happen with the second 20 loaves of bread? Your answer is they get less butter.

Mr. MAY. I think that is the answer that is expected. I am not sure that is the case with aviation safety.

Mr. MICA. What I want to do is take the number of inspectors—I looked at the administration's proposal. There is a 4.4 percent increase in safety operations. But we are also mandating from Congress some inspections for foreign repair stations that we already have being done at the same standards. So we are taking personnel to do what is done—existing standards and using those personnel where we don't need them. Wouldn't you think it would be better served to spread that butter where we need the coverage?

Mr. MAY. I think that makes ultimately good sense, Mr. Mica, but it raises an interesting point. We have talked about one level of safety here. I think on paper we have one level of safety, certainly. It is called FAR 121. And we all, whether it is a regional airline commuter, airline mainline carrier have to live up to the principles and standards of FAR 121. The question is whether or not it is being aggressively enforced, audited, et cetera.

Mr. MICA. That is where spreading the butter thinner and doing things we don't need to do—thank you.

Mr. MAY. May I have one moment?

Mr. MICA. No, I am running out of time. Mr. Costello holds me right to the—he gives me a little bit of leeway as the Ranking Member.

But I just want to get a question on the record about the way compensation is determined for regional carriers. Now, I am told it is a negotiation between I guess the union or the pilot representatives and the air carrier. Is that the way it is done, Mr. Cohen?

Honestly, I don't know the answer to my question. Mr. Prater, I have been told—is there is a preliminary wage level set and then is there—can you explain to the Committee how that is done? Because I have heard a lot about wages and the airlines are doing—that the regionals are doing this on the cheap and pilots aren't getting paid adequate compensation or copilots are getting far less than they should and pilots get a certain—how is that compensation determined?

Mr. COHEN. At all but one of our carriers, every one of the agreements for the crew members is collectively bargained.

Mr. MICA. That is a determination between, again, the pilots' representatives and the airlines. And then the difference between the levels, say, for a captain or the primary pilot and the copilot or lesser position, is that also part of that——

Mr. COHEN. Also all covered under the collective bargaining agreement.

Mr. MICA. So it is agreed upon by the union or the representative and the airline?

Mr. COHEN. Correct.

Mr. MICA. Thank you.

Mr. COSTELLO. The Chair thanks you, Mr. Mica; and let me thank all of our witnesses for being here to testify today, in particular you, Mr. Loftus, on behalf of the families. I can assure you and the family members who are with us and those who could not be with us today that this Subcommittee is not going to let this issue slip away, that we are going to work—we are looking forward, as all of you are, to the meeting on Monday with the Department of Transportation and the FAA Administrator to see what comes out of that meeting.

But it is clear at least to me—I can't speak for other Members of the Subcommittee—that we can no longer rely on recommendations by the FAA, that some standards are going to have to be changed. And I think we need to look at the relationship between the major carriers and the regional airlines, and I think we need to take a look at the training to find out if, in fact—for instance, some of the issues that we talked about today should be incorporated as mandatory training as opposed to leaving it up to the airlines, to their discretion.

Obviously, fatigue is a major factor. As Captain Prater said, this not the first time that he has talked about the issue before the Committee. We have heard others, not only pilots but air traffic controllers and others within the system, talk about their concern. We have heard testimony from the Inspector General, we heard testimony from the GAO on the issue of fatigue.

I think we need to look at pilot records and to determine if we need a data bank and how far those records—how far we can go back so that all of the airlines have access when they are hiring a new first officer, a new pilot to know what that person's record is, as well as all of the NTSB's recommendations.

I, at least, feel at this point that with the new administrator, given his background and his experience as a pilot and with ALPA, that he understands the importance of when the NTSB makes a recommendation that he is going to implement a system to review those recommendations, figure out either, one, implement them, two, modify them or, three, reject them and give a solid reason for rejecting them and to get reports to us and to the Congress on these issues.

So, again, we thank all of you for being here today to offer your testimony; and let me just say that, again, we are going to do everything we can to continue to focus, as we did with the past administration, with this administration, to follow our responsibility to provide the oversight so that the FAA and others in the system

are doing what they need to do to continue to have the safest aviation system in the world.

With that, I would ask the Ranking Member, Mr. Petri, if he has any final thoughts or comments.

Mr. PETRI. No. We join you in the determination to stick with this; and, again, thank you all for being here.

Mr. COSTELLO. Again, thank you.

That concludes the hearing today, and the Subcommittee stands adjourned.

[Whereupon, at 1:49 p.m., the Subcommittee was adjourned.]

Opening Statement June 11, 2009

Thank you, Mr. Chairman and Ranking Member Petri for holding this important hearing.

Last month, I wrote to the Committee requesting an opportunity to examine the safety practices of regional carriers. All of us are saddened by the tragic loss of Flight 3407, and many of us are concerned about the questions raised from the National Transportation Safety Board's investigation.

Regional carriers are a critical part of our nation's aviation system. They are an economic lifeline to and from major hubs, and they provide much needed air service to rural areas like my home state of West Virginia.

But while the routes travelled by these carriers are usually a short distance, safety should never be shorted. Airports in West Virginia are serviced mostly by regional carriers. It is troubling to note that regional carriers have been involved in *all* of the last six fatal airline accidents.

I thank today's witnesses and I speak for the Subcommittee when I say we are here to listen. We want to know about safety standards and resources available for training. We want to know about hiring and vetting practices of pilots. Most importantly, I hope you will provide insight into the relationship between regional and major carriers, shedding light on important differences and disparities.

Finally, I would like to make special mention of the family members of Flight 3407 here with us today. I was fortunate to meet with some of you yesterday. I commend your work and hope we can use the lessons from this accident to improve the safety of the entire industry.

I look forward to your testimony, I thank the chairman and I yield back.

Shelley Moore Capito

OPENING STATEMENT OF
THE HONORABLE RUSS CARNAHAN (MO-03)
HOUSE TRANSPORTATION AND INFRASTRUCTURE COMMITTEE
AVIATION SUBCOMMITTEE

Hearing on
Regional Air Carriers and Pilot Workforce Issues

2167 Rayburn House Office Building
Thursday, June 11, 2009

Chairman Costello and Ranking Member Petri, thank you for holding this hearing regarding regional air carriers and pilot workforce issues.

Regional flights currently comprise one-half of all scheduled flights around the country. In more recent times of economic decline, regional airlines have become increasingly utilized as the major airline companies face further financial and operational restrictions. Therefore, it is both relevant and necessary that due attention be paid to regional air carriers and by extension, to the issues facing the pilot workforce.

The tragedy of Continental Connection flight 3407, which crashed near Buffalo, New York, demonstrated a regrettable reason for one purpose of this hearing. We want to ensure that every possible safety precaution is being taken by regional airlines and that the pilot workforce is receiving valued treatment to guarantee exceptional performance levels.

Although the NTSB investigation of flight 3407 is ongoing, several investigative issues have been brought to my attention which I believe apply to broader regional airline issues. These include flight crew experience and disclosure of any pilot training examination failures. In 2005, the NTSB made a recommendation that would require airlines to acquire all FAA disapprovals and ratings of pilot applicants before making hiring decisions. I am interested in hearing from the panels about the plausibility of this recommendation and its potential for future implementation.

Many pilots and aviation groups have voiced their concerns over the continual decline of compensation and benefits, arguing that economic constraints prevent the aviation industry from drawing and retaining the most skilled pilots. This shortfall will weaken the pilot workforce, a group in which we place our lives every time we take a flight.

In closing, I want to thank the members of the panels for being here today. I look forward to hearing their testimonies and hope that we can move in a constructive direction with the hope that regional air carriers operate at the safest level and that pilots receive the benefits that allow them to skillfully execute their duties.

Russ Carnahan

STATEMENT OF
THE HONORABLE JERRY F. COSTELLO
SUBCOMMITTEE ON AVIATION
HEARING ON
"REGIONAL AIR CARRIERS AND PILOT WORKFORCE ISSUES"
JUNE 11, 2009

- I welcome everyone to the Aviation Subcommittee hearing on Regional Air Carriers and Pilot Workforce Issues.

- On February 12, 2009, a Colgan Air Bombardier Dash 8, doing business as Continental Connection Flight 3407, crashed en route to Buffalo-Niagara International Airport. All forty-five passengers and the four crew members died, as well as one person on the ground.

- Mr. Mike Loftus' daughter, Madeline, was a passenger on Flight 3407. I am pleased he is joining us today to offer testimony. On behalf of each member of the Subcommittee I extend our sincere condolences to you, as well as other

family members and friends who lost loved ones in this tragic accident.

- The National Transportation Safety Board (NTSB) held a three day public hearing on May 12 through 14 on the Colgan Air Flight 3407 crash. The investigation is on-going and final conclusions and outcomes are not expected to be made for many months. We need to let the NTSB investigation run its course.

- However, the NTSB hearing identified the need to closely examine the regulations governing pilot training and rest requirements and the oversight necessary to ensure their compliance, with a particular focus on regional airlines. While we do not have all of the facts, I have expressed concerns that these issues could be symptomatic of larger

trends driven by economic pressures within the airline industry.

- We are in an economic downturn that has placed enormous pressures on airlines to cut costs. Airlines cannot control the cost of fuel or the cost of aircraft. But they can control what they pay pilots, how they train pilots, what that training will cost, and when pilots can fly.

- Due to competitive cost concerns, major airlines have cut their own domestic capacity and **outsourced** air transport service in many cases to the lowest bidder to smaller, lower-cost regional airlines and then keep the passenger ticket revenue. Approximately 90 percent of regional airline passengers travel on flights that are scheduled, processed, marketed, ticketed and handled by major airlines through

code-share arrangements. To win the contract to fly for the major carriers, the regional airlines have gone to great lengths to provide their services at the lowest price. With today's economic and outsourcing business practices, pilots with decades of experience are laid off from the major carriers, but cannot afford to work for one of the regional carriers because they are faced with starting over as a first officer making less than $25,000 per year. The economics and incentives to outsource to cheaper contractors must not outweigh the value of having experienced pilots in the cockpit.

- Today regional airlines are viewed by pilots as an entry-level "stepping stone." They do not pay as well as major airlines and they do not require as many flight hours to get hired. However, regional airlines have been involved in the last six fatal airline accidents, and pilot performance has been

implicated in three of these accidents. There must be "One Level of Safety" between major and regional airlines – mandated rather than recommended by the FAA.

- I believe we need to take an industry-wide look at strengthening pilot training requirements. In theory, FAA-training programs certify that every airline, both regional and mainline, train its pilots to the same standard. I think the FAA regulations are too broad and the minimums are too low. We must find a solution to fix this so everyone is on the same level, not just in theory, but in practice. I have requested that the Inspector General review FAA's regulatory requirements for airline pilot training programs and report back.

- It is important to note that many of the training issues that surfaced during last month's NTSB hearing are not new. We have seen them surface in other accidents. For example, as a result of a December 2003 Federal Express crash at Memphis involving a pilot that failed numerous proficiency checks, the NTSB recommended requiring airlines to establish remedial training programs for pilots who have demonstrated performance deficiencies. In 2006, the FAA responded by issuing guidance recommending that airlines implement remedial training programs. NTSB will testify today that despite the FAA's recommendation, Colgan **did not** have a remedial training program in place.

- While I applaud the Obama Administration's "Call to Action" earlier this week, I do not believe we can rely on airlines to voluntarily comply with industry best practices. As

we now know from testimony at the public hearings, Colgan had not fully implemented industry best practice safety initiatives, such as Flight Operational Quality Assurance program before the accident. We need to require that all regional carriers implement the best practice safety initiatives that are common among the major carriers. Further, the major carriers need to take more ownership of the regional carriers' training programs and implementation of best practices.

- I also want to have an honest and frank discussion regarding airline pilot pay. I have met with the pilot groups and I understand their concerns that pay and benefits have declined over the years, due to bankruptcies, mergers and acquisitions, oil prices, 9/11, failed labor negotiations, and furloughs.

- Airline pilots are highly skilled safety professionals. They are responsible for people's lives. Airline pilots deserve the respect that their profession once had and they should be paid far more than $24,000 a year, which is what the first officer of Flight 3407 was paid.

- Low pilot pay is symptomatic of other troubling pressures and trends within the industry. Some regional airlines are paying pilots the absolute minimum that the market will bear, with no relation to the lives they are responsible for, or the value or seriousness of the work they are doing. It is detrimental to the overall self-image and morale within the airline pilot profession, which is reflected, in some instances, by poor professionalism. While low pilot pay may keep airline costs down, it does not serve the public well.

- Moreover, low pay drives away qualified and experienced pilots. There was a time when a high percent of our commercial pilots were former pilots in the military. That is not the case today. Far fewer military pilots are applying to the airlines when they retire because of the low pay of regional carriers.

- NTSB is also looking at fatigue with regard to the Colgan accident. Fatigue has been on the NTSB's Most Wanted list since 1990, and continues to be identified as an issue in many accidents. The FAA has yet to update its rules governing crew rest requirements taking into consideration the latest research on fatigue. Nor has the FAA developed and used a methodology that will continually assess the effectiveness of fatigue management systems implemented by operators. This is unacceptable! I have asked the Inspector General to

conduct an extensive review of fatigue issues, and I look forward to hearing how he intends to move forward with this audit.

- After this hearing, I intend to draft legislation to address the concerns and issues we are discussing today.

- Finally, this hearing is not intended to condemn the major airlines or all regional carriers. It is intended to identify problems in the system that need to be addressed to improve safety.

- Before I recognize Mr. Petri for his opening statement, I ask unanimous consent to allow 2 weeks for all Members to revise and extend their remarks and to permit the submission of additional statements and materials by Members and witnesses. Without objection, so ordered.

Opening Statement for the Honorable Eddie Bernice Johnson
Transportation & Infrastructure Committee
Subcommittee on Aviation
Thursday, June 11, 2009 – 2167 RHOB @ 10:00AM

EB Johnson

Thank you Mr. Chairman.

I want to thank you and Ranking Member Petri for holding today's important oversight hearing regarding regional carriers and pilot workforce issues.

We have been advised on a number of occasions by the Department of Transportation's Office of Inspector General, the National Transportation Safety Board, and FAA whistleblowers that there exists serious problems within FAA's safety oversight systems and the time is now for reform.

Without question, the crash of Colgan Flight 3407 exists as one of our nation's worst aviation accidents in recent history and my thoughts and prayers go out to all of the family members who lost loved ones on that tragic day.

Mr. Chairman I feel strongly that the best tribute we can pay to the victims of Colgan Flight 3407 is to ensure that adequate safety standards and oversight are implemented and enforced by the Federal Aviation Administration and industry stakeholders to prevent a similar disaster. To do anything less, will only serve to undermine this nation's claim to the safest aviation system in the world.

From the outset I want to make it clear, I am not here to castigate regional carrier stakeholders. Regional carriers play a vital role in our nation's aviation system, providing air transport to over 159 million passengers, serving more than 650 airports in the United States.

In my district, American Eagle often times serves as the only air carrier service available to connect my constituents to parts of the country that are not serviced by large hub airports. Needless to say, our nation's economy is dependent on regional carriers for the movement of people, but this movement should not and can not come at the expense of safety.

It is clear to me that a problem exists. According to a recent report by USA Today, "In nearly every serious regional airline accident during the past 10 years at least one of the pilots had failed tests of his or her skills multiple times, according to an analysis of federal accident reports." Contrastingly, according to the report, "Pilots on major airlines and large cargo haulers had failed the tests more than once in only one of the 10 serious accidents in this country over the past 10 years." This is a problem and something must to be done to improve this now.

While I am heartened by FAA's move to bring industry stakeholders together to see what can be done to improve safety standards, I am less thrilled by reports of calls for voluntary action. Mr. Chairman, we've been down this voluntary road before only to see various reform processes ignored and ultimately discarded.

What I'd like to hear from the stakeholders that have come before us this morning is that they are engaged in a frank, introspective discussion that will ultimately yield strong and mandatory safety reforms within the regional carrier industry.

And Mr. Chairman, should they fail to do so, I say it then falls upon us as a Committee to step in and act to ensure a culture of safety is permeated throughout this industry.

As I close I want to thank our witnesses that have come before us to give testimony this morning. I look forward to hearing from them regarding the current state of safety affairs and how we may work together in ensuring safety remains a cornerstone of the regional air carrier industry.

Thank you Mr. Chairman and I yield back the balance of my time.

Rep. Christopher J. Lee (NY-26)
Testimony Before the House Subcommittee on Aviation
Regional Air Carriers and Pilot Workforce Issues
Thursday, June 11, 2009

Thank you, Mr. Chairman. I am grateful for the opportunity to discuss an issue of great importance to my constituents, and I appreciate your vigilance in this matter.

Of course, we are here today to discuss something of concern to all of our constituents. As major airlines have confronted significant challenges in maintaining market share, regional airlines have continued to expand their operations and now account for roughly half of the nation's commercial flights.

That includes Continental Connection Flight 3407, which departed Newark, New Jersey on the night of February 12, 2009 carrying 49 passengers and crew en route to Buffalo, New York.

One of those passengers was a 24-year old woman by the name of Madeline Loftus. Madeline was returning to Buffalo that night to play in an alumni hockey game at Buffalo State College.

And though she had purchased a Continental ticket, she was actually flying on a plane operated by Colgan Air with a crew hired and trained by Colgan Air.

Madeline died that evening when Flight 3407 crashed in Clarence Center, New York, just five miles from Buffalo-Niagara International Airport. All 49 on board the plane and one resident on the ground lost their lives.

Today, this panel will hear from Madeline Loftus's father, Mike, who served for more than 20 years as a pilot for Continental Airlines.

Mr. Loftus wants nothing less than to ensure that a tragedy like this never occurs again, and I thank the committee for allowing him to appear before you today on behalf of the family members of the victims of Flight 3407.

As you know, the need for further congressional scrutiny of this accident became readily apparent when recent National Transportation Safety Board hearings revealed a number of troubling findings, including:

- **The crew's lack of hands-on training and experience in the plane's safety systems**; for instance, the crew was trained in the activation of the stick shaker, but not in the next step, activation of the stick pusher.

- **Questionable handling of failed check-rides by Colgan Air;** specifically, despite the fact that the pilot of Flight 3407 had failed two general aviation check-ride failures, we now know that Colgan did not attempt to access this information.

- And **non-essential cockpit conversation below 10,000 feet** in violation of the FAA's "sterile cockpit rule."

These revelations have left the families to struggle with the harsh reality that this horrific tragedy may have been preventable and far more questions than answers about how <u>all</u> of the regional air carriers operate.

For my part, I am concerned that a culture of corner-cutting has pervaded the regional air carriers, leaving passengers at risk.

That is why I have joined with my colleagues from Western New York to push for an independent, comprehensive review of all commercial pilot training and certification programs.

This Government Accountability Office study would look at every aspect of these programs, including required training hours, training practices for new technologies, and the adequacy of responses to unsatisfactory check-rides.

Additionally, we are interested in learning what information is required to be provided by pilots on their job applications and what ability air carriers now have to verify that data.

And while we are pleased that the House has given the go-ahead for this analysis in the form of an amendment to the recently approved FAA reauthorization legislation, it is clear that we should not wait any longer to proceed.

I am submitting into the record today a letter Congresswoman Slaughter, Congressman Higgins and I have written to the GAO instructing them to begin their work at once.

I urge this panel to lend its support to this bipartisan effort so we can expose information that will inform future steps taken by Congress to improve pilot training practices and ensure passenger safety and confidence.

I also urge this panel to hold the FAA accountable and demand that it do its part to strengthen oversight of the regional air carriers and implement the NTSB's most-wanted safety recommendations on flying in icing conditions.

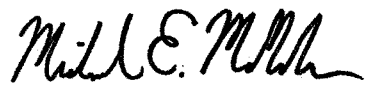
* * *

Finally, like many Western New Yorkers, I knew several people who lost their lives on Flight 3407, including a close personal friend of mine, an expectant mother whose child would have been just two or three weeks old at this point.

I just want to say that I am very proud of the first responders, the volunteers, and all the members of our community for coming together to provide support to those who have been affected by this horrific tragedy.

Again, I am grateful for the committee's time, and I hope that this hearing is just the beginning of a prolonged effort to treat this matter with the attention it deserves.

Thank you.



The Honorable Michael E. McMahon
Statement
Regional Air Carriers and Pilot Workforce Issues
Aviation Subcommittee Hearing
House Transportation and Infrastructure Committee
June 11, 2009

Thank you Chairman Costello and Ranking Member Petri. I would also like to extend a warm welcome to all of our witnesses today – particularly my colleagues and good friends from New York, Congresswoman Slaughter and Congressman Lee, Acting NTSB Chair Rosenker, our new FAA Administrator Randy Babbitt, as well as a welcome to Mr, Loftus representing the families of Continental Flight 3407, and all our witnesses for joining us here today to address the most serious of topics, aviation safety.

All of us were shocked at the horrible news from the early morning hours of February 13, 2009 that an airplane had crashed hours before in the middle of a residential area enroute from Newark airport to Buffalo. As we slowly learned what happened to Continental Flight 3407, we all were deeply saddened to learn that all 45 passengers and crew had been lost, and that one person on the ground was killed when the plane made impact.

My deepest sympathies go out to all of you in this room who lost someone in this tragedy, as well as all the families who lost love ones on that awful day.

As details emerged about this flight, our sadness has turned to anger. This is a tragedy that could have been prevented – although the ice storms that night and rough flying conditions contributed to the crash, it is clear that with more training, more experienced and better rested pilots, the Colgan Air flight should very well have reached its destination safely.

I was most disturbed to learn from the NTSB hearings that Captain Reslow was allowed to pilot planes even though he had failed several FAA flight certification tests and lied about his flight record. It is unconscionable that a pilot would be allowed to fly a plane without proper certifications – and it appears that nobody bothered to check!

Additionally, the hearings revealed that first officer Rebecca Shaw was sleep deprived as she boarded her plane. In fact, Ms. Shaw was paid only $16,000 a year, lived with her parents in Seattle and commuted each day cross country to get to her Northeast flight job. Ms. Shaw even told the crew of the FedEx flight that brought her from Seattle that day that there was a couch in the lounge at Newark that "had her name on it."

Sleep deprivation has the same effect as drunk driving. People should not be entrusting their lives with pilots who are essentially flying while intoxicated.

All of this is completely unacceptable.

This tragedy demonstrated a system failure on all levels, a failure by the regulators and the airlines to allow unqualified people to fly the plane, and major gaps in training and work rules.

But Mr. Chairman, I am just a new member of this committee, but after sitting through our hearings and conversations with industry professionals, my greatest fear is that this tragedy could repeat itself in the not so distant future.

We need to have a well paid, professional and experienced workforce operating our air system. It is not acceptable that people like Captain Sullenburgher – the hero of the Hudson – had to work 2 jobs just to make the same salary he made a decade ago, or that one of our regional pilots gets paid so little that she has to bunk with her parents and fly cross country to work to board a plane without sleep.

We need to perform background checks to really be sure that the people who fly our planes – regardless of how many passengers they carry or where they travel – are fully certified and trained.

And we need to make sure that our air traffic controllers review changes to airspace flight patterns.

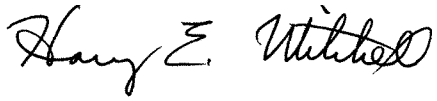
Administrator Babbit and Chairman Costello, this tragedy must be a wake-up call – a canary in the coal mine if you will – and

we need to address these issues now, whether it be through regulatory or legislative changes.

We owe it to the families that are here today and we owe it to the American people.

I look forward to hearing our testimony today and working with you and our partners in the airline industry to make sure that the air remains the safest way to travel.

Thank you, I yield back the balance of my time.



Statement of Rep. Harry Mitchell
House Transportation and Infrastructure Committee
Subcommittee on Aviation
6/11/09

--Thank you Mr. Chairman.

--All of us were surprised and deeply saddened by the sudden crash of Colgan Air Flight 3407 near Buffalo, New York.

--We need to understand what happened, so we can take steps to ensure the safety of the flying public.

--While, the National Transportation Safety Board (NTSB) is still investigating this incident, and I do not want to prejudge the outcome, the investigation has already raised some deeply disturbing questions, especially in the area of crew fatigue.

--According to NTSB, Captain Renslow flew from his home in Lutz, Florida to Newark, New Jersey before beginning a two-day trip the next day. First Officer Shaw commuted overnight via two flights from her home near Seattle.

--The practice of crew commuting is common in the industry, however, given the risks of fatigue, I believe the NTSB is right to review this.

--Last year, at an FAA Symposium on Aviation Fatigue Management, research was presented that found 80 percent of regional pilots surveyed had said that they had nodded off during a flight.

--A related issue has also emerged: crew salaries.

--At Colgan, Captain Renslow was paid approximately $65,500 a year, and First Officer Shaw was paid approximately $23,900 a year. By contrast, it has been reported that pilots working for major carriers flying large jets earn about $125,000 a year.

--I believe we need to let the NTSB collect all the facts and complete its investigation. But in the mean time, I hope we can help shed some light on some of these issues today.

--I look forward to hearing form today's witnesses.

--At this time I yield back.

OPENING STATEMENT OF
HONORABLE JAMES L. OBERSTAR
BEFORE THE HOUSE AVIATION SUBCOMMITTEE
REGIONAL AIR CARRIERS AND PILOT WORKFORCE ISSUES
JUNE 11, 2009

Thank you, Chairman Costello and Ranking Member Petri for calling this important hearing on regional air carriers and pilot workforce issues. The crash of Colgan Flight 3407 serves as a reminder that we must maintain constant vigilance over airline safety. Although the National Transportation Safety Board (NTSB) has not yet completed its investigation of the Colgan accident, it has identified issues related to pilot training and fatigue as possible factors, and notes in its testimony that it has made numerous recommendations to the Federal Aviation Administration (FAA) for rule changes in these areas.

The opening line of the Federal Aviation Act of 1958 states that "maintaining **safety** is the highest priority." Having a strong safety culture at the FAA must begin at the top. I am pleased to see that the new FAA Administrator Randy Babbitt is here today to discuss the issues arising from the Colgan crash. He has had a long career in aviation, including as a pilot, and I welcome his insight and action to ensure that FAA thoroughly responds to the issues that are discussed today.

Moreover, I have often observed that airline safety begins in the Company Boardroom. If regulations are paid lip service in the Boardroom in an effort to increase the bottom line, we all fail. Each airline must have a strong safety culture to ensure that the highest levels of safety are maintained.

In the early 1990s, labor and industry voiced their concerns to me regarding the disparity in the Federal Aviation Regulations between part 121 passenger carrier and part 135 commuter carrier operations. These concerns followed a spate of accidents involving commuter aircraft operating under part 135. On February 9, 1994, as Chairman of the Aviation Subcommittee, I held a hearing to determine whether FAA safety regulations should be modified to establish a single standard for all scheduled operations, regardless of size. Later that year and again in early 1995, I introduced legislation to require the FAA to establish "one level of safety"—that is, to apply its safety standards uniformly to all air carrier operations, without regard to the seating or payload capacity of the aircraft involved.

On December 20, 1995, the FAA issued a final rule to establish "one level of safety," requiring scheduled commuter air carriers to operate under the more stringent part 121 air carrier regulations.

Nevertheless, many issues concerning regional carrier safety have resurfaced. The recent NTSB hearing on the crash of Colgan Flight 3407 identified the need to closely examine the regulations governing pilot training, rest requirements, and the oversight necessary to ensure their compliance. This is a particular concern at regional carriers since the last six fatal part 121 accidents involved regional air carriers, and the NTSB has cited pilot performance as a potential contributory factor in three of those accidents. The NTSB is also looking into how pilot fatigue may have contributed to the Colgan crash.

Though today regional and mainline carriers must operate under part 121 minimum requirements for FAA-approved training programs, I am concerned that these requirements may grant airlines too much latitude, making it difficult for FAA inspectors to ascertain whether pilot training programs are adequate.

Earlier this week the FAA announced a "Call to Action" for airlines to voluntarily implement training best practices. But many of the issues arising from the Colgan crash are not new issues and may not be able to be corrected using voluntary initiatives. For example, based on an accident in 2003, the NTSB recommended that airlines establish remedial training programs for pilots who have failed a significant number of proficiency checks. In 2006, the FAA responded by issuing guidance

recommending remedial training programs. NTSB will testify today that despite this recommendation, Colgan did not institute a remedial training program.

Another important factor is Crew Resource Management (CRM), including crew pairing. CRM is an important tool that encourages enhanced situational awareness and problem solving, which encourages everyone in the crew to question decisions made, to create a safe and efficient flight operation. I am interested in hearing from our witness on any suggestions for enhanced CRM.

One of the most critical issues facing pilots today is fatigue, especially in this economic downturn and with the air carrier's emphasis on increasing productivity and driving down labor costs. Working long hours on an irregular schedule can have a deleterious effect on a pilot's decision-making abilities. Having well-rested pilots is critical to aviation safety. It is time to refocus our efforts and press the FAA to resolve these very significant and complex flight and duty issues. As I have repeatedly said: Fatigue does not show up in autopsies! Our nation's pilots must be provided adequate rest to perform their critical safety functions. Anything less is simply not acceptable!

I also have concerns about whether pilots who work second jobs or live long distances from their work stations are adequately rested when they start their work

schedule. Current FAA regulations only govern hours worked as a pilot, and leave off-duty activities to the good judgment of pilots. We will want to consider whether we need the airlines or the FAA to show more concern about off-duty activities.

As mainline carriers increasingly outsource smaller domestic routes to regional airlines, I am also concerned about the relationships that exist between these carriers. Passengers do not always realize they are flying on a carrier other than the one they bought the ticket from originally. Mainline and regional air carriers both operate under part 121 regulations but arguably mainline carriers have more resources and infrastructure to go over and above the minimum regulations issued by the FAA. When mainline carriers put out a bid for a "fee for departure" or a "shared revenue" agreement it is because they want that route flown for less money than they could afford to fly it. A question that we should explore is: do the economic pressures on regional carriers to win these bids undercut training and other safety related programs?

Today's hearing is an important reminder that Congress must continue to be ever vigilant at holding FAA accountable on its true mission, to promote safety. A strong safety culture starts at the top, with the FAA Administrator and in airline Boardrooms across America.

Thank you again, Mr. Chairman, for holding this hearing. I look forward to hearing from our witnesses.

Congresswoman Louise Slaughter's Hearing Statement
Regional Air Carriers & Pilot Workforce Issues
Subcommittee on Aviation
Thursday, June 11, 2009

Chairman Costello, Ranking Member Petri and Members of the Subcommittee:

Thank you for holding this important hearing on regional air carriers as well as for the opportunity to testify on this critical issue.

As we are all acutely aware, one of the worst plane accidents in recent U.S. history occurred earlier this year on the night of February 12, just outside of Buffalo, New York. We lost many lives that night and my thoughts and prayers continue to be with the families of the victims whose grief and loss are immeasurable.

We must learn from this tragedy in order to prevent any future loss of life. Beginning on May 12, the National Transportation Safety Board conducted 3-days of hearings on Colgan Air, Flight 3407. We were all shocked and saddened by what we learned about regional carriers.

There are still many unanswered questions and a lot of work to be done to ensure the safety of passengers and crew when travelling on regional airlines. As members of Congress, this is our responsibility and our mission.

Much of what we have learned about regional airline industry training and standards is shocking and must be addressed immediately with strong, meaningful and timely legislation.

Regional airlines' training programs are clearly inadequate. It's unacceptable for flight academies, such as Florida-based Gulfstream academy, to advertise they can train amateur pilots who have aspirations to fly for a major carrier in only three months and for as much as $30,000 in tuition. Passengers deserve only the very best trained pilots and I commend Secretary LaHood and Administrator Babbitt for recently ordering FAA inspectors to ensure regional carrier training programs are complying with federal regulations. We must demand that all pilots receive extensive and thorough training as well as enforce the highest standards for the regional carrier industry.

I was amazed to learn how little pilots are paid upon graduating from flight academies. The first officer of Flight 3407 was paid $16,000 a year. How are pilots expected to live on that sum of money? Apparently there is a joke among pilots: "What do you call a regional first officer without a girlfriend? You call him homeless." This is not funny, especially when regional carriers account for half the country's scheduled airline trips. Thousands of lives are at stake daily and these pilots must be compensated properly to ensure we attract the best possible people to fly these planes.

This leads me to the issue of fatigue, a major a factor in Buffalo's tragedy. In order to make ends meet, regional pilots may have work four or five days a week and as much as 14-to 16-hour days, coupled by having to fly back and forth across the country. It is no wonder that pilots and crew are found sleeping in airport crew lounges or even worse, in their cars. We must demand compliance with the mandate that they are allowed a sufficient amount of rest in order to remain alert and react properly to critical situations, such as a stall warning.

I was also stunned to learn that the pilot of Flight 3407 had failed five tests, including two with Colgan Air. Even more disturbing is the fact that the airline was not aware of two of the three other failures. This is absolutely unacceptable. We must provide airlines access to a pilot's entire flying history and it should be made readily available on the internet. Passengers should not have to guess whether their pilots are competent prior to boarding a plane.

Like many of my colleagues, I fly weekly on regional airlines. While I purchase my ticket from U.S. Air, the plane is in fact operated and maintained by Wisconsin Air. This information is not provided at the point of purchase, let alone prior to boarding the plane. We must require airlines to disclose to consumers the operator of their flight prior to purchasing their ticket so that they have the opportunity to make well-informed choices.

Most recently, a FAA investigation accused Florida-based Gulf Stream Airlines of overworking their pilots and breaking aircraft maintenance rules. Former pilots reported seeing parts fall off of the planes and that records were changed or erased. I was appalled to learn further that the airline installed unapproved air-conditioner compressors. These types of practices must come to an end and regional airlines must be held accountable for their negligence. I think we've only scratched the surface of anything goes and safety is second to profit.

We must address all these critical issues to ensure our safety when boarding a regional airplane. It is our responsibility and duty to help restore the public's faith in these airlines through introducing strong legislation that requires compliance with all standards and a FAA that can assure us that they are able to certify it.

There are many charges of a too cozy relationship between airline owners and the FAA. Some teeth in "suggestions" from NTSB are also necessary. Why shouldn't all the painstaking work of that agency be given the power to force compliance? Lives depend on it.

Thank you, Mr. Chairman, for your diligence and the experience you bring to this issue. I look forward to working with you.

Remarks for the Aviation Subcommittee, U. S. House of Representatives
June 11, 2009

Dr. Frank Ayers
Chairman of the Flight Training Department
Embry-Riddle Aeronautical University
600 S. Clyde Morris Blvd.
Daytona Beach, FL 32114-3900

Thank you for the opportunity to discuss the merits of the professional aviation program at Embry - Riddle Aeronautical University that produces the finest professional pilots in the industry. As you may be aware, Embry- Riddle was founded as a flight training school in 1926, one year after the U.S. Congress passed the first Airmail Act of 1925, making aviation a business, as well as, a developmental pastime. In the intervening 83 years, Embry-Riddle has remained on the cutting edge of aviation training, education and technology. In 1966, Embry-Riddle became a comprehensive university offering engineering, business, and aviation-related degrees. However, through all of this Embry-Riddle has remained true to its core of producing the best pilots in the aviation industry. Today, as a private not-for-profit university, Embry-Riddle is the largest, most technically advanced, and the best of over 100 institutions nationwide that offer integrated academic and flight training programs.

We appreciate your kind invitation to testify today and we believe that Embry-Riddle can provide useful insights into the issue of quality training for airline pilot candidates. Our experience in applied research in this area also may prove quite useful as we move forward. Our experience and research lead us to believe a successful airline pilot candidate preparation program should exhibit several critical characteristics.

First, a successful program should embrace a candidate selection process, and more importantly, a methodology to weed out unsuccessful candidates prior to their employment by the airlines. A successful program should be subject to professional/ industry peer review to ensure that high academic and professional standards are met, in addition to the required FAA supervision of its flight training operation. A program must be stable financially in order to invest in the technology and human resources required to prepare candidates for airline operations.

For an airline preparation program to be truly a success, it should have a strong academic quotient that goes far beyond the skills and knowledge required to fly general aviation aircraft, and far beyond the requirements of the FAA commercial license standards. These are simply a starting point. The academic program must educate the potential airline pilot candidate in advanced aircraft systems, the latest electronic cockpit technology, Crew Resource Management (CRM) and especially in the areas of pilot decision making and aviation safety culture. From the first day of class, the potential airline pilot candidate must understand that they are entering a rewarding, and yet unforgiving occupation that requires the highest professional standards for performance, self discipline, and safety. Additionally, the flight and simulation training program that accompanies the academic foundation, must reflect the latest technology available as well as the latest FAA, airline and military style training methodologies.

It also is imperative that upon successfully completing a rigorous program of study, candidates should find both pay and stable working conditions that respect the investment they have made in preparation for this critical career field.

We believe this convergence of high academic standards is present at Embry-Riddle Aeronautical University. The combination of a well-rounded four-year degree program, the most advanced flight

training in the industry, and the constant peer review and scrutiny by our accrediting authorities and the FAA, is why Embry-Riddle graduates are the best prepared for immediate employment and success in the airline industry, the military and commercial aviation. I have been asked to comment on several specific areas so I will review those questions in the brief time I have today, and I'll be glad to answer your questions.

1. **Why is the Embry-Riddle Aeronautical University (and generally, flight training in the university environment) quantitatively and qualitatively superior to other methods of producing professional pilots?**

Quantitative Data

A March 2008 study (which is in the process of being prepared for publication) by Embry-Riddle's Professor Antonio Cortes, of 452 new hire regional airline first officer candidates from a variety of sources (university aviation programs, the military, flight schools, others), revealed the following:

In the area of initial training success – defined as the ability to complete the regional airlines training course without additional training – the following groups scored as follows:

72% of university aviation program graduates who had earned the flight instructor certificate and had less than 500 flight hours required zero additional training.

63% of pilots with military flight experience required no additional training.

52% of all university aviation program graduates required zero additional training.

40% of pilots without an aviation higher education degree required zero additional training.

On the other end of the spectrum, those candidates that were least successful in initial regional pilot training and required significant additional training were:

15% of pilots from Commercial Flight Schools or FBOs

13% of pilots with degrees, but not from aviation higher education

11% of pilots without degrees

8% of pilots with degrees from aviation higher education

Qualitative Data

The four-year professional aviation program provides several advantages to future employers, the traveling public, as well as, to our graduates:

First, the non–profit nature of our institution ensures that academic and flight training are less subject to the economic challenges of the aviation industry. At the same time, the students are subjected to very rigorous academic standards. This results in a stable four-year academic and flight training program that starts with a larger number of students who desire employment as professional pilots, and through self selection, failure to meet academic or flight training standards, or for other reasons, results in a lesser number of exceedingly well-prepared graduates. This four year selection process is present in all universities to some degree, and serves the professional aviation community well. As a footnote, this is a difficult time for "for profit" flight training only providers. In the last six months, two different flight schools have ceased operation due to financial insolvency in the greater Daytona Beach area alone. In the last few years that number is even greater. The stability offered by the university environment should not be underrated.

Second, the four year experience goes far beyond the requirements of a flight school environment. At Embry-Riddle, the Aeronautical Science degree is a rigorous Bachelor's of Science program with strong Math and Physics requirements. The first two years of the program cover these prerequisites, as well as, the basic flying skills required by non-university flight training schools. During the last two years of the program, our graduates receive the same academic content that a senior airline Captain receives over a lifetime. Mentored by senior faculty who have hands-on industry experience, our students are taught subjects such as: aviation safety culture, cockpit resource management, advanced aircraft systems (including autopilots/ anti-icing systems), electronic flight controls, and glass cockpits, to name a few. This produces a young pilot who has a deeper understanding of a professional pilot's responsibilities and knowledge requirements than those who do not receive an academic education in conjunction with flight training. Actual data shows that university-prepared graduates of flight training programs excel to a higher degree in specific airline training than those prepared in any other way, including those trained by the military.

Third, since Embry-Riddle is a non-profit institution, flight training is strictly a break- even financial unit. We invest in the safest and most efficient training equipment, procedures and people that we can bring together. To this end, the university equipped our entire fleet with the Automatic Dependant Surveillance Broadcast System (ADS-B) in 2003 to increase the safety of our fleet by providing electronic aircraft avoidance information to the pilot. As you are aware, this equipment will not become mandatory in the industry until the year 2020. Embry-Riddle has produced thousands of professional pilots over the last six years who have flown with this advanced equipment and are the most prepared in industry for the ushering in of this new technology. Also, our aircraft fleet consists of all recently manufactured aircraft, and this fall, will be an all glass cockpit fleet--with equipment, in many cases--superior to the equipment that our students will fly after they graduate.

Fourth, the curriculum is focused on training jet pilots. The capstone course is conducted in a Regional Jet Flight Training device (simulator) and brings together all the knowledge gained in the classroom and in the airline-style general aviation flight training we provide, to produce a graduate who can think, decide, and excel at jet speeds and in difficult situations.

2. What is the role of peer review (SACS and AABI) in the university aviation environment?

As a four-year institution, Embry-Riddle is subject to rigorous peer review by the Southern Association of Colleges and Schools (SACS) which ensures general academic quality, as well as, by the Aviation Accreditation Board International (AABI) which accredits the professional aviation programs of 32 colleges and universities. These peer reviews, conducted at five and ten year intervals, examine every aspect of our academic and flight training programs for quality, relevance, and to assure our graduates meet these high standards. The peer reviews also provide opportunities for the cross flow of ideas and best practices among the member institutions, and foster a spirit of collaboration among the member schools, which immediately benefits the students through improved academic and training standards.

3. **What regulations is Embry-Riddle governed by and to what extent does the FAA oversee our program?**

Embry-Riddle is the only major university, or general aviation flight training program to be certified under Part 142 of the Code of Federal Regulations (CFR). The majority of general aviation training-based airline training programs are guided by the less stringent Part 141 or Part 61 rules. Part 142 training is the same program used by most major airlines and it instills a greater sense of training discipline, allows increased use of flight simulation, and invites even greater FAA participation in our training program.

As such, our flight training program is effectively modeled on the airline policies and procedures that our students will encounter upon graduation. A full 35% of our flight training is accomplished in flight simulators and flight training devices that allow for the introduction of real world flight scenarios designed to increase the student's ability to think, plan, and make sound decisions in real time. These flight training devices, which we call "Level 6 plus", not only meet the requirement levied by the FAA, but exceed them in two critical areas—flight dynamics and visual display.

Under Part 142, our students receive check rides from FAA designated Training Center Evaluators (TCE's) who are trained and approved by the FAA. We welcome this level of direct supervision of our program. It promotes a healthy spirit of "regulatory compliance" among our students and staff and ensures the quality of our graduates remains high.

Our aircraft maintenance facility also is certified as a "Repair Station" under Part 145 of the CFR and, as such, is subject to regular notice and no notice inspection visits by the FAA. Neither the Part 142 nor 145 certifications are required, but they are indicative of the close relationship that Embry-Riddle and our other university aviation programs have with the FAA.

4. **What do Embry-Riddle professional pilot students do after they graduate?**

The 2008 graduation classes in Aeronautical Science, the professional piloting program, and (most recent data available) were broken down as follows:

On the date of graduation (May 2008)

46.6% had obtained employment*

12.5 % were continuing their education.

Of those employed:

32% were working in flight training.

21% went to the airlines**

18% went into the military

12% went to work for a Fixed Base Operator (most likely as a flight instructor)

17% other

* Note that these results are from a self-reported survey and so many students had not responded.

** Of those reporting, the following airlines were listed: Spirit, Airtran, Atlantic Southeast, Peninsular Airways, PSA, and Com Air

For students one year out from graduation (latest data is for the class of 2006):

As of May 2007:

90% had obtained employment.

Of those employed as professional pilots:

41% went to the airlines***

28% were working in flight training

18% went to the military

13% other

*** This survey did not specify which airline the student was employed by.

The data shows that the typical career pattern for an Embry-Riddle graduate is to move into flight training as an instructor for one to two years and then, after having built up hours and experience, move on to a regional airline. Embry-Riddle employs nearly 75 of these recent graduates as flight instructors, who build valuable experience under the watchful eyes of senior instructor pilots and managers in preparation for their airline career. The value of this flight training instructor experience is that it further enhances and builds excellent skills in Crew Resource Management(CRM), work ethic, safety awareness, discipline, professional responsibilities, judgment and decision-making. It is analogous to a residency for a budding physician. Embry-Riddle considers this flight training experience as the capstone to our graduates' educational experience and key to a successful career.

5. **What is the cost of the program?**

Embry-Riddle is a not-for-profit private university.

Tuition and room and board is approximately $120,000 for four years.

The flight training portion costs approximately $45,000.

6. **In summary, why is the Embry-Riddle Professional Pilot Program (and other university collegiate programs) a better way to train airline and military pilots?**

The four-year academic and flight training environment provides an excellent "natural" selection process. A combination of high academic standards and normal attrition ensures that only the best graduate from the program and move on to the airlines. The non-profit nature of the university structure, and the stability it provides, promotes a strong emphasis on program quality, technological excellence, and safety culture. In the Northeast Florida area alone we have seen several stand alone flight training providers come and go in the last few years.

The peer review of four-year institutions by SACS for overall academic quality, and by AABI for specific areas of professional pilot preparation, ensure the highest academic and flight standards are maintained. This process produces the best qualified pilots in the industry, a claim which is backed up by empirical data.

The strong academic foundation in modern high altitude airline-oriented jet academics creates Embry-Riddle graduates who fully understand the implications of jet aircraft systems failures; such as aircraft icing, use of autopilots and automation, advanced weather study, glass cockpits, ADS-B, and other knowledge items critical to aviation safety.

The airline-based CFR Part 142 flight training program provides for active FAA supervision and instills flight discipline, good judgment and excellent flying skills. This is accomplished through the use of advanced flight training devices (simulators) and state-of-the-art aircraft with the latest in modern glass cockpit technology.

The combination of the academic program (also Part 142 supervised) and the flight training program in an integrated four-year process of mentoring and growing young people into fully qualified airline pilot candidates, and a means to guard against potential airline disasters.

7. What are the challenges our graduates face going into the workforce?

Our pilots were in very high demand for their skills until the recent economic downturn, and they will be again. However, our students who come to the university, and remain with us as flight instructors after graduation, often find that the leap to a regional airline may often involve a significant cut in pay, as well as, a requirement to commute to their job weekly. Some take second jobs while working as line pilots. Others rely on living with families or friends until the first year has been completed. All of this increases the stress and fatigue on these fine young professionals. In view of our graduates' excellent technical skills, safety responsibilities, and service to the industry, we believe that the pay and working conditions that they encounter could be improved.

Thank you for the opportunity to discuss university flight education and specifically the contribution that Embry-Riddle Aeronautical University brings to this field.

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Embry-Riddle Aeronautical University, the world's largest, fully accredited university specializing in aviation and aerospace, offers more than 30 degree programs in its colleges of Arts and Sciences, Aviation, Business, and Engineering. The university educates more than 34,000 students annually in undergraduate and graduate programs, with accreditation pending for Embry-Riddle's first doctoral programs, in Aviation and in Engineering Physics. Embry-Riddle educates students at residential campuses in Prescott, Ariz., and Daytona Beach, Fla., through the Worldwide Campus at more than 130 campus centers in the United States, Europe, Canada, and the Middle East, and through online learning. For more information, visit www.embryriddle.edu.

STATEMENT OF THE HONORABLE RANDOLPH BABBITT, ADMINISTRATOR, FEDERAL AVIATION ADMINISTRATION, BEFORE THE HOUSE OF REPRESENTATIVES, COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE, SUBCOMMITTEE ON AVIATION, ON REGIONAL AIR CARRIERS AND PILOT WORKFORCE ISSUES. JUNE 11, 2009.

Chairman Costello, Ranking Member Petri, Members of the Subcommittee:

Thank you for inviting me here today to discuss the Federal Aviation Administration's (FAA's) role in the oversight of air carriers. Let me begin by saying that we at the FAA mourn the tragic loss of Colgan Air Flight 3407 deeply. This is an agency dedicated to aviation safety; any loss is felt keenly by us all. Likewise, our sympathies go out to the families and loved ones of the passengers and crew of Air France Flight 447.

The National Transportation Safety Board (NTSB) conducted a public hearing May 12-14, 2009 on the Colgan Air crash. Several issues came to light regarding pilot training and qualifications, flight crew fatigue, and consistency of safety standards and compliance between air transportation operators. Given that the NTSB has not yet concluded its investigation, I cannot speak today to any of the potential findings. I can, however, outline for you the FAA's oversight responsibility with regard to safety oversight of operators, pilot training and qualifications, and flight and duty times for flight crew, and my focus on aviation safety as my top priority.

One Level of Safety

In the mid-1990s, the FAA revised its regulations on air carrier safety standards to reflect "one level of safety," requiring regional air carriers to operate under the same rules and at the same level of safety as their major airlines counterparts. I am proud to say that while I was president of the Air Line Pilots Association, I led the efforts on working with the FAA to make these changes.

Now, all air carriers that operate aircraft with 10 or more seats are required to meet the same safety standards and are subject to the same level of safety oversight across the board. Specifically, the air carriers are required to comply with the regulations embodied in Part 121 of Title 14, Code of Federal Regulations (Part 121).

FAA safety oversight for these carriers is conducted through the comprehensive Air Transportation Oversight System (ATOS). ATOS has three fundamental elements: design assessment, performance assessment, and risk management.

- Design assessment ensures an air carrier's operating systems meet regulatory and safety standards.
- Performance assessments confirm that an air carrier's operating systems produce intended results, including mitigation or control of hazards and associated risks.
- Risk management process identifies and controls hazards and allocates FAA resources according to risk-based priorities.

Under ATOS, FAA's primary responsibilities are: (1) to verify that an air carrier is capable of operating safely and complies with the regulations and standards prescribed by the Administrator before issuing an air carrier operating certificate and before approving or accepting air carrier safety programs; (2) to re-verify that an air carrier continues to

meet regulatory requirements when changes occur by conducting periodic safety reviews; and (3) to continually validate the performance of an air carrier's approved and accepted programs for the purpose of continued operational safety.

Pilot Training and Qualifications

The FAA offers several types of pilot certification. The typical FAA certification progression for an airline pilot is Private Pilot (a license to fly oneself and others, without charge, under Visual Flight Rules), Commercial Pilot (a license needed to fly for compensation or hire as a second in command), and Airline Transport Pilot (a license to fly as a captain for an airline), with an Instrument Rating (a rating that one is proficient at using instrument navigational aids and other avionics) usually added to the Private Pilot certificate. For each level of pilot certification, the individual must demonstrate aeronautical knowledge as well as flight proficiency. Each new level of certification requires the satisfactory completion of the previous rating. In other words, it is not permissible for an individual to receive a Commercial Pilot certificate without first completing the requirements of the Private Pilot Certificate. For airline pilots to be captains of aircraft larger than 12,500 pounds, or any jet aircraft, they must complete specialized training for the specific aircraft and test for a type rating in that aircraft.

The requirements for each of these pilot certifications, including the Instrument Rating, are summarized below:

1. Private Pilot	**(Minimum of 40 hours at certification)**
a. Aeronautical knowledge	Complete a comprehensive ground school and pass a written test composed of at least the following: aircraft systems, weight and balance, aeronautical charts, Federal Aviation Regulations (FARs), airport operations, national air space, emergency procedures, communications, and navigation requirements. The ground school must be conducted by an authorized instructor.
b. Flight proficiency	Minimum of 40 hours, composed of at least 20 hrs from an approved instructor, 10 hrs of solo, 3 hrs of night time, and 5 solo hrs of cross country. Pass a flight check administrated by the FAA or designated evaluator.
2. Commercial Pilot	**(Minimum of 250 Hours)**
a. Aeronautical knowledge	FARs, accident reporting procedures, aerodynamics, meteorology, weather reports and forecast, safe operations of the aircraft, weight and balance, performance charts, aircraft limitations, aeronautical charts, navigation, aeronautical decision making, aircraft systems, maneuvers procedures and emergency operations, night and high altitude operations, and operations in the national airspace system.
b. Flight proficiency	Minimum of 250 hours to include day, night and flight by reference to aircraft instruments. Pass a flight check administrated by the FAA or designated evaluator.
3. Instrument Rating	
a. Aeronautical knowledge	Must complete ground training on instrument flight conditions and procedures. Pass an aeronautical test composed of the following: FARs, Air Traffic Control (ATC) system, instrument procedures, Instrument Flight Rules (IFR) navigation, instrument approach procedures, use of IFR charts, weather reports and for casts, recognition of critical weather situations, aeronautical decision making, and crew resource management.
b. Flight proficiency	Minimum of 50 hrs cross country as Pilot in Command (PIC). 40 hours of actual or simulated flight time, 15 hrs with an authorized instrument instructor. Pass a flight check administrated by the FAA or designated evaluator.
4. Airline Transport Pilot	**(Minimum of 1,500 Hours)**
a. Aeronautical knowledge	FARs, meteorology, Knowledge of effects of weather, general weather and Notices to Airmen (NOTAM) use, interpretation of weather charts, maps and forecasts, operations in the national airspace system, wind sheer and micro burst awareness, air navigation, ATC procedures, instrument departure and approach procedures, enroute operations, airport operations, weight and

	balance, aircraft loading, aerodynamics , aircraft performance, human factors, aeronautical decision making, and Crew Resource Management (CRM). Must pass an FAA test on these subjects.
b. Flight proficiency	1500 hours total time. 500 hrs cross country, 400 hours night time. Pass a flight check administrated by the FAA or designated evaluator on the maneuvers required by the FAA's Airline Transport Pilots Practical Test Standards.

In addition to these FAA certifications, airline pilots receive initial and additional recurrent training through the air carriers for whom they work. These training programs are evaluated and approved by the FAA. An air carrier training program contains curricula, facilities, instructors, courseware, instructional delivery methods, and testing and checking procedures. These training programs must meet the requirements of Part 121, the regulations for commercial air carriers, to ensure that each crewmember is adequately trained for each aircraft, duty position, and kind of operation in which the person serves. An air carrier or operator's training program is divided into several categories of training that are specific to the operator, and which may include initial training for new hires, initial training on equipment, transition training, upgrade training, recurrent training, and requalification training.

Training programs are approved by the FAA in two stages: initial training approval and final approval. Initial approval consists of a thorough review by the Principal Operations Inspector (POI) for that carrier of the training program to ensure that all applicable requirements of Part 121 have been met and are covered in the training program. Once initial approval is granted by the POI, the POI will observe several training classes, which include ground training and flight (simulator) training.

The quality of the training is determined by an evaluation of passing scores of the pilots. Direct observation by the POI of testing and checking is an effective method for determining whether learning has occurred. Examining the results of tests, such as oral or written tests or flight checks, provides a quantifiable method for measuring training effectiveness. The POI must examine and determine the causal factors of significant failure trends. The POI periodically monitors the training and evaluates failure rates to determine whether the training program continues to comply with FAA standards, and also evaluates the program.

On January 12, 2009, the FAA issued a Notice of Proposed Rulemaking (NPRM) regarding upgraded training standards for pilots, flight attendants and dispatchers. This proposal is the most comprehensive upgrade to FAA training requirements in 20 years and was drafted working with an Aviation Rulemaking Committee (ARC) that included pilots, flight attendants, airlines, training centers, FAA, and others.

While aviation has incorporated many technologies over the years to prevent accidents by addressing findings from NTSB accident investigations, human factors remain a source of risk. Improving human performance is a central element to improving safety. Thus, the FAA proposal is aimed at using best practices and tools to help pilots, flight attendants, and dispatchers (1) avoid the mistake and (2) respond better if there is a mistake made.

The aviation industry has moved to performance-based training rather than prescriptive training to reflect that the way people learn has changed. New technology, particularly simulators, allows high-fidelity training for events that we never could have trained to in the past using an aircraft, e.g., stall recovery. We now have qualitative measures to measure actual transfer of knowledge. We can determine proficiency based on performance, not just on the number of hours of training. While the major airlines are already doing this type of training, our proposed rule incorporates best practices and tools so that all operators will use the upgraded standards.

One of the pilot training issues that has arisen in the wake of the Colgan Air investigation is that of failed check rides and whether air carriers are informed of a pilot-applicant's failures. A check ride is a practical examination given by an FAA check airman or airline employer that checks or tests the proficiency of the pilot to perform certain skills. Under the Pilot Records Improvement Act of 1996 (PRIA), air carriers must obtain the last five years' performance and disciplinary records for a prospective pilot from their previous employer. These records would include information regarding initial and recurrent training, qualifications, proficiency, or professional competence including comments and evaluations made by a check airman.

PRIA also requires carriers to obtain records for a pilot from the FAA. FAA records regarding pilot certification are protected by the Privacy Act of 1974. However, PRIA requires carriers to obtain a limited waiver from prospective pilots allowing for the release of information concerning their current airman certificate and associated type

ratings and limitations, current airman medical certificates, including any limitations, and summaries of closed FAA legal enforcement actions resulting in a finding by the Administrator of a violation that was not subsequently overturned. Although PRIA does not require carriers to obtain a release from prospective pilots for the entirety of the pilot's airman certification file, including Notices of Disapproval for flight checks for certificates and ratings, FAA guidance suggests to potential employers that they may find this additional information helpful in evaluating the pilot. In order to obtain this additional information, a carrier must obtain a Privacy Act waiver from the pilot-applicant.

Pilot Fatigue

Another one of the concerns that has come out of the NTSB's investigation is the issue of pilot fatigue and what factors may contribute to pilot fatigue. This is an area of particular interest to me. The FAA regulates flight and duty limitations for all Part 121 pilots conducting domestic operations. The "crew rest" elements of the regulation are designed to mitigate chronic and acute fatigue, primarily through limitations on flight hours and defined hours of rest relative to flight hours. For example, the regulation outlines:

- No more than 30 flight hours in any 7 consecutive days
- At least 24 hours of consecutive rest during any 7 consecutive days
- Varying rest requirements relative to hours flown in any 24 hour period

The rule also defines rest period activities and prohibitions, and provides provisions for circumstances under which flight time limitations can be exceeded, such as in adverse weather operations. As of late 2000, an FAA legal interpretation clarified that under

these rules a pilot crew member, flying under domestic flight rules, must "look back" 24 hours and find eight hours of uninterrupted rest before beginning any flight segment.

Pilots also have a regulatory responsibility to not fly when they are not fit, including being fatigued. Thus, while the carrier schedules and manages pilots within these limitations and requirements, the pilot has the responsibility to rest during the periods provided by the regulations. The FAA has long held that it is the responsibility of both the operator and the flight crewmember to prevent fatigue, not only by following the regulations, but also by acting intelligently and conscientiously while serving the traveling public. This means taking into consideration weather conditions, air traffic, health of each flight crewmember, or any other circumstances (personal problems, etc.) that might affect the flight crewmember's alertness or judgment on a particular flight.

The FAA has initiated a number of fatigue mitigation efforts in recent years:

- The FAA took steps in 2006 to address fatigue mitigations for Ultra-Long Range flights (more than 16 hours of flight time) and associated extended duty times.
- The FAA held the 2008 Aviation Fatigue Management Symposium to provide the industry the latest information on fatigue science, mitigation, and management. (Symposium proceedings are available on www.faa.gov.)
- The FAA is in the process of writing an Advisory Circular regarding fatigue that incorporates information from the Symposium.

However, because piloting is a highly mobile profession, one of the persistent challenges is that pilots are often domiciled in places that are hundred of miles from the airlines' bases of operations, e.g., the pilot lives in Los Angeles but is based out of the airline employer's Atlanta operations. This means that the pilot's "commute" is a five hour plane ride. Though the commuting pilot is riding in the jump seat or in a passenger seat,

she is not technically considered to be on duty during that time. Whether this has an impact on pilot fatigue is something that the FAA continues to monitor and examine to determine whether it is an appropriate area for regulation.

As the NTSB moves forward on its investigation and presents its findings, the FAA continues to examine the facts that are coming to light. We continue our vigilance in assessing the safety of our system and taking the appropriate steps to improve that. While we are in an extremely safe period in aviation history, the Colgan Air accident and the loss of Air France 447 remind us that we cannot rest on our laurels, that we must remain alert and aware of the challenges in our aviation system, and that we must continue to work to enhance the safety of the system. This is a business where one mistake is one too many.

Chairman Costello, Ranking Member Petri, Members of the Subcommittee, this concludes my prepared remarks. Thank you again for inviting me here today to discuss the FAA's role in the oversight of air carriers. I would be happy to answer any questions that you might have.

U.S. Department
of Transportation

**Federal Aviation
Administration**

Office of the Administrator

800 Independence Ave., S.W.
Washington, D.C. 20591

JUL 8 2009

The Honorable Jerry F. Costello
House of Representatives
Washington, DC 20515

Dear Congressman Costello:

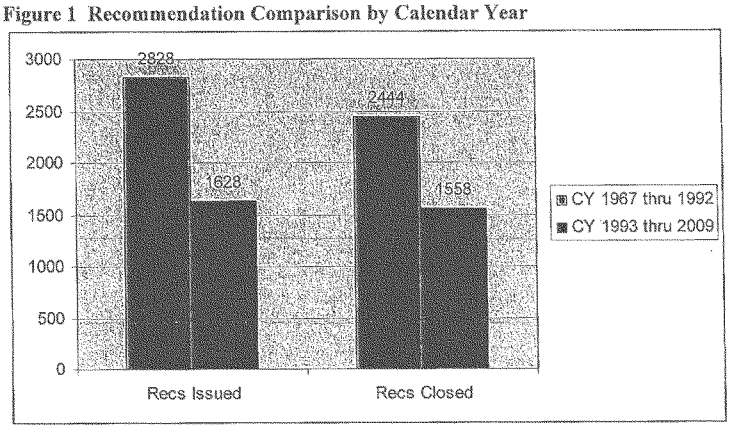
Given the focus on this issue at our recent hearing, I want to take this opportunity to provide you with some additional information related to the Federal Aviation Administration's responsiveness to National Transportation Safety Board (NTSB) recommendations. I would like to begin by providing you with a brief overview of the NTSB process and then provide you the status of open NTSB recommendations.

- The FAA has 90 days upon initial receipt of a NTSB safety recommendation to provide a response with its proposed action;
- Once the FAA has provided its initial response to a recommendation, the NTSB reviews the response and usually classifies it as acceptable or unacceptable. The NTSB may wait for further information before classifying a recommendation. On average, the NTSB provides a response within six months of being notified by FAA. The FAA responded to 133 recommendations from January 2008 through November 2008. The FAA is still waiting on a response from the NTSB for 51 of those recommendations;
- Standard practice is to provide an update to the recommendations annually until the NTSB classifies a recommendation as closed; and
- The FAA and the NTSB staff meet regularly to address individual safety recommendations and program management issues.

Statistical Data for the Years 1967 to Present

The FAA works diligently in responding to NTSB recommendations. There are many issues that require long-term efforts with significant research and deliberation before the FAA can fully implement the recommendation. For example, the NTSB recommended that FAA develop and implement design or operational changes to reduce flammability of fuel tanks. It took eight years of research, and it was FAA engineers who ultimately developed a technical solution to address this risk. Rulemaking to require implementation took almost three years. The NTSB does not close a recommendation until all actions are complete. Figure 1 shows the work of the FAA in responding to NTSB safety recommendations.

Figure 1 Recommendation Comparison by Calendar Year



90 percent of all recommendations issued from 1967 to present have been closed
82 percent of all closed recommendations have been closed acceptable

Status of Open Recommendations

NTSB Classification	Number of Recommendations
Open Acceptable/Open Acceptable Alternate • Actions completed and awaiting closure (63) • Actions in regulatory process (41) • Actions other than regulatory (170)	274
Open Unacceptable Response	90
Open Awaiting Response*-The Board has asked for more information	1
Open Response Received-Has not been classified by the NTSB yet	71
Open Awaiting Response-Initial 90-day cycle	18
	Total: 454

*The NTSB received the FAA's initial response but asked for additional information before they classify the recommendation.

Even though there are 454 open recommendations, the chart shows that well over half are in process and acceptable to the Board. Seventy-one recommendations are awaiting classification from the Board and 90 are classified as open unacceptable. I can assure you FAA will continue to work hard to meet the intent of the NTSB recommendations, and I am committed to responding to all recommendations. If the FAA is unable to fully meet the intent of any recommendation I will provide a response to the NTSB explaining why.

We have sent an identical letter to Senator Byron L. Dorgan.

If I can be of further assistance, please contact me or Mary U. Walsh, Acting Assistant Administrator for Government and Industry Affairs, at (202) 267-3277.

Sincerely,

J. Randolph Babbitt
Administrator

cc: Senator Jim DeMint
Congressman Tom Petri

Testimony of
Roger Cohen, President of the Regional Airline Association
Before the Subcommittee on Aviation, Committee on Transportation and Infrastructure
U.S. House of Representatives
June 11, 2009

Chairman Costello, Ranking Member Petri, and Members of the Subcommittee:

My name is Roger Cohen. I am the President of the Regional Airline Association. The 31 member airlines of RAA carry more than 90 percent of the passengers traveling on regional aircraft.

The circumstances that prompted the Subcommittee to convene today's hearing are tragic. We share the Subcommittee's concern for the lives of the passengers and crews that have been lost and the grief suffered by their families and loved ones.

The challenge now facing this Subcommittee, federal aviation safety agencies, and the aviation industry is to review all of the issues and take whatever steps are necessary to prevent accidents in the future.

Federal safety statistics clearly show that flying is the safest mode of travel. A person is far more likely to have a fatal accident traveling in a car, train, or bus than traveling by air. According to the National Safety Council, the fatality rate for cars is 7,700 percent higher than for commercial aircraft and the fatality rate for trains and buses is 300 percent higher. This remarkable safety record is the result of decades of dedicated work from aviation safety professionals, both in the government and in the industry.

Nevertheless, the pursuit of improved aviation safety is a shared and continuous effort, to which regional airlines are committed, along with everyone else in the commercial airline industry. The industry's overarching goal has been and always will be zero accidents and zero fatalities. We are committed to working with Congress, the FAA, the NTSB, and aviation safety experts in academia to ensure that we can meet this goal.

Mr. Chairman, for the purposes of aiding this Subcommittee with its inquiry, our testimony will focus on two broad areas.

First, we will take a few moments to reacquaint the Subcommittee with the regional airline industry. Anyone who has done background research on the industry prior to this hearing would have found a large number of inaccuracies portrayed in the media, and such misconceptions will not help the Subcommittee carry out its responsibilities.

Second, we will talk about the steps regional airlines have already taken and the actions they plan to take to even further intensify their focus on aviation safety. The regional airlines are launching a new initiative to advance industry safety standards. We also believe that Congress can provide additional safety tools for the industry.

Regional Airlines

Regional airlines operate regional jets or turboprop aircraft ranging in size from about 10 to 100 seats and provide scheduled passenger service on short- and medium-haul routes that connect more than 600 smaller towns and mid-size cities to each other as well as to the nation's major hub airports. This network offers passengers seamless service to almost every community in the country and many around the globe, serving 160 million passengers last year.

Shorter flights to less heavily populated areas on smaller aircraft should not be equated with fewer flights or limited reach. Over the last 20 years, the industry has worked to match aircraft size to the market, leading to vast improvements in service to many communities that would otherwise not have air service. Today, more than 50 percent of all scheduled flights are operated by regional airlines and three out of every four commercial airports in the United States are served exclusively by regional airlines.

Regional airlines operate in full partnership with major airlines. Indeed, major airlines either contract with regional airlines to provide service on selected routes or have an ownership stake in regional airlines.

In this relationship, a regional airline is responsible for providing the crew and maintaining the aircraft. The major airline, for which the regional carrier is providing service, determines flight schedules and fares and sets customer service standards.

From the passenger's perspective, the brand of the major airlines is in full view throughout the travel experience. In most cases, the passenger buys the ticket from the major airline, typically checks in at the major airline's counter, may find the in-flight magazine of the major airline, and may even sip a beverage placed on the cocktail napkin of the major airline.

Regional airlines and their major airline partners operate as a single, integrated system. The notion of two separate systems is a misconception.

That misconception extends to safety standards and it needs to be corrected if the Subcommittee is to have an accurate grasp of the situation. The fact is that all carriers are subject to the same strict FAA safety standards and requirements and receive the exact same level of safety oversight, notwithstanding so many erroneous press accounts.

Pilot Qualifications. Regional airline pilots are subject to the same training requirements that apply to pilots working for major carriers. The rules are the same for all airlines.

Pilots must complete rigorous classroom and simulator training and regularly pass extensive flight checks given by FAA-approved examiners throughout their careers. Each and every check tests a pilot's knowledge and ability to perform both routine and emergency procedures. Each and every question, procedure and maneuver must be executed fully to FAA standards. Unlike many professional tests, the checks that airline pilots must complete are unforgiving. What this means is that airline pilots must complete every aspect of their flight check successfully, in effect scoring a grade of 100 percent, or they cannot fly for the airline. When this happens, the pilot must receive remedial training and successfully complete a re-check before being allowed to fly again.

The FAA also requires pilots to be separately trained and qualified on every type of airplane that they will be operating.

Regional airlines comply with these strict safety standards and regularly operate under internal standards above and beyond FAA requirements. For example, the average experience of the RAA member airline flight crews is 3075 total flight hours for first officers and 8500 for captains, which far exceed the FAA requirements of 500 and 1500 hours, respectively.

Pilot Background Checks. All airlines conduct in-depth background and safety checks on pilots before they are hired. Two separate sources are consulted.

The FAA maintains a database of pilot information established by the Pilot Records Improvement Act of 1996 or PRIA. This database includes information about a pilot's certificates, ratings, medical status and any rule violations for the previous five years. In addition, this law requires airlines to contact the pilot's previous airline employer to obtain information about his or her training performance, drug and alcohol tests, and employment status. FAA maintains a separate database, not subject to the PRIA law, which includes a pilot's history of FAA check ride disapprovals. Certainly, integrating a real-time database containing all pilot records would improve access to this vital information.

Pilot Fatigue. Rested, alert, and focused pilots are essential for aviation safety. All parties – the FAA, airlines, and pilots – have a role to play in ensuring that pilots are well rested.

The FAA has rules in place to avoid fatigue. These rules apply to all pilots and all airlines.

- Pilots cannot fly more than 100 hours per month. In practice, pilots typically fly less than that – 80 to 82 hours during a month.
- Pilots can fly no more than eight hours per day.
- Pilots are required to get at least nine hours of time off between trips.

All airlines construct their pilot schedules in strict adherence to federal rest rules. In addition, many airlines have agreements with their pilot groups, further limiting the length of their scheduled working days. Computers are used to track pilots' flight and duty time to ensure that they are working within the FAA rest rule limits. Pilots are also required to maintain their own log books and are directed to alert airline management if they are approaching a limit. These systems alert airline management if a pilot is approaching FAA limits.

Additionally, airlines provide training to pilots so that they can accurately recognize the signs of fatigue. It is the professional responsibility of every pilot, if he or she does not feel sufficiently well rested, to say so and not fly. Airlines have non-punitive policies in place that allow pilots to drop the trip if the pilot feels incapable of flying alertly. Backup flight crews are in place specifically for this purpose.

Pilots must maintain this professional responsibility and ethical obligation to passengers and their fellow crewmembers to conduct themselves in a manner that ensures they are well rested. In fact, the great majority of regional airline pilots are consummate professionals that embrace their responsibilities without hesitation and without compromise. While there are strict FAA rules and regulations in place to ensure pilots have enough time off between duty periods, it is the pilot's responsibility to ensure they get enough rest during their time off and to notify the airline promptly in any case where the pilot did not get sufficient rest.

Among the other issues of interest to this Subcommittee, which I would like to review, is pilot compensation.

Pilot Pay. The entire airline industry – regional, majors, and low-cost airlines – has a highly unionized work force that is paid a fair and reasonable wage. Pay levels, the option to commute, and virtually all other work rules are negotiated through the collective bargaining process.

The average salary for a regional pilot with the rank of Captain at an RAA member airline is $76,000 a year. This salary is comparable to other professions that utilize similar skills. For example, according to the Bureau of Labor Statistics, the average salary in the architecture and engineering fields is $71,430 per year. In the computer industry or in mathematical sciences the average annual salary is $74,500.

A First Officer has less seniority and responsibility than a Captain. The average salary for a First Officer, working at an RAA member airline, is $32,000 a year. Again, this salary is in line with comparable professions. The average salary for a paramedic is $31,980; medical assistants average $29,060 per year.

Pilots earn a fair and reasonable wage and also receive valuable benefits such as free airline travel, paid leave, and comprehensive benefits. Also, pilots, while on duty, receive collectively-bargained *per diem* expenses.

Commuting. Some pilots choose to commute and live away from their crew base, which is the airport from which they will begin and end every flight assignment. In fact, commuting is a common and long-standing practice among crewmembers at all airlines, regional and major.

Whether to commute and what constitutes an acceptable commute is a choice made by each individual crewmember. In fact, the ability to live where they want to and to fly to where they work is a valuable perk that attracts pilots to the profession. It is important to note that, while many pilots commute, many others do not. Commuting is not necessitated by economics. In fact regional airlines have crew bases in dozens of attractive and affordable communities across the country.

On the other hand, those who choose long commutes have a professional responsibility to arrive at work properly rested. As I mentioned earlier, the airlines have non-punitive policies in place to relieve a pilot who is not rested or feels fatigued.

Moving Forward: Strategic Safety Initiative

In furtherance of this increased attention to maintaining rigorous flight crew training, the Regional Airline Association and its member airlines have decided to launch a Strategic Safety Initiative to study and to recommend actions responsive to challenges facing the airline industry. This initiative has four elements.

1. **Review Safety Procedures**
   The Regional Airline Association will form a task force comprised of safety directors and operations directors from the regional airlines to review safety procedures, giving particular attention to any issue or procedure cited by the NTSB as a contributing factor to any accident.

2. **Study Impact of Fatigue**
RAA will commission a study to look at the impact of fatigue and other human factors on pilot performance. The study will be conducted by an independent and expert organization, in all likelihood a university with a respected aviation program.

The study will be framed by a Strategic Safety Advisory Board comprised of industry experts drawn from the ranks of academia, industry, and safety regulators.

3. **Fatigue Awareness Management Program**
The Regional Airline Association will create a fatigue awareness management program for use by its member airlines.

4. **Recommendations to Congress**
We are committed to working with Congress on this initiative and believe that Congress can provide the aviation industry with additional safety tools, including:

a. **Single Database of Pilot Records**
Requiring the FAA to maintain a single, integrated database of pilot records would provide airlines with critical, real-time information about pilot qualifications and performance, thereby improving the process of recruiting, hiring, and training new pilots.

b. **Random Fatigue Tests**
Airlines are already required to conduct random drug and alcohol tests on pilots. RAA recommends exploring with FAA and all industry stakeholders the concept of random fatigue tests on pilots to help ensure that pilots are indeed rested before flying.

c. **Commuting**
We believe it would be prudent for Congress, working with all stakeholders, to examine commuting in depth, including the possibility of limiting commuting time prior to beginning a work assignment.

d. **Extend Background Check Timeframe**
Under current law, an airline conducting a background check on a pilot can only review the last five years of the pilot's safety records, qualifications, and training. Extending the review period from five to ten years will help airlines identify safety risks.

e. **Audits of Cockpit Voice Recordings**
Currently, cockpit voice recordings can be reviewed only as an accident investigation tool. Yet, as we saw in the flight 3407 accident, pilots have violated the rule requiring sterile cockpit below 10,000 feet. Similar to ASAP and other diagnostic preventative safety programs, an initiative permitting airlines to conduct random audits could provide valuable information.

f. **Improved Tracking and Analysis of Check Rides**
Though every airline pilot is required to pass frequent check-rides during their service, the FAA and the airlines may be able to increase the level of safety through more detailed analysis of this testing over the entirety of a pilot's career. By working with regulators and the employee groups, the industry may develop a

better methodology for assessing pilot performance and instituting remedial training programs that will ensure a higher level of safety.

We will be moving expeditiously to implement this initiative and have already begun compiling a list of aviation experts as candidates for our Strategic Safety Advisory Board. We will keep the Subcommittee informed of these activities.

Mr. Chairman, the Regional Airline Association appreciates the opportunity to testify before this Subcommittee and I welcome any questions you might have.

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TESTIMONY OF R. CURTIS GRAEBER ON BEHALF OF

THE FLIGHT SAFETY FOUNDATION

TRANSPORTATION AND INFRASTRUCTURE COMMITTEE AVIATION SUBCOMMITTEE HEARING ON REGIONAL AIR CARRIERS AND PILOT WORKFORCE ISSUES

JUNE 11, 2009

Chairman Costello, Ranking Member Petri, and distinguished members of the Subcommittee: My name is Dr. Curtis Graeber and I am a Fellow of the Flight Safety Foundation.

The Foundation is an independent, nonprofit, international organization engaged in research, auditing, education, advocacy and publishing. Its mission is to pursue the continuous improvement of global aviation safety and the prevention of accidents. On behalf of the Foundation, I appreciate your providing me this opportunity to testify about recent scientific and technological progress related to flight crew fatigue. As a former National Aeronautics and Space Administration (NASA) scientist, I led the Foundation's Task Force on Crew Alertness in Ultra-Long Range Operations and also chaired the International Civil Aviation Organization's (ICAO's) Subpanels on Flight and Duty Time Limits and on Fatigue Risk Management.

We have all experienced fatigue to one degree or another. It can be a welcome prelude to a well-deserved rest or an insidious threat to our personal safety and well-being. Like Charles Lindbergh, we can ignore it at our own peril, but not when it threatens the safety of others or their property.

Unfortunately, fatigue is ubiquitous and unavoidable in aviation. It can negatively affect both physical and cognitive functioning as well as mood and thereby negatively impact a crew's response time, decision making, and crew coordination. While today's hearing focuses on flight crews and commuter flight operations, the challenge of fatigue is much broader and extends to all aviation professionals in all types of operations.

Fortunately, despite fatigue's presence, our aviation system typically operates safely day in and day out. Commercial pilots understand that they have an individual responsibility to report for duty fully rested and alert. When accidents do occur, the transient nature of fatigue and its poor signature make its contribution difficult to confirm and its etiology a challenge to unravel.

In order to minimize fatigue-related errors and accidents, regulators have traditionally imposed hours-of-service limits governing how long and how often pilots can operate an airplane. Different countries impose different limits, but they are usually based upon very little, if any, scientific knowledge. The Federal Aviation Administration (FAA) regulations governing flight time limitations are no different. They also lack a sound scientific basis and have remained essentially unchanged for the last fifty years. While these regulations have undoubtedly saved many lives, they are a fairly "blunt instrument" for managing the safety risk posed by fatigue. As a result, accidents continue to occur in which fatigue is cited as a significant contributor. While several unsuccessful attempts have been made to update the regulations, such efforts can best be described as "tweaking" what already exists and would likely result in little improvement.

Other, more effective, tools are needed. Fortunately, science and technology can offer a better way forward. The past three decades have witnessed an extensive scientific effort to better understand the complex origins of fatigue, its impact on performance, and how it can be mitigated. In 1979, NASA sought to undertake the first study to examine the effects of fatigue on decision making, in an aircraft simulator. Soon afterwards Congress directed NASA to undertake a multi-year effort to improve our understanding of crew fatigue and jet lag. This led to a series of in-flight and laboratory studies with volunteer pilots, coupled with a very productive collaboration with laboratories in the United Kingdom, the Federal Republic of Germany, and Japan. The cooperation of the airline and pilot communities was a key factor in producing truly outstanding results.

While the focus was on domestic and international flight operations, and not regional commuter operations, many of the findings have general applicability. Subsequent work, including a study of controlled rest on the flight deck, was also carried out with FAA support. The scientific approach has enabled us to examine how various factors interact to produce fatigue as well as how individuals and crews cope with it.

This work, as well as other, non-aviation, studies on fatigue and sleep loss have resulted in three decades of research which can provide the

scientific basis for a paradigm shift in how regulators, operators, and pilots manage fatigue risk. In addition, the Flight Safety Foundation and the industry have worked together over the past several years to develop the processes needed to connect the science with the operators' needs and regulatory oversight.

This shift has become known as Fatigue Risk Management or FRM. It is a proactive approach to addressing fatigue in a systematic, comprehensive manner that does not rely solely on adherence to a set of prescribed hourly limits of duty and required time off. Instead, the FRM concept decreases the role of the regulator and increases the responsibility of the operator and its employees to jointly manage the risk. In its broadest interpretation, FRM takes a systematic three-pronged, incremental approach to managing fatigue risk:

1. **Prevention** — This fundamental first step can be characterized as proactive strategic risk prevention. It includes such measures as scientifically defensible scheduling, suitable hotels for sleep, crew augmentation, and education and training about sleep hygiene and fatigue. We believe that this step should also include medical identification and treatment of sleep disorders which are known to increase with aging; however, the FAA's annual medical examination for Air Transport Pilots (FAA Form 8500-8; Application Process and Examination Techniques) has no requirement to identify possible sleep disorders.

2. **Mitigation** — This second step encompasses risk mitigation at the operational level. It includes such measures as responsible trip planning, including pre-trip rest and commuting if necessary, crew rest facilities (both at the airport and in flight for augmented crews), meal planning, anticipation of irregular operational events, and Crew Resource Management (CRM) training that addresses fatigue effects on crew performance.

3. **Intervention** — This final step recognizes the inevitable fact that crews sometimes experience significant fatigue despite their and the operator's best efforts to prevent it. It includes those actions that can be invoked to manage the risk until the flight is safely concluded. Such interventions can include tailored procedural guidelines, enhanced CRM, timely intake of caffeine, and controlled rest on the flight deck.

The effectiveness of the latter was demonstrated by NASA in 1989 and subsequently incorporated into a draft Advisory Circular entitled "Controlled Rest on the Flight Deck" by an Aviation Rulemaking Advisory Committee Working Group in 1993 (ref 1, 2). While it has never been implemented in the United States, it has been approved for use by numerous other authorities around the world and has been successfully implemented by foreign carriers since 1994.

A key part of the first step involves the alternative use of an FRM System (FRMS) in place of prescribed flight duty limits to determine what is acceptable "scientifically defensible scheduling." It takes into account known variables that affect sleep and alertness which prescriptive flight/duty limits cannot address, such as multiple time zone crossings, sleep at inappropriate circadian times, night work, effects of sunlight, and cumulative sleep deficit. Using the latest technology, an FRMS employs a multi-layered defense to manage operational fatigue risk proactively. Data related to crew alertness, as well as operational flight performance data, are routinely collected and analyzed.

An FRMS's comprehensive range of safeguards is designed to control the risk associated with both transient and cumulative fatigue. In contrast to prescriptive limits, this approach does not rely on *a priori* decisions about the factors most likely to be causing fatigue. Instead FRMS is data-driven, monitoring where fatigue risk occurs and where safety may be jeopardized. It then allows for generating new scheduling solutions or other strategies to mitigate measured fatigue risk. At the same time, FRMS provides operators with flexibility to seek the most efficient safe crewing solutions to meet operational needs.

In early 2006, the International Civil Aviation Organization (ICAO) established a Fatigue Risk Management Sub-Group (FRMSG) of the Operations Panel to develop an international regulatory framework for fatigue risk management in commercial aviation. Their starting point was the FRMS model developed by the Flight Safety Foundation for ultra-long range operations (i.e., flights longer than 16 hours), through a series of international workshops involving airlines, representatives of flight and cabin crew, regulators, and scientists (ref 4). The draft regulatory framework developed by the FRMSG defines FRMS as a data-driven, flexible alternative to prescriptive flight and duty time limitations which is based on scientifically valid principles and measurements. It requires a continuous process of monitoring and managing fatigue risk. FRMS incorporates the management of operational fatigue risk into a proactive and accountable Safety Management System (SMS) framework (ref 3) which is data-driven to reflect unique and changing airline factors.

FRMS enables an enhanced level of safety because it is a data-driven, ongoing adaptive process which can identify fatigue risks and develop and evaluate mitigation strategies to manage any emerging operational risks relevant to specific circumstances.

In its current form the draft ICAO FRMS framework is based on three key structural elements:

Fatigue Risk Management Policy, which establishes the commitment of senior management to the general philosophy and goals of the operator's FRMS. It also defines management and employee responsibilities at all levels for the elements of the FRMS;

Fatigue Management Steering Group, which coordinates all fatigue management activities (e.g., standard operating procedure [SOP] recommendations, rostering, and data collection and analysis). It includes all stakeholders, including those with scientific, data analysis, operational and medical expertise; and

Sleep/Fatigue Awareness and Countermeasure Training, which is designed to educate relevant staff about sleep and performance.

The draft FRMS framework is currently under consideration by ICAO. ICAO envisions the FRMS framework to be a high-level policy document which needs to be accompanied by more specific guidance to regulators and operators on how to actually implement an FRMS program. Efforts are under way to develop the latter.

An FRMS enhances the capability of prescriptive flight-time limitation concepts to provide an equivalent or enhanced level of safety based on the identification and management of fatigue risk relevant to the specific circumstances. Use of an FRMS can allow greater operational flexibility and efficiency while maintaining safety by relying on in-flight measurements of sleep and alertness, including subjective reports by crew members, to monitor how scheduling affects flight and cabin crew alertness during flight duty.

Commercially available computer models aim to predict average performance capability from sleep/wake history and circadian rhythm (24-hour physiological cycle) phase. They can be embedded within FRMS as a component to help understand the likely effects on performance of sleep obtained before and during trip patterns. Such models, though not required, encapsulate the latest scientific research on human circadian systems, sleep, and performance capability and can be

useful for rapidly estimating the likely fatigue levels associated with proposed new routes or schedule changes. However, certain assumptions and limitations need to be taken into account.

An FRMS, where implemented, should be an integral part of an operator's established SMS and its capability should be commensurate with the risk oversight needs. An FRMS applies SMS principles and processes to proactively and continuously manage fatigue risk through a process requiring shared responsibility amongst management and flight and cabin crewmembers. Since feedback and non-punitive reporting from flight and cabin crewmembers are essential elements of an FRMS, a "just culture" is integral to any FRMS program. By including Flight Operational Quality Assurance (FOQA) and Aviation Safety Action Program (ASAP) reporting as data tools within the FRMS framework, the operator can strengthen its multi-layered systematic defense against fatigue risk.

The FAA implicitly recognized this new safety opportunity by sponsoring a major international symposium in June 2008 titled "Aviation Fatigue Management Symposium: Partnerships for Solutions." For the first time, they brought together leading scientists and industry leaders from around the world to share the latest scientific and industry developments (ref 5). At that symposium several airlines outside the United States reported in detail on their already successful implementation of FRMS, both in short-haul and long-haul operations. The result has been improved safety, improved crew satisfaction, greater operational flexibility, and lower costs, including insurance costs. While the U.S. is lagging in FRMS implementation, the FAA has recently begun utilizing an FRMS approach to oversee three carriers' 16-hour-plus flights to destinations such as Mumbai, India and Hong Kong, China. The Foundation applauds this data-driven effort based on the Foundation's ULR Task Force recommendations.

The Department of Transportation has also sought to gather scientific expertise, and in March of this year hosted the second "International Conference on Fatigue Management in Transportation Operations" in Boston (ref 6).

The Flight Safety Foundation strongly encourages the industry to adopt the systematic three-pronged approach of Prevention, Mitigation, and Intervention to address fatigue risk management. The United States aviation community can no longer treat fatigue risk as just another rule that has to be met. A proactive focused commitment to fatigue management is the only way we can successfully address this serious safety concern. In this context the Foundation agrees strongly with the

participants at the June 2008 FAA symposium that controlled rest on the flight deck should be made legal and used when necessary for safety of flight. The excuse that "it doesn't pass the Jay Leno test" is no longer valid. The traveling public understands that all measures should be taken to ensure an alert flight crew during approach and landing, the most risky phase of flight.

The Foundation also urges the FAA to capitalize on its June 2008 symposium and its ULR experience to further develop and implement FRMS within the context of current prescriptive flight-time limitations on a trial basis. As in other countries, close cooperation and support among airline management, pilot organizations, and regulators will be critical to achieving success. In addition, since ICAO is the appropriate body to establish mutually acceptable worldwide standards for FRMS, the Foundation strongly encourages the FAA's continued participation in and support of ICAO's efforts.

These two actions will enable U.S. commercial aviation to enhance its level of safety with regard to fatigue risk and to do so efficiently and proactively. The United States commercial aviation community should be leading the world in fatigue management instead of lagging behind other nations because of parochial interests that stifle consensus.

Thank you for your consideration.

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Testimony of John Michael 'Mike' Loftus
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Committee on Transportation and Infrastructure
U.S. House of Representatives
Subcommittee on Aviation
Hearing on 'Regional Air Carriers and Pilot Workforce Issues'
Thursday, June 11, 2009
2167 Rayburn House Office Building
(202) 225-4472

Making Air Travel Safer in the Wake of the Continental Flight 3407 Tragedy

Mr. Chairman and subcommittee members, thank you for the opportunity to speak before your subcommittee today. My name is John Michael Loftus. I am here today to testify on behalf of the 'Families of Continental Flight 3407', both as a father, and as a former pilot with Continental Airlines for over 20 years.

My daughter, Maddy Loftus was onboard Continental Flight 3407. On February 12, 2009, Maddy was a beautiful twenty four year old woman just starting down the pathway of her adult life. She had finished her education and returned to her home in New Jersey where she had landed an excellent job with an outstanding advertising agency. She was surrounded by family and friends who loved her. As she boarded flight 3407 she was so excited about going back to Buffalo State College for an alumni hockey game - so excited to see old teammates and friends and pursue one of the loves of her life: hockey. In other words, she was poised to begin "the rest of her life." But, that night, onboard Flight 3407, all her hopes and dreams and plans for the future - career, love, marriage, motherhood - were brutally extinguished. And I am left sitting here today asking why? I don't think we can ever make sense of the tragic loss of Maddy and the other forty nine human beings who died that night. But we can, we must, do everything in our power to ensure that it never happens again.

Maddy grew up as the daughter of a Continental pilot, and she had traveled on Continental flights throughout her life. She was a member of the Continental Family. However, this trip was even more significant. Maddy was excited, as she had bought her

first airline ticket. No more standby travel for her.... she had arrived! When she bought that ticket, she bought it on Continental - a company that she had grown up with, a company that she trusted and flew all her life. She never realized that she had actually purchased a ticket on Colgan Air, the regional carrier who in fact operated that flight. Had she known of the significant differences in pilot training and experience levels between Continental and Colgan, she may never have boarded the plane.

Unfortunately, her flight never did arrive in Buffalo. Her life, along with the lives of forty nine others, was tragically taken on that February night. The real tragedy of Flight 3407 is, of course, that it did not have to happen. It was the result of a number of failures, each of which was completely preventable. With your help, the devastation of Flight 3407 does not have to be repeated – without your help, it most surely will happen again in some shape or form.

I speak to you not only as a grieving parent. I also bring my aviation background, having been a commercial pilot for over 26 years as well as having 22 years of experience working for Continental Airlines and Continental Express.

My flying experience started in 1980 as a flight instructor. I have flown cargo planes, charter planes, and even flew three seasons as a crop duster. When I was hired into the Continental Express family of airlines in 1984, I had over five thousand hours of flight time; I now have over twenty thousand hours. I started my career as a First Officer with Provincetown Boston Airlines (PBA) in 1984, and continued the normal progression

from First Officer to Captain in smaller airplanes, and then on to Captain in larger airplanes. Notably, I have flown the ATR-42 and ATR-72, which are similar airplanes to the Bombardier Q400 that took my daughter's life.

In 1998, I advanced to Continental Airlines where I served as a First Officer on the Boeing 737, 757, 767, and 777. Finally I became a Captain on the Boeing 737, before leaving Continental in 2006 for family reasons.

I also had the experience of holding numerous union positions while at Continental and Continental Express, including serving on the Negotiating Committee from 1996 through 1998. While on this committee, I was able to observe firsthand the discussions between labor and management pertaining to both hiring and training.

If I can leave each of the members with only two thoughts today, they would be:

1) There is no substitute for experience in the air; and

2) The importance of pilot training, especially in emergency circumstances, cannot be overstated.

My experience in the cockpit involved many difficult flying conditions. I flew in thunderstorms, low ceilings, dense fog, and many winter seasons involving icing conditions. As was normal in the aviation industry during that period, I was able to gain knowledge by flying with other, more experienced pilots, who had dealt with these same difficult flying conditions for longer than I had.

My fellow regional pilots at Continental and I also had the benefit of having access to the same training and pilot resources that the pilots at the "major" carrier had. At the time, I felt there was no better regional airline operation than Continental Express. We had an excellent safety record.

However, once the major airlines turned to a third tier of regional airlines for their domestic passenger feed, there became separate and unequal systems of educating and training pilots. While the training and processes may have met the FAA minimums, they were nowhere near what the majors required of their own pilots. Consequently, I witnessed the industry evolving to two standards of safety – one for the majors, and a second for the regionals.

I do not impugn the pilots who fly for these third-tier carriers, and most certainly do not mean to denigrate Captain Marvin Renslow and First Officer Rebecca Shaw. I admire both for how dedicated they were to pursuing their dream of flying – Renslow following a non-traditional career path and not breaking into the cockpit until later in life, and Shaw for all the ways in which she sought to gain knowledge of planes as she was growing up and trying to break into the field. They were both trying to gain the experience to further their careers.

Unfortunately, I feel that they were not given the proper tools to gain that experience, as the pilots of my generation and I were given. Indeed, the transcript of the cockpit recorder makes plain that the ice build-up on the aircraft was a condition they themselves

had not been adequately trained for. When they began as first officers, they were not exposed to pilots with the same experience level as I was fortunate enough to have been, and therefore were unable to draw on the wealth of experience normally handed down from highly experienced pilots to their first officers. Flying for a small regional carrier like Colgan Air with inherently less resources, they were not availed of an extensive training department with decades of institutional knowledge like I had at Continental Express. And as we now know from testimony at the public hearings, Colgan had not fully implemented industry best practice safety initiatives such as FOQA (Flight Operational Quality Assurance program) and LOSA (Line Observation Safety Assurance).

Clearly, this accident also underscores the need for flight time and duty regulations to be re-examined. We are currently employing a model that is over fifty years old. These regulations are very complex and confusing. When I was flying, I remember thinking to myself, 'How can we expect the pilots to manage their duty days and rest periods if they cannot understand what is expected of them?'

Commuting is a way of life for pilots and this will not change. During my years flying as an international pilot, I recall many a crewmember walking into the cockpit and requesting the first break on a flight, because he or she had commuted in from the west coast on the red-eye and spent all day in the crew room. I would like to see management

and labor collaborate on instituting effective and practical commuter policies for pilots, realizing that the foundation of a safe flight is a properly rested flight crew.

However, these changes will take time to implement. In the meantime, it is imperative that the pilots maintain the highest standards of professionalism when it comes to commuting and gaining the proper rest, remembering the immense responsibility that they are charged with.

When considered all together, the pilots of Flight 3407 were not given the same chance to succeed when faced with difficult flying conditions. From my years in the cockpit, there is just no substitute for experience as well as the most advanced training that the industry can offer.

So, Mr Chairman and fellow subcommittee members, those are some of the insights I have into the safety issues that the tragedy of Flight 3407 has brought to our attention. Most importantly, however, all of the family members, here and not here, implore you to help bring forth solutions.

First, we need to take an industry-wide look at experience requirements in terms of hiring, upgrading, and the pairing of pilots in the cockpit. While I do not have data from

other regional carriers to compare to, I was shocked to hear that Colgan only required 650 hours of total time and 75 hours of multi-engine time to be hired.

More importantly, we have to realize that the safety net for this industry in terms of hiring first officers with little experience is an effective system of gate-keeping to ensure that airlines only upgrade pilots to the left seat when they are ready and capable of mentoring young first officers. So, we argue that the criteria for upgrading to Captain needs to be re-evaluated as well. Ironically, Colgan has voluntarily taken steps in both of these areas since the accident. This only serves to evoke questions of the effectiveness of the current FAA minimum standards.

Second, we need to revamp the approach to training. In theory, FAA-approved training programs certify that each and every airline is training its pilots to the same standard. The fact that Colgan's FAA-approved training program did not include a hands-on demonstration of the stick pusher, essentially the pilot's last line of defense in stall recovery, leaves much to be questioned in terms of the validity of the current minimum standards for training.

More importantly, the difference of not just *what* is trained, but *how* it is trained, needs to be more fully considered. In listening to testimony at the NTSB hearings in May, it became very evident on numerous occasions that there exists a wide gulf in the quality of

training offered by the regional carriers versus the major airlines. As an example, Colgan safety officials were quick to pat themselves on the back for implementing Continental's two-day, pilot-facilitated Crew Resource Management/Threat Error Management (CRM/TEM) program in the wake of the accident. To us, this just serves to prove that there are two different levels of training, and therefore, unfortunately two different levels of safety. This even brought NTSB Vice Chairman Robert Sumwalt to lament that all major carriers do not make all their most advanced training available to their regional partners.

After all, the cold, hard fact about the airline industry that is staring us all in the face is that the pilots **most** in need of the best training, who fly in the oldest (often turboprop) planes, and who fly the shortest routes at lower altitudes with more take-offs and landings every day, are the less-experienced pilots at these regional airlines.

Finally, in the same vein, we need to require (as opposed to merely recommend, as the FAA currently does), that all regional carriers implement the best practice safety initiatives that are commonplace among the major carriers – FOQA, LOSA, and ASAP (Aviation Safety Action Program). These safety programs are important in detecting trends in poor safety practices, and the data they produce is a great tool for young pilots to get a better feel for their profession and all that goes into the safe operation of airplanes. Once again however, these programs cost money to implement, which can

prove to be a challenge for these regional airlines. But again, their pilots are the ones who need the benefits of these programs the most.

We would love to see these above-mentioned areas addressed in the upcoming months to ensure that there is no repeat of Flight 3407. Furthermore, to all of the stakeholders in this industry, we implore you to rededicate yourself to even higher standards of safety, and to rethink some of your long-held mindsets that may be impediments to providing the safest air travel possible to the American public.

For the pilots, this accident certainly brought to the forefront some glaring deficiencies in the way many pilots have to go about their day-to-day business, especially in terms of pay and rest. We are certainly supportive of steps being taken to ensure that more experienced, better-compensated, and more well-rested pilots are in the cockpit every time we get on a plane. However, on the flip side, if concessions are to be made in these areas, we expect pilot unions to not just blindly defend their pilots to the detriment of safety, and to instead, to be supportive of safety initiatives taken by the airlines such as FOQA, as well as any other actions taken to ensure that pilots who do not live up to the standards are not retained, or even worse, promoted to the left seat.

For the airlines, it is time to acknowledge, not just in words but in actions, that the responsibility for the lives of human beings makes an entry level pilot's job different

from nearly every other profession. This means concessions in the areas of pay and duty day/scheduling. For the major carriers, it is also time to step up and take more ownership of the regional carriers' training programs and implementation of best practices. Clearly, the regional carriers exist to fill a low-cost niche in the industry, and therefore, they seemingly cannot afford to spend the same dollars per pilot on training and safety programs when their existence is tied to being the lowest bidder. In that model, safety will always lose out. Consequently, we believe the only solution is for the major carriers to get involved, whether it be in mandating more advanced training, assisting in the design of the regional partners' training programs, allowing the regional carriers to piggy-back on the major carriers' training, and/or auditing the training that is going on with their regional carriers to ensure that it is of the same high quality.

Most importantly, though, we turn to you as our leaders in government. You will be faced with some difficult choices in the aftermath of yet another tragic accident. Unavoidably, there will be a price tag associated with each and every one of these decisions, and the industry lobby is going to be in your ear vigorously reminding you of that everyday.

And yet, we are here before you to say that no price tag, no matter how large, can stack up to the price we have paid for the loss of our loved ones, and the price that other Americans will have to pay in the future, if the issues of pilot experience, training and fatigue are not addressed. When you make these tough decisions, please think of ***your***

daughter or son or loved one flying on a turboprop plane, on the last flight of a long day, in the dead of winter in Minnesota, Illinois, or Wisconsin. And please, just ask yourself, how much you think that your loved one's life is worth.

Unfortunately, as a veteran of this industry, I have often heard it said that most aviation regulations and procedures are written in blood. My Maddy and 49 other people who died that tragic day in February **have given** their blood. And now, we believe that they are owed solutions.

I miss my daughter everyday. Her mother, brother, and sister miss her terribly too. My only wish is to not have to see another father, mother, husband, wife, or child sitting here before your committee searching for answers. Let's solve this now.

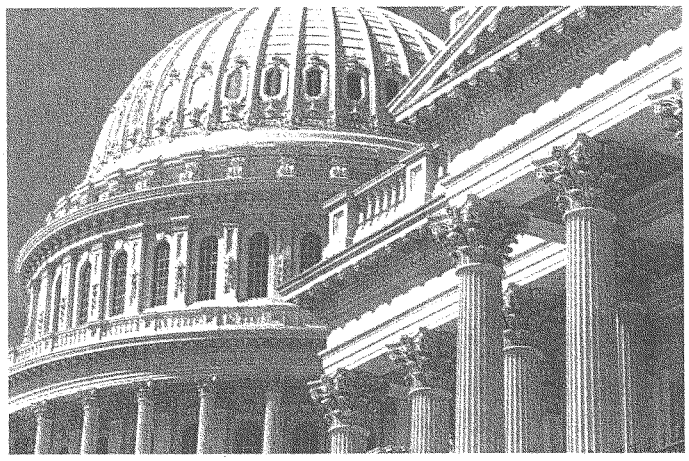
Thank you.

In Memory – Continental Flight 3407

Mary Julia Abraham
Clarence A. 'Larry' Beutel III
Ronald and Linda Davidson
Beverly Eckert
Ronald Gonzalez
Zhaofang Guo
Kevin W. Johnston
Ellyce Kausner
Jerome Krasuski
Beth Ann Kushner
Madeline Linn Loftus
Don McDonald
Dawn Monachino
Jennifer Neill (and Baby Neill)
Mary 'Belle' Pettys
Matilda Quintero
Capt. Marvin D. Renslow
John G. Roberts III
Rebecca Lynne Shaw
Jean Srnecz
Susan Wehle
Douglas C. Wielinski
ClayYarber
Georges Abu Karam
David Borner
Alison Des Forges
John J. Fiore
Brad S. Green
Steven L. Johnson
Ruth Harel Katz
Nicole Korczykowski and Johnathan Perry
Brian Kuklewicz
Sean Lang
Lorin Maurer
Coleman Mellett
Donald, Dawn, and Shawn Mossop
Gerard Niewood
Donna Prisco
Ferris Reid
Julie Ries
Kristin Safran
Dipinder Sidhu
Darren Tolsma
Ernest West
Shibin Yao
Joseph J. Zuffoletto

ATA TESTIMONY

REGIONAL AIR CARRIERS AND PILOT WORKFORCE ISSUES



Statement of James C. May
President and CEO
Air Transport Association of America, Inc. (ATA)
before the
Subcommittee on Aviation
of the
House Committee on Transportation and Infrastructure

June 11, 2009

AIR TRANSPORT ASSOCIATION

The crash of the Colgan Air aircraft near Buffalo on February 12, 2009 was a tragedy that has produced heartache for the relatives and friends of the victims of that accident. Words are faint consolation for their grief.

Two basic considerations need to guide us in the aftermath of that tragedy.

The first consideration is that in the aviation community, no accident is acceptable. We need to understand through rigorous and searching inquiry the cause of the Buffalo accident. Completion of the ongoing National Transportation Safety Board investigation will produce a far more complete picture than we have today of what so tragically unfolded that evening. Moreover, the Department of Transportation Inspector General recently began an examination of Federal Aviation Administration (FAA) oversight of certification, pilot qualification, training and other issues that will augment the NTSB effort. The "call to action" meeting that the Secretary of Transportation announced on Tuesday will enhance these two efforts. The FAA will host stakeholders at that meeting on June 15 to review pilot training, cockpit discipline and other issues associated with flight safety. We enthusiastically support this initiative. ATA and its members actively participated in last year's FAA runway safety "call to action." We look to the same type of involvement with this latest "call to action."

The second consideration is that it is the certificate holder – the air carrier that has received the authority from the FAA to serve the public – that is ultimately responsible and accountable for the safety of its operations and for complying with the requirements that the FAA imposes on air carriers. The Inspector General recognized these roles in his testimony today.

It goes without saying but I will say it: ATA members are uncompromisingly focused on their responsibilities as certificate holders. They and their employees have achieved an extraordinary safety record because of that single-minded focus. This has occurred, I would emphasize, during the most turbulent era in our industry's history. It is in the spirit of the pursuit of safety that I appear before you today.

Understandably, much has been written about the Buffalo accident. Speculation, however, is not the foundation for a meaningful response to any aviation accident. We need to get it right. That is why we all rely on the NTSB in these situations. After its investigation is concluded, the Board will prepare and issue a detailed narrative report that analyzes the investigative record, identifies the probable cause of the accident and makes specific recommendations for fixing the causes of the accident.

That kind of rigor is indispensable in developing a fact-based, informed and effective response to the accident. It is the kind of diligence that characterizes other safety-related efforts in our industry. We approach safety issues collaboratively with commitment and know-how within the bounds of the Federal Aviation Regulations (FARs).

In the airline industry, safety is the highest priority. That is a shared commitment and we work closely with other members of the aviation community to achieve it. Together with the FAA, manufacturers, labor unions and other interested parties, we have achieved an extraordinary safety record. That impressive accomplishment, however, does not mean that we can rest on our laurels. We continuously pursue safety. Improving safety is work that is never done; we always seek to improve.

Commercial aviation has built this record through a disciplined and analytical approach to improving safety performance. That scrutiny includes benefiting from experience and from a forward-looking search to identify emerging issues. The Commercial Aviation Safety Team (CAST), for example, brings together stakeholders to improve safety performance by applying data-driven analyses to spot issues before accidents occur and to establish safety priorities. Increasing reliance on two industry-led safety programs, the Aviation Safety Action Program (ASAP), which encourages voluntary reporting of safety issues and events that come to the attention of employees of certain certificate holders, and the Flight Operational Quality Assurance (FOQA) program, which involves the collection and analysis of data recorded during flight to improve safety, have also added immeasurably to our knowledge. This empirical approach,

coupled with the expertise and commitment of our front-line employees, provides the underpinning for industrywide safety efforts.

Participation in these programs underscores that ATA members' efforts go well beyond compliance with governmental regulatory directives. This willingness to exceed minimum requirements is often overlooked. It is tightly woven into the safety culture of airlines, whether they are mainline or regional.

No accident or incident is acceptable. We seek to learn from each event. Consequently, ATA has formed a Senior Advisory Task Force to address the matters raised during the recent NTSB hearing about the Buffalo accident. The task force is comprised of airline presidents, chief operating officers and their peers. It will ensure that our support of the FAA, airlines, unions and others is responsive, targeted and thorough.

ATA member airlines highly value their relationships with regional airlines and the customer benefits those arrangements provide. Customers, communities and the marketing and operating carriers benefit immensely.

The bedrock principle in civil aviation is that the entity to which the FAA has issued a certificate is solely responsible for its activities. Whether that entity is an air carrier, an airman or a dispatcher, that responsibility cannot be delegated or assumed by others. That principle avoids any confusion about ultimate responsibility, an absolutely essential consideration in promoting safety. It is a principle that dates back to 1938, when Congress created the Civil Aviation Authority, the predecessor of the FAA.

As separate regulated entities, regionals are independent of mainline airlines. As I noted above, they hold operating authority that the FAA has granted them. The FAA certificates regionals under Federal Aviation Regulation Part 121. This means that the certificate holder - the regional airline – maintains the responsibility for and direct control of its operations and safety programs. The FAA has the mandate to assure compliance with Part 121 and other FAR requirements.

We should also remember that in the mid-1990s, in evaluating the need for improvements in the regulatory structure under which commuter airlines – the former term for regional airlines – operated, the FAA responded with the support of ATA and its members by requiring them to adhere to FAR Part 121, the same regulation under which mainline airlines operate. As a result, the rule that became effective on December 20, 1995 imposed a "one-level-of-safety" standard that continues to this day. It required aircraft with 10 or more passenger seats and all turbojets operated in scheduled passenger service to operate under and comply with FAR Part 121 operational requirements. These included dispatch requirements and the use of certificated dispatchers, new flight/duty time rules, manuals and procedures for flight and ground personnel, cabin safety and flight attendant requirements for 20- to 30-seat airplanes, and new training rules.

Moreover, the Department of Transportation for over a decade has required in 14 CFR Part 257 that code-share arrangements be disclosed to customers before they purchase a ticket. This "operated by" language underscores the importance that the government has recognized in maintaining the distinction between the mainline airline and the regional airline.

The FAA's implementation of uniform mainline and commuter regulatory requirements has raised questions about mainline and regional operating environments. The most significant of those concerns and our responses follow.

"Two-tiered safety environment." As noted previously, since 1995 the FAA has imposed one level of safety on the air carrier industry – whether with respect to training, flight deck crew competency, etc. If the NTSB or FAA determines that regional airline performance within that unitary regulatory structure requires additional attention, it should reformulate its compliance efforts as necessary.

Flight/duty time regulations. An issue that has arisen in the Buffalo accident is the role of flight-deck personnel commuting. That, it should be clear, is not a flight/duty time issue. Commuting is within the

exclusive control of the pilot or copilot. It is expected, and the law assumes, that they will report fit to work. It is the responsibility of the crew member to inform the carrier if he/she is unable to fly because of fatigue, whether because of commuting or for any other reason. That is why Part 121 airlines staff reserve crew members.

Flight deck crew compensation. With but one exception, pilots at all larger regional airlines are represented by unions and they work in a seniority-based system. Compensation is a function of collective bargaining. Neither legislation nor regulation can effectively peg what is the right compensation in such a system of negotiated wages, benefits and working conditions.

Sterile cockpit rule. The FAA imposed the sterile cockpit rule in 1981. Its longstanding prohibition against "nonessential conversations within the cockpit" is well-known. To the extent that compliance with the rule is a concern at any Part 121 carrier, it is a matter for the FAA to pursue.

Centralized pilot record database. A centralized database of pilot records would make it easier to evaluate the backgrounds of applicants for flight deck positions. We urge the FAA to determine if such a database can be efficiently implemented. To be successful, however, it must be complete. Results of all pertinent actions relating to the pilot's competency must be recorded and accessible to an airline evaluating an applicant.

Conclusion

We will work diligently with other stakeholders in evaluating and responding to the results of the NTSB investigation of the Buffalo accident and the Inspector General's assessment of the FAA regulatory oversight program. Next week's FAA "call to action" meeting, which we look forward to participating in, should contribute appreciably to this effort. It is in that informed context that any further action to improve safety should be examined.

Statement of Dan Morgan

Vice President, Safety & Regulatory Compliance

Colgan Air, Inc.

before the

Subcommittee on Aviation

Committee on Transportation and Infrastructure

United States House of Representatives

June 11, 2009

Chairman Costello, Ranking Member Petri, Members of the Committee: The issues raised by this Committee are important for Colgan Air and for the airline industry in general. I want to thank you for raising the profile of these issues and for giving me the opportunity to speak to them.

Before I begin my statement -- On behalf of all of the employees of Colgan Air, I would like to again express our heartfelt sympathy to everyone who has been touched by this accident, especially those who lost loved ones on Flight 3407. Our thoughts and prayers are, and will continue to be, with you all.

- **Safety is Colgan Air's top priority**

Colgan Air has a strong culture of safety. Safety is the number one priority for every person and every department here at Colgan Air. It motivates everything we do. Safety is the foundation upon which everything else depends.

Without a strong safety culture, an airline will not survive. Our officers, our employees, and our loved ones fly Colgan Air more than anyone else, so safety

is not just our commitment to the flying public, but also a promise to ourselves, our co-workers and our families.

Colgan Air fulfils this commitment to safety through significant investments in training, systems, and state-of-the-art equipment. It is promoted by FAA-certified crew training programs that exceed FAA requirements, which are the very same requirements for both regional and mainline carriers. It is embodied in numerous Colgan Air safety programs. It is embraced by all Colgan Air employees, who collectively strive to make this the safest possible airline. We are deeply grateful to our employees for their steadfast support and unwavering commitment to safety.

- **Colgan Air has an excellent historical safety record**

Colgan Air has an excellent historical safety record. The company has operated since 1991 and has flown over 10 million passengers. Prior to the tragic Buffalo accident, the Company never had a single passenger fatality. We are extremely proud of this historical safety record.

- **Colgan Air has a philosophy of continuous improvement**

Colgan Air believes a strong safety culture demands continuous improvement. While the last several months have been difficult for all of us at Colgan Air, I want to assure the Committee and the flying public that Colgan Air has a very strong commitment to safety and has already implemented many improvements to ensure that we have the safest possible airline. These initiatives include the following:

- Implementation of Flight Operations Quality Assurance. This program analyzes Flight Data Recorder information from our aircraft to identify potential safety issues and correct them before there are any adverse consequences.
- Creation of a remedial training and pilot monitoring program for pilots who have demonstrated difficulty during any phase of training or checking.
- Development of a Threat and Error Management Program to provide the best possible support for flight crews in managing all threats, errors, and undesired aircraft states that could arise during flight.
- Improvement of ASAP program awareness through a familiarization campaign for all Crew Bases in Summer/Fall 2009.
- Increase of minimum flight experience requirements for new pilots and Captain upgrade candidates.
- Development of more robust fatigue guidance, including fatigue recognition and self-discipline for personal rest plan.
- New standardization initiative involving observations of all Q400 pilots.
- Enhancement of recordkeeping procedures by requiring retention of paper copies of training and checking failures as a backup to our electronic records.
- New automated safety reporting process using a web-based database and automatic alerts to designated Directors and Managers.
- Increased Safety Department observations of crew bases, outstations, and jump seat observations.

- Evaluation of safety reporting systems, including potential use of new technology such as text messaging for instant reporting on issues from the field.

- **Colgan Air's pilots are carefully screened**

Colgan Air pilots meet the same high, federally-mandated standards as pilots at major air carriers and undergo a rigorous, multi-tiered evaluation process before they are hired. About two-thirds of those who are initially contacted for an interview are not offered a job.

The process starts with an online application. This application covers flight time, accidents, incidents, violations, DUIs, failed checkrides, and other items bearing on the fitness of an applicant. Those who appear well-qualified are contacted for a phone interview to discuss the items covered by the online application and the pilot's general flying background and qualifications. Applicants who successfully pass the phone interviews are invited for an in-person interview.

At the in-person interview, the applicant takes a 50 question written test that parallels the FAA's Airline Transport Pilot written exam. Those who pass the written exam undergo an interview conducted by a pilot recruiter or the Manager of Recruiting and qualified line pilots. Applicants who pass this phase of the interview process are evaluated by a check airman in a full motion simulator.

Pilots who successfully complete all steps in this process become training candidates. As a training candidate, the pilot must pass all ground training,

simulator training, checkrides, and PRIA (Pilot Records Improvement Act) records and background checks prior to setting foot in the cockpit.

In keeping with our philosophy of making constant improvements, Colgan Air has made several recent improvements to our pilot hiring process:

- We raised minimum qualifications of new hires to 1000 hours total flight time with 100 hours of multi-engine time.
- We are exploring the possible use of FOIA requests to obtain additional information about an applicant's general aviation background, including check ride failures.

- **Colgan Air pilots are highly trained**

Colgan Air's Q400 training program was developed in close coordination with one of the world's leading aviation training companies. The program is fully approved by the Federal Aviation Administration and exceeds FAA requirements. Our training uses state-of the-art equipment such as a full-motion simulator, a flight management system trainer, and a ground flight simulator.

Our Captains have, on average, over 4,600 hours of flight time. Every Captain has an Airline Transport Pilot rating, which is the highest level of pilot certification available. All pilots are "type rated" on the specific aircraft they fly, and all ratings are issued by the FAA.

Before our pilots can operate a Q400 aircraft as a fully-qualified crew member, they must complete:

- 156 hours of Q400 flight and ground training, including training on:
  - normal procedures
  - abnormal procedures
  - stall recovery procedures
  - winter operations training
  - sterile cockpit
  - aircraft systems
  - Standard Operating Procedures
- An online Flight Management System training course
- Three Cockpit Procedures Training sessions
- Four observation flights with experienced Q400 pilots
- Over 20 hours flying with a check airman observing
- Two successful check rides

- **Compensation of Colgan Air pilots is in line with industry standards**

Our Captains earn an average of $67,000 per year, and our First Officers earn an average of $24,000 per year. These average salaries, as well as starting salaries, are consistent with the regional airline sector. While starting base salaries for co-pilots may seem low, they must be viewed in the context of the airline industry where higher salaries are achieved through progressive levels of responsibility.

Colgan had planned to implement increases in pilot wages in 2009, and will still do so. However, those wage increases are now subject to the collective bargaining process and will be negotiated with our pilot group.

- **Colgan Air's policies allow for rested and fit flight crews**

Colgan Air follows the duty and rest time regulations of the FAA. An automated crew scheduling system tracks duty time and ensures compliance with duty limitations and rest requirements in compliance with FAA regulations. Crew schedules are developed to provide ample rest between duty days and periodic extended rest periods. For example, after a three or four consecutive day duty period, a pilot may have four or five days off. Such schedules are desirable for pilots in order to achieve those consecutive days of rest, and airlines want their pilots to have those days off to be ready for their next assignment.

Monthly schedules are determined well in advance of the beginning of each month, which helps pilots be ready for their next assignment. Colgan Air pilots do not routinely work long duty days or long duty periods. The schedules for Q400 pilots are built with maximum duty days of 12 hours, and with a maximum of 7 ½ hours of flight time during that duty period. The average for all scheduled flight and duty times from January of this year has been 4:44 and 8:59 respectively, with an average of 13 days off each month. Due to delays from weather or air traffic control or other irregularities beyond the airline's control, duty days do occasionally extend beyond the scheduled pairing times. Although sixteen-hour duty days are legal under FAA regulations, they are rarely assigned by Colgan Air. In fact, duty days that exceed 14 hours must be reviewed by a

senior operations manager prior to assignment, and Colgan Air will only assign a crew a duty day that exceeds 15 ½ hours with the crew's agreement.

A review of the actual pairings flown for April and May shows that 97% of all duty days were less than 14 hours, and less than 1% of duty days exceeded 15 hours. As for rest, 74% of the rest periods between duty days in April and May exceeded ten hours, and less than 10% were between eight and nine hours. Also, long duty days do not involve continuous work. Pilots have several periods of "down time" during their duty day. While this down time may not be true rest, it also is not a time of added work-load fatigue. Pilots also know themselves, and professional pilots use their rest periods to ensure they are ready to work.

Our pilots are professionals and know the importance of proper rest. However, if a pilot does experience fatigue, he has the ability to remove himself from duty without punitive action from the Company. Simply stated, Colgan's fatigue policy is: if you are fatigued, you do not fly. A pilot declaring fatigue will be removed from duty, and is asked to provide the Company with a report of the fatigue event which will only go to the Safety Department. The Safety Department in turn tracks the reports of fatigue for trend analysis in the development of our Fatigue Risk Management program.

- **Colgan Air has appropriate commuting policies**

Many Colgan Air pilots commute from residences that are varying distances from their base assignment, a common practice in the airline industry. We do not regulate where any employee chooses to live. We do, however, expect our pilots and all of our employees to present themselves fit for duty,

regardless of where they choose to reside. Commuting pilots have various options available to them for residence while at their base, including shared apartments, and we expect they will make suitable arrangements to ensure they always have proper rest before reporting for duty.

The Company realizes that commuting pilots sometimes encounter difficulties getting to work in time for their rest and their assignment. Therefore, Colgan Air offers these pilots an option to call the Company in advance when they know they will not be able to report on time. This "commuting policy" aids the Company by ensuring we have ample time to re-assign a flight to a reserve pilot, and also aids the pilot in knowing he or she can notify the company of a missed assignment without punitive action from the Company.

- **Colgan Air will continue to improve**

In closing, I want to assure this Committee and the flying public that Colgan Air will continue to make safety the highest priority and will aggressively seek to identify ways in which we can improve safety and ensure that we operate the safest possible airline.

STATEMENT OF

CAPTAIN JOHN PRATER, PRESIDENT

AIR LINE PILOTS ASSOCIATION, INTERNATIONAL

BEFORE THE

SUBCOMMITTEE ON AVIATION

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

UNITED STATES HOUSE OF REPRESENTATIVES

WASHINGTON, DC

June 11, 2009

REGIONAL AIR CARRIERS AND PILOT WORKFORCE ISSUES

Air Line Pilots Association, International
1625 Massachusetts Avenue, NW
Washington, DC 20036
(202) 797-4033

STATEMENT OF
CAPTAIN JOHN PRATER, PRESIDENT
AIR LINE PILOTS ASSOCIATION, INTERNATIONAL
BEFORE THE
SUBCOMMITTEE ON AVIATION
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
UNITED STATES HOUSE OF REPRESENTATIVES
ON
REGIONAL AIR CARRIERS AND PILOT WORKFORCE ISSUES

June 11, 2009

Good morning. I am John Prater, president of the Air Line Pilots Association, International (ALPA). ALPA is the world's largest pilot union, representing nearly 54,000 pilots who fly for 36 airlines in the U.S. and Canada. ALPA was founded in 1931 and our motto since its beginning is "Schedule with Safety." For more than 77 years, ALPA has had a tremendous impact on improving aviation safety. ALPA is a founding member of the International Federation of Air Line Pilots Associations (IFALPA) and the U.S. and Canada representative to the Federation which joins the pilots of over 100 nations together in safety and security harmonization efforts. Today, ALPA continues to be the world's leading aviation safety advocate, protecting the safety and security interests of our passengers, fellow crewmembers, and cargo around the world. ALPA has lived up to its mandate to the extent that many in the industry, including a former FAA administrator, have referred to us as the "conscience of the airline industry."

We applaud the Committee for holding this hearing and appreciate this opportunity to testify about regional air carriers and pilot workforce issues. We would like to begin our testimony by discussing crewmember fatigue.

Crewmember Fatigue

Fatigue may adversely affect every flight crewmember every time they fly. Due to airline economic conditions which require pilots to work longer days and more of them than ever before, fatigue has reached alarming levels within the industry. The FAA's flight and duty time regulations are woefully inadequate to address today's situation and have not significantly changed in over 60 years, since well before jet transports came into use in the late 1950s. The current U.S. flight and duty time rules are a patchwork of regulations that are intended to address disparate domestic, international flag, and supplemental operations. There have been a number of attempts to revise the regulations over the past 25 years, but those attempts have met with generally abysmal results because of the contentious disagreement by the stakeholders as to which changes were appropriate or needed.

One fact about pilot fatigue that is not widely known is that airline pilots frequently spend much more time at work each day than the number of hours recorded actually flying an airplane. This is especially true in the regional industry although the work schedules at the so-called "legacy carriers" are by no means free of these same concerns. Currently, airline pilots are routinely assigned duty days of up to 15 hours. During a typical 14- to 15-hour duty day, a pilot can expect to be assigned fewer than 8 hours of flying but up to 8 individual take offs and landings, in various types of weather and across multiple time zones. The time not flying may be spent performing duties such as checking weather, dealing with routing, dispatch and flight paperwork, overseeing aircraft loading and unloading, dealing with mechanical issues, waiting on the ground between flights, and similar activities. Thus, although a pilot may have only flown 7 or fewer flight hours by the end of a duty day, he or she could easily have been on duty 14 or 15 hours. This work pattern may be repeated over a period of several days. The weight of the scientific evidence accumulated over the last 20 or so years has firmly established that the vast majority of humans simply cannot be expected to reliably and safely perform operational tasks beyond 12 to 14 hours on duty. It cannot be overstated that pilots are making their most critical decisions on landings at the very end of their duty day which, due to unplanned circumstances, can easily be 20 hours or more since their last rest period. It is worth noting in this context that most fatal accidents occur during the landing phase of flight.

The airlines are required to give pilots only an 8-hour break after any duty day, regardless of its length. Unfortunately, this 8-hour minimum break does not provide an adequate opportunity for recuperative sleep because the break is not an opportunity for 8 hours of sleep, but rather a period of time away from the aircraft. During the 8-hour break, it is not unusual for a pilot to be left with a *maximum* 4 or 5 hours of sleep opportunity. This occurs because the FAA has defined all time away from the airplane ("release to report") on a trip as "rest." Incredible as it may seem, the time a pilot spends waiting for a hotel shuttle and going through airport security screening is defined as "rest" under the current FAA regulatory scheme. A pilot must also attend to all of his or her other non-work-related daily physical and nutritional needs and requirements during this 8-hour break away from the aircraft. It is not at all unusual for a pilot to elect to forego a meal so as not to further reduce their sleep opportunity. This situation is highly objectionable– sleep experts agree that most adults require 7 to 8 hours of sleep each night to meet their physiological needs and restore their alertness. Pilots need a longer, and genuine, daily rest period than is allowed under current regulations.

Another serious deficiency in current regulations is the failure to acknowledge circadian rhythms. Every human has an internal circadian cycle that determines sleep and wakefulness. Typical "circadian low" cycles (i.e., a period of reduced wakefulness and energy) will occur from approximately 3:00 to 5:00 a.m. and again from 3:00 to 5:00 p.m. Performance and alertness may be decreased during the nocturnal window, which is from approximately 2 a.m. until 6 a.m., depending on individual variability. Flight and duty regulations need to acknowledge this cycle.

Because the FAA's present fatigue regulations are antiquated and outmoded, they have frequently been augmented by contractual work rules negotiated between pilots and their employers in the decades from 1960 to the mid 80's. Through the restructuring of pilot contracts in corporate bankruptcies (note: over 160 U.S. airlines have gone through bankruptcy since 1980) and the complete absence of negotiated work rule improvements at many carriers, there has been non-uniform treatment of flight duty and rest limitations at the various airlines, leaving only the antiquated Federal Aviation Regulations to govern maximum duty days and minimum rest periods for thousands of airline pilots. Further exacerbating the problem is the fact that pilot wage rates and pensions were slashed by more than 30% in corporate bankruptcies forcing pilots to accept even more flights or face their own financial crisis. Fatigue provisions are rarely found within any pilot contract, especially within a regional airline agreement. Of the regional contracts that do have such provisions, only one of which we are aware allows a pilot to recoup his or her lost pay. All contracts of which we are aware contain real threats of disciplinary action if the company determines that a pilot's claim of fatigue was fraudulent.

In recent times, there has been severe pressure on individual airlines to slash pilot staffing and reduce rest periods to minimum levels due to a belief that such actions would result in "productivity" increases necessary for economic survival. The demands for more monthly and yearly flight hours flown by fewer pilots has lead to endemic fatigue levels, and with fewer pilots staffed on reserve or standby duty for weather disruptions, pilots are forced to fly more flights to the upper limits of the FARs or watch as scheduled flights are cancelled for lack of available rested crews. The fatigue cushion once provided by negotiated work rules has been virtually eliminated largely due to a single-minded focus by airline managements on minimizing the labor costs associated with flight operations. This elimination of the fatigue protections once provided by negotiated work rules that were developed over decades of experience at most established air carriers means that today, for more and more pilots, the bare minimum protections afforded by the FAA flight and rest regulations have become a daily way of life.

The current cumulative effects of reduced rest resulting from working to minimum FAA limits, combined with the effect of personal financial stress and uncertainty brought about by nearly eight years of severe economic downtimes in the industry, have taken a severe toll upon pilots. Many pilots feel that they are just hanging on to a barely tolerable job instead of pursuing a once-promising career. Today's airline pilot is typically working substantially more hours for less money and spending more hours away from home than his or her predecessors. In addition, regularly required training events are crammed on top of the monthly flight schedule often paying less than 3 hours of pay for 8 hours of training with none of that time counting towards the FAR flight time limits. The repeated attempts by airline managements in recent years to return U.S. airlines to an era of profitability by cutting labor costs continues to be paid for by the daily sacrifices and toil of airline pilots and other workers.

ALPA joins the National Transportation Safety Board (NTSB), which since 1990 has identified reducing accidents and incidents caused by human fatigue as one of its "Most Wanted Transportation Safety Improvements" in the United States, in calling for

revisions to the current FAA regulations based on fatigue research, circadian rhythms, and sleep and rest requirements. The current FAA rules glaringly fail to adequately address any of these issues and reform is decades overdue. Other U.S. federal agencies have moved towards scientifically-based worker fatigue regulations; the FAA is simply lagging behind other agencies when it comes to the need to modernize its fatigue rules.

When addressing possible revisions to the current FAA flight duty and rest regulations applicable to pilots, airlines and their pilots are immediately at cross-purposes. Managements are looking for more availability and "productivity" from flight crews. For flight crews, safety advocates and scientists, the question is often not whether to change the current rules, but rather *how much* to reduce the current maximum flight and duty limitations to enhance safety, raise human performance to acceptable levels, and reduce risk. Hence, the past approach of creating proposed regulations on notions of operational necessity without the assistance of scientists and technical advisors, or reference to the technical literature, has failed. Needed are rules which are grounded in the results of scientifically based fatigue studies and safety reports.

The International Civil Aviation Organization (ICAO) has enacted standards that will become effective in November 2009 which will require participating States to adopt rules limiting airline pilot duty periods that are based on science. The United States' airline pilot fatigue rules currently do not meet this new international standard and the FAA will be under pressure to comply. In Europe, new regulations governing airline pilot flight time limitations were enacted in 2008. While implementation of these new regulations in individual European Union member States is an ongoing process, the design and implementation of scientifically-based airline pilot fatigue rules has been underway in Europe for some time. For example, the United Kingdom has for years had science-based airline pilot flight and duty time regulations. The U.K.'s rules, embodied in Civil Aviation Authority document CAP 371, account for human circadian rhythms and adjust maximum pilot duty periods based on time of day, number of flight legs, time zones crossed, acclimatization to local time and other factors. Under these scientifically-based rules, if a pilot who is normally awake during the day and asleep at night reports for duty during the middle of the night, he or she is simply not permitted to work as long as if he or she reported during normal daylight hours. The current FAA rules incorporate none of these modern, scientifically-justified fatigue protections.

Pilots performing commercial flying duties must have regulatory safeguards which provide them with an opportunity to get an adequate night of sleep before each duty day of flying. In some cases, pilots may lack access to adequate rest facilities to obtain needed recuperative sleep in order to prepare to safely operate the next flight or series of flights. Unfortunately, the combination of duty periods and personal or industry economic circumstances may in some cases operate to a deny pilot a realistic opportunity to obtain facilities for needed rest. Ensuring that a meaningful opportunity for rest is provided combined with a scientifically determined maximum length duty day, including provisions for the type of flying accomplished – whether it be traditional short haul, multiple sector flying or flights across multiple time zones – is essential to ensure that the U.S. air transportation system continues its envied record of safety. We believe it is

possible to implement needed regulatory changes that will adequately address safety needs and the issues related to pilot fatigue without negatively impacting the ability of the nation's airlines to serve the needs of the public.

To that end, we are pleased that the House included a provision in H.R. 915 to arrange for a study by the National Academy of Sciences on pilot fatigue which will examine recommendations made by the NTSB and the National Aeronautics and Space Administration (NASA) on this subject, and provide recommendations concerning the FAA's flight and duty regulations. ALPA stands ready to work with regulators and the industry to develop science-based rules that will adequately address the problem of fatigue.

Fatigue Risk Management Systems

A fatigue risk management system (FRMS) is a science-based, data-driven process used to continuously monitor and manage fatigue risks. An FRMS is intended to be implemented within an airline's safety management system (SMS) to allow operational efficiency for unique and specific operations when needed while also mitigating fatigue-inducing factors. An FRMS offers an effective, alternative means of evaluating and managing risk when compared to a purely prescriptive scheme but it is intended to be built upon – and create synergy with – defined, prescriptive flight and duty time regulations. I would invite the committee to review ALPA's white paper on FRMS, published in June 2008, for additional information on this subject.

Revised regulations must provide guidance based on science that accounts for start and stop times related to crew circadian rhythms, the number of takeoffs and landings related to crew duty days, and any time zones that must be crossed. Science-based regulations, coupled with an FRMS, can allow some flexibility in unusual flight operational situations.

Since fatigue is such a critical factor in daily airline operations, ALPA published *The Airline Pilots' Guide to Fighting Fatigue* in October 2008. This booklet may be carried by crews and provides guidance to understanding and dealing with fatigue. Understanding and mitigating fatigue is extremely important and assists crews in flying in as rested a state as possible, given the inadequate regulations governing the tempo of operations. We are presently updating this document to give pilots guidance on "responsible commuting."

Airline Training Programs

Most airlines, which include many of the major or "legacy" carriers and the larger, "mature," regional airlines, do an outstanding job of hiring and training pilots. They normally require significant flight experience including substantial amounts of multi-engine and turbojet time. However, some smaller regional airlines which may have very thin profit margins due to the economics of the contract between them and their major airline, have traditionally not offered compensation packages which enable them to hire

experienced pilots. As a result, they must often employ pilots with little experience and bare minimum qualifications who are willing to take these low-paying positions in exchange for an opportunity to build experience so that they can move to a career airline. ALPA has prepared a white paper on improving future airline pilot performance which discusses training, hiring, and mentoring airline pilots which we would be pleased to make available to the committee.

Some airline training programs, including those at mature regional airlines, are extensive and exceed the regulatory minimums. When pilot experience at the new-hire level dropped severely below 1,000 hours, or less than a year's worth of total flight experience, these airlines wisely extended their training process and doubled the initial operating experience (IOE) program requirement for these pilots. However, this cannot be said for all airlines.

Economic pressures push some airlines to train to the minimum requirements set by regulations. These minimums were established decades ago and were based on pilots coming into the airlines with much more experience than many pilots have today. Experience allows pilots to broaden their approach to problem solving and decision-making above the technical proficiency needed to fly the aircraft. It allows for the recognition of outside patterns and trends that develop during the course of routine flights and permits crewmembers to accomplish tasks specific to their cockpit position as well as be aware of the tasks being performed by other crewmembers. Experienced pilots tend to identify more pertinent clues and generate more alternatives in problem solving and decision making than inexperienced pilots

ALPA believes the licensing and training methodologies used successfully in the past may not work where airline pilots entering airline operations do not have the background or experience that previous generations of incoming airline pilots possessed. In meeting this challenge, the airlines and other training providers must develop methodologies to "train experience" that in the past was acquired in the traditional maturation and progression to becoming an airline pilot. This training should include extensive and detailed academic courses of learning taught in classrooms by well-qualified instructors.

Screening

Few, if any, airlines tailor their training programs based on their new hires' past flying experience. The airline industry has seen significant changes – some of which involve pilot demographics – that have not been reflected in our training practices. For example, there are considerably fewer former military pilots in the airline ranks than in years past. The military services extensively screen their candidates, who are generally required to have a four-year college degree, before being accepted into pilot training. Once accepted, military training provides intense and rigorous classroom academic instruction as well as in-depth flight instruction that takes over one year. Additionally, pilots today coming from non-military backgrounds often do not have the challenging experience of their predecessors on which to build – e.g. flying corporate, night freight, or flight instructing - before being hired at entry-level, or regional air carriers. These demographic changes

require a new focus on standardization and professionalism training and even some fundamental flying skills. The previous training programs based on the assumption of more experienced pilot candidates will not be sufficient; "one-size-fits-all" training is ill suited to the task.

The financial commitment of training and the historical time commitment to build experience to qualify to be hired by an airline through the civilian route and the considerable time and sacrifices needed to serve in the military acted as a screening process to eliminate those only marginally interested in becoming an airline pilot. However, with new pilots being hired with as little as 200 hours total flight time (much of which could have been in a simulator) and fewer military pilots seeking airline jobs, this *de facto* screening process that helped ensure only the highest performing people make it to the airlines is no longer effective. Today, many regional airlines do nothing to discourage their experienced pilots from quitting so as to hire lower-paid replacements.

Flight experience and pilot capabilities cannot be measured by mere flight hours. Airlines used to have an extensive screening process that included psychology tests, academic knowledge tests, simulator flying skill evaluations and medical conditioning exams. As the number of pilot applicants declines and airlines become more desperate to fill the positions, these screening processes have been reduced and some elements completely eliminated.

Airlines need to reestablish thorough screening processes, or their equivalent, to ensure that the applicants they hire will be able to maintain an equivalent or better level of safety, professionalism and performance than their predecessors. Flight schools need to implement extensive screening processes for students pursuing a professional pilot career. Regulators need to provide the oversight to ensure that these screening tools are implemented effectively by the airlines and flight training organizations, as well as modify pilot qualification regulations to include much more rigorous education and testing requirements in order to provide a screening process that begins prior to initial pilot certification and continues at the airlines.

Command and Leadership Training

The FAA does not currently require command training for pilots who upgrade to captain. The agency does require that an applicant for an airline transport pilot certificate have knowledge of aeronautical decision making and judgment, as well as crew resource management, to include crew communication and coordination. We do not consider these requirements to rise to the level of command training. The difference between the two approaches is a focus on knowing what to do versus knowing how to do it. Training in decision making, for example, might emphasize all the things that a pilot must investigate in order to make a sound decision, but might not provide strategies for how to stick to that good decision in the face of pressure from outside entities to compromise.

The role of captain includes far more than the ability to fly the aircraft from the left seat and perform the checklists. Some airlines have courses for teaching prospective captains

how to lead a crew, exercise command authority, take charge of a situation, and so forth, all of which are critical safety skills that must be learned. They are not simply inherent to being the one "in charge." Specific training should include emphasis on setting the tone for compliance by adhering to standardized procedures. Other topics that should be trained include reinforcing the skills, aptitude, and character necessary to lead fellow crewmembers (informally or otherwise) in compliance with procedures.

Need for Stronger Academic Emphasis

The Joint Aviation Authority (JAA), now the European Aviation Safety Agency (EASA), and FAA pilot licensing requirements are both ICAO-compliant. The single biggest difference between EASA and FAA is knowledge requirements. The FAA theoretical knowledge is simply not as demanding as EASA, which has 14 written exams versus one by the FAA, which is a multiple-choice exam. The EASA exams require the student to be tested for 30-40 hours. By stark contrast, the FAA publishes its exam questions with answers provided so a student can purchase them, study the questions, and pass its single exam. Examination questions are not available for EASA exams in such a manner.

The least demanding Federal Aviation Regulations which govern commercial pilot license requirements (i.e., §61.125 and §61.155) specify the aeronautical knowledge requirements for commercial and airline transport pilot ratings. These rules were written decades ago, when there was no expectation that they would be used as minimum standards to train pilots to take jobs as airline first officers. The requirements emphasize weather and navigation, including interaction with air traffic control. There is some mention of aircraft aerodynamics and human factors, including aeronautical decision making and judgment as well as crew resource management. The regulations allow self-study and many such training courses emphasize passing the test rather than learning the material. We do not feel these requirements are adequate to prepare a professional airline pilot. The ground instruction of these subjects needs to be strengthened with required formal classroom academic instruction and more extensive testing and examination.

The EASA-approved training course for a commercial airline pilot tends to be rather structured and rigorous. FAA should develop and implement a corollary ground school and testing process in FAR Part 121 for all pilots who seek commercial airline careers. Testing akin to the quality of the Certified Public Accountant (CPA) exams or bar exam for attorneys would benefit aviation by serving as a screening tool to ensure that, in the future, only the most knowledgeable and dedicated pilots join the ranks of airline pilots.

Airline Relationships

The past several years have been very turbulent ones for the major, legacy airlines which have experienced numerous bankruptcies and changing operations. Rather than using their own pilots on the mainline seniority list to fly the 50- to 90-seat jet aircraft or modern 76-seat turboprop aircraft into midsize and smaller cities in the U.S., Canada and Mexico, they have established economic relationships with regional airlines to provide this service and feed the major carriers through their hub cities. The major carriers exert a

great deal of economic, and other pressures on the regional airlines to provide their service at the lowest possible price. The major carrier controls all aspects of ticket pricing and schedules and regularly moves flying between their regional partners, which forces major changes of pilot domiciles among the regional carriers. An operational and safety relationship providing surveillance and oversight of regional airline operations must be required and maintained by those major carriers who either own or contractually use regional airlines. Even with these relationships, there is no guarantee that "One Level of Safety" will be provided by the dependent carriers. Safety comes not just from oversight from an outside airline or organization but is an intrinsic value built into an airline from the highest levels of internal management. Given operational criteria and guidance, this value must be recognized and nurtured to realize true safety in operations. ALPA's endeavors to establish One Level of Safety and contract standards have been rebuffed by the managements of some mainline and regional carriers.

Before the practice of codesharing with regional partners began, ALL flying was done by the pilots of an airline on one, single pilot seniority list. This practice ensured that several years of airline operations experience for newly hired airline pilots -- even those with military or thousands of hours of previous civilian flight time -- was earned before assuming the command responsibilities of an airline captain. The pilots of the name brand airline were trained and met the same high standards, whether they flew 70-seat DC-9's or 400-seat B-747's, or they were not promoted to be an airline captain. The pilots that once flew for such regional airlines (which were in the 70's and 80's referred to as "national carriers") as Ozark, Southern, North Central, Hughes AirWest, AirCal, Allegheny, Piedmont, PSA, and Frontier, held career jobs at those carriers. They flew 40-50 seat propeller-powered aircraft and 70- to 100-seat jet aircraft. They had good jobs with pensions, work rules, and wages that made them career destinations. Those pilots were not just trying to gain experience to get a job with a major airline. Their pilot seniority list operated to guarantee stability and years of cockpit experience before assuming command. The merger mania of the 80's saw those carriers swept into the major or legacy airlines.

Then, as competitive cost concerns increased with the post-deregulated upstart carriers, the legacy airlines began to outsource the flying to as many as a dozen new "regional" partners flying 30- to 50-seat props and 50- to 90-seat jets. The name brand airline then began the practice of having their "partners" bid against each other to maintain these "fee for departure" outsourcing contracts. As the legacy airlines replaced more and more mainline flying by this outsourcing scheme to regional operators, they furloughed hundreds of highly experienced pilots, and refused to allow these experienced pilots to fly for the contractor carrier, effectively replacing them with lower paid and lower experienced pilots.

With this overriding concern on lowering costs by the legacy carrier, the stable and experienced regional partners were whipsawed against each other and forced to continually lower their costs to today's substandard levels or be replaced by another newly created contractor. This system of replacing one regional with another has created unprecedented, rapid growth at a few low-cost regionals where newly hired pilots are

upgraded to Captain with less than one year of air line flying experience. A copilot seeking to upgrade to captain with the minimum of 1,500 total hours has not been through several years of thunderstorms and winter storms despite the fact that they meet the FAA minimums. He or she has not flown with hundreds of other Captains nor been through several years of annual training and checking events. Before this unconscionable focus on outsourcing mania began, most airline pilots would have 10 or more years of airline experience as a co-pilot before qualifying for command.

The legacy airlines grant these outsourcing contracts to the regional carriers for short periods from 2 to 7 years so that higher costs and their experienced pilots can once again be replaced by new airlines with new pilots. Today, even though the "regional" carriers are flying up to 40% of the US airline domestic system, few of the regional airline pilot jobs created by the outsourcing schemes are worthy of an experienced aviator career. The duties and responsibility of a captain and a co-pilot flying 30 to 100 passengers for a regional partner airline is just as important to their passengers as a Captain flying a B-777 or Airbus 330 for a legacy carrier. In a further example of this safety compromising business practice, the legacy airline, will oftentimes during growth periods refuse to hire the experienced "regional" pilot from one of their fully owned or contract partners to become a co-pilot on a 100-120 seat mainline airplane. However, that same pilot may be a captain flying a complex jet aircraft with 70 passengers on 5 or 6 flights per day in the service of the codeshare, mainline airline which sold the ticket to the passengers. This cycle of outsourcing with very little oversight by the ticket-selling carrier has created a very unstable environment which has broken the One Level of Safety mandate.

The NTSB has performed several safety studies of the regional, air taxi, and air carrier industry. As a result of those studies, the Board called upon major airlines and their code-sharing partners to establish a program of operational oversight that would include periodic safety audits of flight operations, training programs, and maintenance and inspection as well as emphasize the exchange of information and resources that will enhance the safety of flight operations. The Board believes that there may be large differences between code-sharing partners in terms of the knowledge, expertise, and other resources for assuring safe operations. They noted that this is particularly true when a code-sharing carrier uses the brand identity name and paint scheme of the larger carrier. Passengers have no choice but to fly on the code-share carriers even though they purchased their ticket from the major carrier and deserve the same level of operational oversight, control and service, which the code-share partner may not be able to deliver.

The regional airlines, in their own cost-saving measures, have gone to extraordinary lengths to provide their product at the lowest possible price. As an example, Trans States Holdings, which operates Trans States Airlines, established a second subsidiary airline, GoJet Airlines, which operates United Express flights from United Airlines hubs at Chicago O'Hare, Denver, and Washington Dulles airports flying Bombardier CRJ700 Regional Jets. A passenger buying a ticket on United Airlines may very well, unwittingly, end up on a GoJet flight. As a new airline, GoJet can abrogate prior relationships their parent airline may have with service providers to provide cheap airline seats for their code share partner.

Another example of this type of cost pressure can be seen at Midwest Airlines which has outsourced over 75% of its flying to regional partners. They have laid off 75% of their experienced pilots and replaced them by contracting with Republic and Skywest Airlines. Midwest Airlines refuses to train their long-time pilots in the new smaller jet aircraft. This has the effect of the Midwest pilots with over 15 years of airline experience being replaced by pilots with less than three years experience in a blatant disregard for the value of its own employees. Economics of outsourcing to cheaper contractors has clearly trumped the safety value of maintaining experience in the cockpit.

Pilots flying for airlines like GoJet, Gulfstream, Colgan and others are at the bottom of the economic scale with starting salaries below $20,000 per year. In many cases, pilots have accumulated extraordinary costs just to earn the basic FAA licenses of commercial, instrument and multi-engine ratings. A 4-year flight education at a college or university can cost from $120,000 to $180,000, or more. It is difficult to repay these expenses and maintain any sort of reasonable lifestyle on the starting pay of a regional pilot. So these jobs frequently end up as a stepping stone to a major carrier, an opportunity to build valuable flight time before moving on to a more lucrative job with a major carrier. In fact, some airlines publicly call themselves "stepping stones" without reservation, as could be heard in a recent NTSB public hearing. This type of relationship effectively represents a disincentive to provide more than the bare minimum training or to provide any motivation for experienced employees to remain. Typical wage differences between major and regional carriers can be as much as $70,000 for a Captain and $50,000 for a first officer at 5 years of service. The differentials increase dramatically the longer the pilot is employed.

When an economic downturn comes, operations contract, major airlines park their airplanes, and employees are furloughed. These furloughed employees will generally not take the jobs in the regional industry; they have other skills to market. It is a telling factor that as pilots were called back from furloughs following the 9-11 downturn, a majority chose not to return even to the major airlines; they found other jobs, many times in an entirely different industry, or returned to full-time military service. In today's economic and outsourcing business practices, pilots with decades of experience are laid off from the legacy airlines and cannot afford to work for one of the regional partner airlines as a newly hired first officer. Their experience is not given any value for employment at the legacy carrier's code share partners and they are faced with starting over as a first officer for less than $20,000 per year.

In today's airline industry, the legacy major airlines have farmed out the flying to the lowest regional bidder while rejecting any attempts to retain their experienced pilots within their extended airline systems.

Retirement benefits have also been reduced within the regional industry. Managements have refused to grant sufficient improvements for retirement benefits due to, among other reasons, the (assumed) belief that the pilot will not be there long anyway. However, as we have seen, the overall longevity of pilots staying at the regional level has increased as

the economic outlook has changed. Major carriers have reduced their overall capacity steadily in recent years, and at the same time reduced their pilot headcount. When combined with the increase in retirement age to 65, the regional pilot may have little choice but to maintain employment at a carrier that offers lower wages, with lower health and retirement benefits and far less in quality of life.

Commuting Pilots

Aviation is a turbulent industry; numerous cost and operational pressures occur daily. Airlines frequently make adjustments to their fleets' size and geographical distribution. Crew bases open, close, or change, sometimes with little or no notice to employees stationed there. An airline that services a city or town with a Bombardier CRJ700 jet today may serve it with an ATR-42 turboprop tomorrow and next week, service may cease entirely. As these operational decisions are made, crew bases move, change, or close. A CRJ base may become an ATR-42 base and the CRJ base may move to a different part of the country. When companies make such changes, the pilots involved may have several alternatives. They can move to the new base where CRJs are being flown, they can remain where they live and commute to the new base, or, if permitted by their employer, they can be trained in the new airplane now being flown out of their old base, which may require a large pay cut. Any of these can be very disruptive for the pilots and in turn, their families.

A pilot may want to stay on the CRJ, for example, but cannot or does not want to move to the new base. Any number of factors can influence that decision, including children in school, relationships with friends, or housing costs. For instance, the cost of living in Des Moines, Iowa is considerably less than the cost of living near JFK in New York. Thus, the pilot is more likely to maintain his home in Des Moines and commute to work, reducing his days off, his free time and his overall lifestyle. That decision to stay on the CRJ will necessitate commuting to the new base. The pilot may share or lease an apartment, plan to stay with friends, or use a hotel for accommodations in the new base. Generally, economic factors determine the course of action, but the basic problem of a relocated crew base is out of the pilot's control; it is forced by the industry and pilots cope as best they can. Most regional carriers, while they offer some expenses towards the moving of displaced crewmembers, offer little if anything to voluntary moves. The difference between voluntary and displaced movement is often a blurred line between having a job and losing a job. However in today's circumstances, even the limited monetary help a regional carrier may provide does not cover the costs of moving a family many times over a pilot's career.

Commuting has a number of complicating factors, which include:

- employer's sick leave and attendance-reliability policies
- very few seats are available for pilots forced to commute on today's full airplanes,
- airline policies which prohibit positive-space transportation,
- inadequate or non-existent relocation provisions, and
- commuting policies which require pilots to depart home base with several backup flights.

This difficult reality adds to the creation of stress and further increases pilot fatigue factors. ALPA encourages airline managements to work with their pilots to establish new or improved commuting policies and scheduling practices that take into account these lifestyle issues.

Safety Data and Reporting Programs

What should be done to make improvements now while we are implementing the previously discussed changes in training and qualifications? There are programs available to the aviation industry today, such as Flight Operations Quality Assurance (FOQA) and Aviation Safety Action Program (ASAP), that can provide important and needed oversight information, not only internally within air carriers, but also for the overall air transportation system. The safety data provided by these programs are making differences in safety and efficiency of air carrier operations. Approximately 90 percent of the data provided through ASAP is sole-source data. This is safety data that will not and cannot be gathered by other means and it can be critical and essential to improve the safety performance of our industry.

Safety Management Systems (SMS) are mandated by ICAO standards. SMS programs are being developed for use by U.S. aviation entities. Safety reporting and safety data are intrinsic in SMS programs and ASAP and FOQA should be an integral part of any SMS.

In order to make the data more readily obtained and available for safety improvements only, protections need to be put in place that will limit the data use in civil liability cases. Restraints also need to be strengthened for the use of the data for safety purposes only. The data has an important safety benefit and it must not be compromised. Unless there are improved protections that will limit the use of the data to solely safety purposes, the flow of reports will cease. These programs are a critical safety benefit for the industry that need to be nurtured, protected, and promoted at all levels of the air carrier industry.

Promoting Professionalism in the Industry

The best safety device on any airplane is a well trained, well rested, highly motivated pilot. A safety culture at an airline must be instilled and consistently reinforced from the highest levels within the organization. An organizational safety culture will encourage the highest levels of performance among professional pilots.

This high level emphasis must go hand-in-hand with appropriate training. Standard operating procedures must be just that; they should be the operating norm for all flight crewmembers and deviations should not be allowed except for extraordinary circumstances. Pilots-in-command should be encouraged to mentor their first officers and instill in them the desire to maintain the highest standards of operational safety.

ALPA offers professional standards programs and structure which reinforce professional conduct in the cockpit. Similarly, airlines need to provide special command training

courses for new captains to instill in them the necessary traits to be a real leader on the flight deck. In addition to basic required skills such as aeronautical decision making and crew resource management, new captains should receive training to reinforce the skills, aptitudes, and character necessary to properly lead a crew, exercise command authority, and maintain the highest levels of safety in the face of internal or external pressures that may tend to lower operational safety margins.

In the case of the Colgan Air accident, the pilot group was new to ALPA, and unfortunately the professional standards structure was just being established.

Mentoring Programs

In addition to promoting professional conduct among crewmembers, at least one airline whose pilots ALPA represents has a detailed, structured, pilot-mentoring program. This program provides a wide variety of resources and benefits to new-hire crewmembers as they become acquainted with their airline and becoming an airline pilot. The program pairs experienced line pilots with new hire pilots in an effort to answer many of the frequently asked questions, such as bidding, jump seat travel, vacation, etc., from new hires. Pilot mentors also assist new hires as they transition from the training environment to flying the line, and throughout their first, probationary year. There is also another aspect of the program that assigns a senior captain or check airman to newly upgraded captains once they are online and out on their own. This greatly assists new captains as they become accustomed to requirements for command.

Conclusions and Recommendations

In conclusion, ALPA believes that it is essential, and long overdue, that the flight and duty time rules for commercial aviation operations be revised based on readily available science. Issues that must be addressed include providing crewmembers a minimum rest period that will allow an opportunity for 8 hours of sleep, and there should be provisions for operations on the back side of a pilot's circadian rhythms. Additionally, a pilot's duty day length should be based on when the day begins and how many flight segments are scheduled.

In regard to training, we feel there should be more stringent academic requirements in FAR Part 121 to obtain both commercial and airline transport pilot ratings. Airlines should provide specific command training courses for new captains to instill in them the necessary skills and traits to be a real leader on the flight deck. Airlines should also implement mentoring programs for both captains and first officers as they first enter operations in their crew position to help them become comfortable and reinforce the knowledge and skills learned in training and apply them to line operations.

Airline training needs to account for the source of their pilots and assume the minimum experience level. There should be structured, in-depth oversight of code-share partners by the major carriers to include periodic safety audits of flight operations, training programs,

and maintenance and inspection. The best practices in use by major carriers need to be mentored into their smaller code share partners.

Safety data provided through important data sharing programs such as FOQA and ASAP needs to be vigorously protected from inappropriate use and preserved for the sole purpose of improving safety and operational efficiency. Further, these programs need to be promoted at all levels of the industry.

Finally, airline managements and their pilots should work closely together to promote policies and practices that instill a strong safety culture throughout the organization; reinforce the importance of professionalism in all aspects of operations; and recognize the value of well trained, well rested, and highly motivated employees.

Thank you, again, for the opportunity to testify today. I would be pleased to address any questions that you may have.

# # #

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Mark V. Rosenker
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Testimony of the Honorable Mark V. Rosenker
Acting Chairman
National Transportation Safety Board
Before the
Subcommittee on Aviation
Committee on Transportation and Infrastructure
United States House of Representatives

Regional Air Carriers and Pilot Workforce Issues
June 11, 2009

Good morning. With your concurrence, Mr. Chairman, I would like to begin my testimony with a short summary of the National Transportation Safety Board's (NTSB) actions to date regarding the investigation of the accident involving Colgan Air flight 3407. I want to emphasize that this is still an ongoing investigation and that there is significant work left for our investigative staff. My testimony today will therefore out of necessity be limited to those facts that we have identified to date, and I will steer clear of any analysis of what we have found so far and avoid any ultimate conclusions that might be drawn from that information.

On February 12, 2009, about 10:17 p.m. eastern standard time, Colgan Air flight 3407, a Bombardier Dash 8-Q400, crashed during an instrument approach to runway 23 at Buffalo-Niagara International Airport, Buffalo, New York. The crash site was in Clarence Center, New York, about 5 nautical miles northeast of the airport, and was mostly confined to a single residential house. The flight was operating as a Part 121 scheduled passenger flight from Liberty International Airport, Newark, New Jersey.

The four crew members and 45 passengers were killed, and the aircraft was destroyed by impact forces and post crash fire. One person in the house was also killed and two individuals escaped with minor injuries.

The flight crew reported for duty on the day of the accident at 1:30 p.m. However, the crew's first two flights of the day were cancelled because of high winds at the departure airport. The accident flight, which had been delayed due to weather, departed Newark at 9:18 p.m. with a planned arrival time of 10:21 p.m.

The captain was the pilot flying the aircraft, and the cruise altitude was 16,000 feet. During the ascent to 16,000 feet, all de-ice systems were selected on and stayed on throughout the flight. About 40 minutes into the flight, the crew began the descent portion of the flight.

At 9:54 p.m., the captain briefed the airspeed for landing, which was to be 118 knots with the flaps set to 15 degrees. At 10:10 p.m., the flight crew discussed the build-up of ice on the windshield. At 10:12 p.m., the flight was cleared to 2300 feet and at 10:14 p.m., the airplane reached the assigned altitude. Over the next two minutes, with the autopilot engaged, power was reduced to near flight idle and the airspeed slowed from about 180 to about 135 knots. At 10:16

p.m., the crew lowered the landing gear. About 20 seconds later, the first officer moved the flaps from 5 to 10 degrees. Shortly afterward, the stick shaker activated, and the autopilot disengaged. The stick shaker is a stall warning mechanism that warns of slow airspeed and an approaching stall should the pilot take no action to remedy the situation. In this case, the stick shaker activated more than 25 knots before the stall airspeed.

The flight data recorder data from the airplane indicate that the crew added about 75% of available engine power and the captain moved the control column aft. This action was accompanied by the airplane pitching up, and a roll to the left, followed by a roll to the right, during which time the stick pusher activated and the flaps were retracted.

At the time of the accident, the weather at Buffalo was: winds from 250 degrees at 14 knots, visibility 3 miles in light snow and mist, a few clouds at 1100 feet, ceiling overcast at 2100 feet, and temperature of 1 degree Celsius.

Examination of the flight data recorder data and performance models shows that some ice accumulation was likely present on the airplane prior to the initial upset event, but that the airplane continued to respond as expected to flight control inputs throughout the accident sequence.

The engines exhibited evidence of power at impact. Flight control continuity could not be established due to the extensive impact and fire damage to the airplane.

On May 12, 2009, the NTSB began a 3-day en banc public hearing on the accident. The NTSB swore in 20 witnesses to discuss the following topics:

- Airplane Performance;
- Cold Weather Operations;
- Sterile Cockpit Compliance;
- Flight Crew Training and Performance; and
- Fatigue Management.

I would like to note that these issues are not relevant to regional airlines alone. They are pertinent to every airline operation, major air carriers as well as regional air carriers.

The investigation is continuing with aircraft performance and simulation work, additional interviews, reviews of policies and procedures, and further examination of selected wreckage. We've identified numerous safety issues that we will explore in significant detail.

During the hearing, the flight crew's experience and training were examined. The captain received his type rating in the Dash 8 in November 2008, only a few months before the crash. He had a total flight time of 3,379 hours, with 1,030 hours as pilot-in-command and 110.7 hours in the Dash 8. The first officer received second-in-command privileges on the Dash 8 in March 2008. She reported 2,244 hours total pilot time with 774 hours in the Dash 8.

The captain had a history of multiple FAA certificate disapprovals involving flight checks conducted before his employment with Colgan. The captain did not initially pass flight tests for the Instrument flight rating (October, 1991), the Commercial Pilot certificate (May, 2002), and the multiengine certificate (April, 2004). In each case, with additional training, the captain subsequently passed the flight tests and was issued the rating or certificate.

In 1995, the NTSB issued 4 recommendations to the FAA to require an airline to evaluate an applicant pilot's experience, skills, and abilities before hiring the individual. The FAA's effort in response to these recommendations resulted in the Pilot Records Improvement Act (PRIA) of 1996 (Public Law 104-264, section 502, which is codified in 49 *United States Code* section 44703 (h), (i), and (j)). The PRIA required any company hiring a pilot for air transportation request and receive records from any organization that had previously employed the pilot during the previous 5 years. However, the PRIA does not require an airline to obtain FAA records of failed flight checks. Although validation of FAA ratings and certifications held by a pilot applicant is necessary in evaluating a pilot's background, additional data contained in FAA records, including records of flight check failures and rechecks, would be beneficial for a potential employer to review and evaluate.

In 2005, the NTSB issued another recommendation to the FAA to require airlines, when considering an applicant for a pilot position, to perform a complete review of FAA airman records, including any notices of disapproval for flightchecks. In response to the NTSB's recommendation, the FAA stated that Notices of Disapproval for flight checks for certificates and ratings are not among the records explicitly required by the Pilot Records Improvement Act (PRIA) of 1996, and therefore, to mandate that air carriers obtain such notices would require rulemaking or a change in the PRIA itself. The FAA indicated that such changes are likely to be time consuming and controversial. The FAA noted that some air carriers currently require applicants for pilot positions to sign a consent form permitting the FAA to release these records to the air carrier requesting them as part of the applicants' pre-employment screening. When this is done, the FAA furnishes these records to the air carrier without violating privacy laws. To date, the FAA has not issued any rulemaking to require airlines to obtain a release from all flight crew applicants to release their records to permit the airline to consider past performance in hiring decisions. These changes could also be made by modifying the statute, but to our knowledge, the FAA has not asked the Congress to do so. On November 7, 2007, the FAA issued Advisory Circular AC120-68D, which informs carriers that they can ask pilots to sign a consent form giving the carrier access to any Notices of Disapproval. The recommendation is currently classified "Open-Acceptable Alternate Response."

The investigators also are pursuing why Colgan did not have a remedial training program in place as recommended in the FAA's 2006 Safety Alert for Operators (SAFO) 06015, the purpose of which was to promote voluntary implementation of remedial training programs for pilots with persistent performance deficiencies.

Specifically, the SAFO provides guidance to safety directors on the development of programs to identify pilots with persistent performance deficiencies, those who have experienced multiple failures in training and proficiency checks. It was suggested that three objectives be accomplished: 1) review the entire performance history of any pilot in question; 2) provide

additional remedial training as necessary; and 3) provide additional oversight by the certificate holder to ensure that performance deficiencies are effectively addressed and corrected.

The investigation is also exploring how commuting may have affected the pilots' performance. Both pilots were based in Newark, New Jersey, but lived outside of the Newark area. The captain commuted to Newark from Tampa, Florida, three days before the accident, and spent the night in Colgan's operations room the night before the accident. The first officer commuted from Seattle, Washington, on a "red eye" flight the night before the accident. She did not arrive into Newark until 6:30 a.m. the day of the accident flight, and there is evidence that she spent the day in the crew room.

Of the 137 Colgan pilots based at Newark in April 2009, 93 identified themselves as commuters. Forty-nine pilots have a commute greater than 400 miles, with 29 of these pilots living more than 1000 miles away.

During post-accident interviews, the Newark regional chief pilot said no restrictions were placed on pilots regarding commuting, but pilots had to meet schedule requirements. Colgan has a commuting policy that is outlined in its Flight Crewmember Policy Handbook. The handbook states "a commuting pilot is expected to report for duty in a timely manner." A previous edition of the handbook stated that flight crewmembers should not attempt to commute to their base on the same day they are scheduled to work. This statement is not in the current handbook edition. Additionally, Colgan's procedures do not allow pilots to sleep in the operations room.

The investigation is examining whether conversations inconsistent with the sterile cockpit rule (which prohibits crew members from engaging in non-essential conversation below 10,000 feet) impacted the pilots' situational awareness of the decreasing airspeed. For example, there was a 3-minute discussion on the crew's experience in icing conditions and training; this conversation occurred just a few minutes before the stick shaker activated and while the crew was executing the approach checklist.

Another issue that the investigation is pursuing is whether fatigue may have affected the flight crew's performance. We know that on the day of the accident, the captain logged into Colgan's crew scheduling computer system at 3:00 a.m. and 7:30 a.m. And we know that the first officer commuted to Newark on an overnight flight and was sending and receiving text messages periodically the day of the accident.

At the time of the accident, Colgan had a fatigue policy in place. The fatigue policy was covered in the basic indoctrination ground school. Colgan did not provide specific guidance to its pilots on fatigue management.

On April 29, 2009, Colgan issued an operations bulletin on crewmember fatigue. The bulletin reiterated the company's fatigue policy and provided information to crewmembers on what causes fatigue, how to recognize the signs of fatigue, how fatigue affects performance, and how to combat fatigue by properly utilizing periods of rest.

Once again, the issues we are exploring in the Colgan investigation are not new issues and are not unique to the regional airlines. The NTSB has previously issued recommendations on stall training, stick pusher training, pilot certification and recurrent training records, remedial training for pilots, sterile cockpit, situational awareness, pilot monitoring skills, low airspeed alerting systems, pilot professionalism, and fatigue. (See attachments.)

As you may know, the NTSB maintains a list of Most Wanted Transportation Safety Improvements. Issues on this list are selected for follow-up and heightened awareness because the Board believes they will significantly enhance the safety of the nation's transportation system, have a high level of public visibility and interest, and will otherwise benefit from being highlighted on the Most Wanted List. Of the six aviation issues currently on the Most Wanted List, two issue areas are in some manner related to the Colgan investigation. I would like to briefly explain the two issue areas, and recent FAA activities in response.

1. Reduce dangers to aircraft flying in icing conditions
2. Reduce accidents and incidents caused by human fatigue

Both of these issue areas currently have a red timeliness classification indicating that the FAA's response has not been acceptable from the NTSB's perspective. In many cases, the FAA's response has been slow in coming, allowing important safety issues that the NTSB has identified to remain unresolved for a lengthy period of time. The FAA has recently indicated that actions are being taken in response to some of these recommendations, and the NTSB is currently reviewing this information. Some of the details, and recent FAA actions for each area are:

- Flight in Icing Conditions: These recommendations date back to 1996, and ask that aircraft approved to fly in icing conditions be certified in icing conditions that represent the most serious threats. In the 13 years since these recommendations were issued, the FAA has not yet taken the requested action. Recent staff level discussions with the FAA revealed that they soon plan to propose changes to the certification regulations that include revised icing conditions that are more representative of the icing conditions that pose the greatest aviation safety risk. In 2007, the FAA issued an NPRM calling for activation and continuous operation of de-icing boots at the first signs of icing. The NTSB is still awaiting a final rule mandating this needed change.

- Human Fatigue: Human fatigue is another issue that has been on the Most Wanted List since it was created 19 years ago. In 1995, the FAA issued a notice of proposed rulemaking (NPRM) that addressed many of the issues identified by the NTSB. That NPRM was controversial and encountered considerable opposition. The FAA later withdrew the NPRM and has not proposed any further revisions to existing flight and duty time regulations. The regulations have not been significantly revised in over 50 years, although there has been substantial scientific-based research over that time frame that the NTSB believes supports changes in the existing flight and duty time regulations. Throughout the 19-year period that this issue has been on the Most Wanted List, right up through today,

the NTSB has continued to investigate accidents where flight crew fatigue was a significant issue.

Finally, I would like to address pilot training issues. As you are aware, on January 12, 2009, the FAA published an NPRM titled, "Qualification, Service, and Use of Crewmembers and Aircraft Dispatchers." The notice proposes to amend the regulations for flight and cabin crewmembers and dispatcher training programs in domestic, flag, and supplemental operations. Proposed changes include requiring the use of flight simulation training devices (FSTD) in traditional flight crewmember training programs and adding training requirements in safety-critical areas. In addition, the proposal reorganizes qualifications and training requirements in the existing rule by moving several sections of advisory information to the regulatory section. The NPRM also addresses issues raised in numerous safety recommendations issued to the FAA by the NTSB; 13 of these recommendations remain open.

On May 7, 2009, the NTSB provided comments to the NPRM. While the NTSB generally supports the proposed rule changes, we suggested additional requirements, including substantive changes that would improve or enhance crew and dispatcher procedures, qualifications, and training and the replacement of advisory circulars and other recommended guidance with regulatory changes mandating compliance.

At an April 7, 2009, presentation on the NPRM, the NTSB was briefed that the FAA principle regarding training is "Train like you fly, and fly like you train." The NTSB agrees with this principle and with several proposed initiatives that are especially appropriate for flight operations in today's environment. For example, the NTSB supports the NPRM's proposals for adding a continuous analysis process and FSTDs to training programs, requiring special hazards and environment training, and establishing qualifications for training centers and other 14 *Code of Federal Regulations* (CFR) Part 119 facilities. The NTSB also concurred with the FAA that it is important for flight crewmembers to be trained and evaluated in a complete flight crew environment, which means that, during training for pilot flying and pilot monitoring roles, crewmembers should occupy the seats for—and perform the duties of—the position for which they are being trained.

The NTSB is aware that, in the past, some considered upset recovery training to be inappropriate due to limitations in aerodynamic model fidelity of simulators; however, unusual attitudes do not equate to being outside the angle of attack and sideslip range of the aerodynamic model. Many, if not most, upsets occur well within this envelope. Therefore, the NTSB supports the "Airplane Upset Recovery Training Aid," which is an FAA-industry effort referenced in the NPRM, and believes that training could be further improved by feedback to the pilot from the simulator. The training aid suggests that, in a scenario in which the pilot has maneuvered the simulator to an extremely high angle of attack or sideslip, there should be a change in the visual display when the aerodynamic envelope is exceeded; specifically, a color change would alert pilots that they are at an angle of attack or sideslip that should be avoided during recovery efforts.

The NTSB notes that some aircraft, such as the Saab 340 and the Bombardier CRJ, have experienced upsets due to premature stall caused by icing that disrupted the airflow over the

wing or otherwise altered the aerodynamic stall characteristics of the wing or control surface. Because icing contamination can cause the critical angle of attack to be reduced considerably, these upsets can occur without warning. A stall roll-off departure from normal flight is often the flight crew's first indication of an upset due to icing contamination; however, the NTSB has found that flight crews often do not apply decisive and timely recovery controls when this occurs, which results in prolonged upsets that increase the probability of ground impact. For aircraft that have experienced upsets due to icing contamination, the NTSB suggests that upset recovery training should include recognition of these excursions from normal flight attitudes and prompt application of proper recovery procedures.

Although the NPRM continues to encourage the traditional training approach to stall recovery (recovery from stick shaker), the NTSB is concerned that flight crews are not recognizing stalls and are not applying aggressive recovery procedures, as indicated by several aviation events. Among these events is the October 14, 2004, accident in which a Bombardier CL-600-2B19 crashed in Jefferson City, Missouri, when the flight crew was unable to recover after both engines flamed out as the result of a pilot-induced aerodynamic stall. Another example occurred during a December 22, 1996, accident in which a Douglas DC-8-63 experienced an uncontrolled flight into terrain in Narrows, Virginia, after the flying pilot applied inappropriate control inputs during a stall recovery attempt and the nonflying pilot failed to recognize, address, and correct these inappropriate control inputs. Because of examples like these, the NTSB advises that training in stall recovery should go beyond approach to stall to include training in recovery from a full stall condition. In addition, in cases when flight data are available (whether from flight tests or accidents/incidents), these data should be used to model stall behavior to facilitate training beyond the initial stall warning.

If the proposed rule becomes final, it would likely meet the intent of 5 of the 13 open safety recommendations related to crewmember training. The following is a list of the 13 recommendations and an explanation of whether or not the NPRM addresses each of them.

A-93-46
Amend 14 CFR Parts 121, 125, and 129 to require Traffic Alert and Collision Avoidance System [TCAS] flight simulator training for flight crews during initial and recurrent training. This training should familiarize the flight crews with TCAS presentations and require maneuvering in response to TCAS visual and aural alerts.

The NPRM contains requirements for TCAS training, as recommended. Therefore, the NPRM is responsive to the recommendation. If the NPRM (as currently presented) becomes a final rule, the NTSB would likely consider it an acceptable action, and the recommendation could be closed. The NTSB notes that this is currently the oldest open aviation recommendation.

A-94-107
Revise 14 CFR Section 121.445 to eliminate subparagraph (c), and require that all flight crewmembers meet the requirements for operation to or from a special airport, either by operating experience or pictorial means.

The NPRM proposes the following language for 14 CFR 121.1235(c): "The Administrator may determine that certain airports (due to items such as surrounding terrain, obstructions, or complex approach or departure procedures) are special airports requiring special airport qualifications and that certain areas or routes require a special type of navigation qualification." In addition, special routes, areas, and airports for special operations are among the subjects in the NPRM's list of required training. Therefore, the NPRM is responsive to the recommendation. If the NPRM (as currently presented) becomes a final rule, the NTSB would likely consider it an acceptable action, and this recommendation could be closed.

A-94-199
Revise the certification standards for Part 25 and for Part 23 (commuter category) aircraft to require that a flight simulator, suitable for flight crew training under Appendix H of Part 121, be available concurrent with the certification of any new aircraft type.

The NPRM proposes a requirement that a flight simulator be available for training. The NTSB has previously indicated that such a requirement would be an acceptable alternative response to a design requirement for an aircraft. Therefore, if the proposed rule becomes final, the NTSB would likely consider it an acceptable action, and this recommendation could be closed.

A-95-124
Require, by December 31, 1997, operators that conduct scheduled and nonscheduled services under 14 CFR Part 135 in Alaska to provide flight crews, during initial and recurrent training programs, aeronautical decision-making and judgment training that is tailored to the company's flight operations and Alaska's aviation environment, and provide similar training for Federal Aviation Administration principal operations inspectors [POI] who are assigned to commuter airlines and air taxis in Alaska, so as to facilitate the inspectors' approval and surveillance of the operators' training programs.

The FAA has previously indicated to the NTSB that the NPRM would include aeronautical decision-making and judgment in the crew resource management portion of the proposed training rule. However, this Safety Recommendation is specific to Part 135 operations in Alaska, while the NPRM addresses Part 121 operations. Therefore, the FAA has not supplied a satisfactory response. Thus, the NPRM, as drafted, would not meet the intent of this recommendation, and the status would remain "Open—Unacceptable Response."

A-96-95
Develop a controlled flight into terrain training [CFIT] program that includes realistic simulator exercises comparable to the successful windshear and rejected takeoff training programs and make training in such a program mandatory for all pilots operating under 14 CFR Part 121.

The NPRM proposes to require special hazards training, including methods for preventing CFIT and approach and landing accidents. Therefore, if this requirement is included in the final rule, the NTSB would likely consider it an acceptable action, and the recommendation could be closed.

A-96-120

Require 14 CFR Part 121 and 135 operators to provide training to flight crews in the recognition of and recovery from unusual attitudes and upset maneuvers, including upsets that occur while the aircraft is being controlled by automatic flight control systems, and unusual attitudes that result from flight control malfunctions and uncommanded flight control surface movements.

The NTSB is pleased that, in response to Safety Recommendation A-96-120, the NPRM includes training on recognizing and recovering from "special hazards," which are sudden or unexpected aircraft upsets. The NTSB interprets that this proposal would also include a requirement that gives FAA POIs the authority to review and require changes to training programs that do not adequately address a special hazard. Lack of such authority was a concern identified during the NTSB's investigation of a November 12, 2001, accident involving American Airlines flight 587, an Airbus Industrie A300-605R.[1] During this investigation, the NTSB learned that the POI knew that aspects of American Airlines' training program had undesirable effects; however, he lacked the authority to force American Airlines to change its program.

In addition, a topic covered in the special hazards training section of the NPRM is recovery from loss of control due to airplane design, airplane malfunction, human performance, and atmospheric conditions. The "Upset Recognition and Recovery" section of the NPRM lists a number of items that should be covered, including catastrophic damage due to rapidly reversing controls and the use of light pedal forces and small pedal movements to obtain the maximum rudder deflection as speed increases.

This recommendation is currently classified "Open—Unacceptable Response" because of the FAA's delayed response. Although the NPRM proposes requirements for Part 121 operators, similar action for Part 135 operators will be needed before Safety Recommendation A-96-120 can be closed.

A-98-102

Require air carriers to adopt the operating procedure contained in the manufacturer's airplane flight manual and subsequent approved revisions or provide written justification that an equivalent safety level results from an alternative procedure.

The FAA has previously indicated to the NTSB that the NPRM would address the issues in this recommendation. However, the NTSB did not see any language in the NPRM that specifically addresses Safety Recommendation A-98-102, which currently is classified "Open—Acceptable Response" pending a requirement for the recommended action.

A-01-85

Amend 14 [CFR] 121.417 to require participation in firefighting drills that involve actual or simulated fires during crewmember recurrent training and to require that those drills include realistic scenarios on recognizing potential signs of, locating, and fighting hidden fires.

The NPRM addresses the substantive issues in this recommendation. Although the NPRM does not propose to revise 14 CFR 121.417, it contains training requirements on the actions to take in

[1] For more information, see *In-Flight Separation of Vertical Stabilizer, American Airlines Flight 587, Airbus Industrie A300-605R, N14053, Belle Harbor, New York, November 12, 2001*, Aircraft Accident Report NTSB/AAR-04/04 (Washington, DC: NTSB, 2004).

the event of fire or smoke in the aircraft, including realistic drills with emphasis on combating hidden fires. This training includes simulated locations of hidden fires, such as behind sidewall panels, in overhead areas and panels, or in air conditioning vents. The NPRM also contains firefighting training requirements for flight attendants, including operation of each type of installed hand fire extinguisher. This recommendation is currently classified "Open—Unacceptable Response" pending a requirement for the recommended action. If the requirements proposed in the NPRM are enacted in the final rule, the NTSB would likely consider it an acceptable action, and this recommendation could be closed.

A-05-30
Require all 14 [CFR] Part 121 and 135 air carriers to incorporate bounced landing recovery techniques in their flight manuals and to teach these techniques during initial and recurrent training.

Although the NPRM contains detailed requirements for training on landing, the NTSB did not see anything in the NPRM related to bounced landing recovery techniques. This recommendation is currently classified "Open—Acceptable Alternate Response" pending the results of a survey indicating that all operators' training programs include the recommendations in a safety alert for operators.

A-07-44
Require that all 14 [CFR] Part 91K, 121, and 135 operators establish procedures requiring all crewmembers on the flight deck to positively confirm and cross-check the airplane's location at the assigned departure runway before crossing the hold short line for takeoff. This required guidance should be consistent with the guidance in Advisory Circular 120-74A and Safety Alert for Operators 06013 and 07003.

The NPRM contains training requirements related to runway safety. Special hazards topics must include how to ensure that takeoff clearance is received and that the correct runway is being entered for takeoff before crossing the hold-short line. This recommendation is currently classified "Open—Unacceptable Response" because of continuing delays in the issuance of this NPRM. If the NPRM becomes final, the proposed requirement is partly responsive to this recommendation because it addresses only Part 121 operators. Action will still be needed for Part 135 and Part 91 subpart K operators before this recommendation can be closed.

A-07-96
Require air carriers to revise their cabin crew training manuals and programs to ensure that the manuals and programs state that a door must remain open while the air conditioning (A/C) cart is connected, advise that the A/C cart can pressurize the airplane on the ground if all doors are closed, and warn about the dangers of opening any door while the air conditioning cart is supplying conditioned (cooled or heated) air to the cabin.

The NPRM proposes a requirement for training that will familiarize cabin crewmembers with each aircraft on which they will work. Among these aircraft familiarization requirements are cabin pressurization indicators and systems. However, the NPRM does not fully address the recommended action because it only addresses specific actions to take when the door remains

open while the A/C cart is connected. This recommendation is currently classified, and would remain, "Open—Acceptable Response" pending timely and acceptable revisions to Notice 8400.35 and Order 8900.1.

A-08-16
Require 14 [CFR] Part 121, 135, and Part 91 subpart K operators to include, in their initial, upgrade, transition, and recurrent simulator training for turbojet airplanes, (1) decision-making for rejected landings below 50 feet along with a rapid reduction in visual cues and (2) practice in executing this maneuver.

The NPRM proposes a requirement to use a simulator for training on rejected landing maneuvers, including the initiation of a rejected landing between 30 and 50 feet above the runway. Thus, the NPRM addresses the second part of this recommendation ("practice in executing this maneuver"). In addition, although the NPRM did not specifically address decision-making, this topic may be covered during training in the maneuver. Safety Recommendation A-08-16 is currently classified "Open—Response Received." The NPRM partially responds to the recommendation because it addresses only Part 121, and not Part 135 or Part 91 subpart K, carriers. Action for Part 135 and Part 91 subpart K operators will still be needed before this recommendation can be closed.

A-08-17
Require 14 [CFR] Part 121, 135, and Part 91 subpart K operators to include, in their initial, upgrade, transition, and recurrent simulator training for turbojet airplanes, practice for pilots in accomplishing maximum performance landings on contaminated runways.

The NTSB did not find any language describing how to accomplish maximum performance landings on contaminated runways in the NPRM. In addition, any proposed requirements associated with this NPRM would only apply to Part 121 carriers and not Part 135 or Part 91 subpart K operators. This recommendation is currently classified "Open—Response Received."

Mr. Chairman, this concludes my testimony, and I will be glad to answer questions you may have.

Attachments:

Recommendation history on:

- stall training;
- stick pusher training;
- pilot training records;
- remedial training for pilots;
- sterile cockpit;
- situational awareness;
- pilot monitoring skills;
- low airspeed alerting systems;
- pilot professionalism;
- and fatigue.

Recommendation Report

Monday, May 18, 2009

Log Number 0940
Issue Date 7/7/1978

THE NATIONAL TRANSPORTATION SAFETY BOARD IS CONCERNED BY THE CONTINUED OCCURRENCE OF STALL/SPIN ACCIDENTS IN RECENT YEARS. THE ACCIDENT STATISTICS ARE ALARMING AND REINFORCE OUR BELIEF THAT POSITIVE, INNOVATIVE ACTION BY THE FEDERAL AVIATION ADMINISTRATION MUST BE TAKEN TO ALLEVIATE THE SITUATION. FROM 1974 TO 1976, THERE WERE 723 STALL/SPIN ACCIDENTS WHICH RESULTED IN 668 FATALITIES AND 246 SERIOUS INJURIES. MANY OF THESE ACCIDENTS COULD HAVE BEEN PREVENTED IF FAA HAD IMPLEMENTED PAST SAFETY BOARD RECOMMENDATIONS RELATING TO STALL/SPIN PROBLEMS.

Recommendation #	Overall Status	Priority
A-78-043	CUA	CLASS I

INCORPORATE ALL OF THE ESSENTIAL ELEMENTS OF THE GROUND AND FLIGHT TRAINING INCREMENTS DEVELOPED IN THE "GENERAL AVIATION PILOT STALL AWARENESS TRAINING STUDY," OR THEIR EQUIVALENT, IN FAR PARTS 61 AND 141.

FAA	Closed - Unacceptable Action	2/3/1989

9/1/1978	Addressee	FAA LTR: WE BELIEVE THAT CERTAIN ELEMENTS CONTAINED IN THE GENERAL AVIATION PILOT STALL AWARENESS TRAINING STUDY SHOULD BE SURVEYED FOR POSSIBLE INCORPORATION INTO THE SECTIONS OF FAR PARTS 61 AND 141 WHICH DEAL WITH TRAINING IN STALL AWARENESS AND RECOVERY. ACTION IS CURRENTLY UNDERWAY TO IDENTIFY RELEVANT ELEMENTS AND INCORPORATE THEM INTO REGULATORY PROPOSALS FOR UPDATING PILOT TRAINING STANDARDS. WE EXPECT TO COMPLETE THIS SURVEY BY MARCH 1979.
10/8/1980	NTSB	The faa letter of september 1, 1978, indicated that a survey waseexpected to be completed by march 1979, and if the results of the survey indicated rulemaking to be appropriate, regulatory projects would be established. In order to evaluate the status of this recommendation and bring the public docket up to date, we would appreciate a progress report.
11/13/1980	Addressee	FEDERAL AVIATION ADMINISTRATION LTR: THE STALL AWARENESS TRAINING STUDY WILL BE INCLUDED, IN ITS ENTIRETY, INTO FAR PARTS 61 AND 141 AGENDA FOR CONSIDERATION IN THE UPGRADING OF PILOT TRAINING STANDARDS. THE FAA IS PLANNING A REGULATORY REVIEW OF FAR PARTS 61 AND 141 DURING THE CURRENT FISCAL YEAR. WE ARE FULLY AWARE OF THE IMPORTANCE OF THIS ACTION AND ARE HOPEFUL THAT WORK CAN BEGIN DURING THIS CALENDAR YEAR. IN THE MEANTIME, THE FAA HAS WRITTEN TO ALL INDUSTRY SPONSORS OF FAA APPROVED FLIGHT INSTRUCTOR REFRESHER COURSES TO INCLUDE TRAINING ON STALL SPIN AWARENESS. FURTHER, THE FAA EXAMINER STANDARDIZATION SECTION HAS INCLUDED A UNIT OF INSTRUCTION ON STALL SPIN AWARENESS TO ALL PILOT EXAMINERS. THE INTENT OF THESE ACTIONS IS TO INFORM THE FLIGHT INSTRUCTORS AND PILOT EXAMINERS OF THE ELEMENTS OF STALL SPIN AWARENESS TRAINING.
12/1/1986	Addressee	THE STALL AWARENESS TRAINING STUDY WILL BE INCLUDED IN ITS ENTIRETY, INTO FAR PARTS 61 AND 141 AGENDA FOR CONSIDERATION IN THE UPGRADING OF PILOT TRAINING STANDARDS. THE FAA IS PLANNING A REGULATORY REVIEW OF FAR PARTS 61 AND 141 DURING THE CURRENT FISCAL YEAR. WE ARE FULLY AWARE OF THE IMPORTANCE OF THIS ACTION AND ARE HOPEFUL THAT WORK CAN BEGIN DURING THIS CALENDAR YEAR. IN OUR JUDGEMENT, THESE ACTIONS WILL SATISFY THE INTENT OF SAFETY RECOMMENDATION A-78-43. WE WILL KEEP THE BOARD INFORMED OF THE STATUS OF UPGRADING FAR PARTS 61 AND 141.
12/1/1986	NTSB	In a letter dated november 13, 1980, we were informed that the faa was planning a regulatory review of far parts 61 and 141 in fy 1981 andwould include the general aviation pilot stall awareness training study in the agenda. Based on this information, the safety board in a letter dated december 16, 1980, classified this recommendation as open--acceptable action. However, we have not received any further response from the faa and would appreciate being informed of the present status of the review. In the expectation that the faa intends to take action as planned, we are main- taining a-78-43 in an open--acceptable action status.

Recommendation Report

Friday, May 15, 2009

Log Number 2527

Issue Date 10/24/1994 COLUMBUS OH 1/7/1994

ON JANUARY 7, 1994, A JETSTREAM J4101, N304UE, OPERATED BY ATLANTIC COAST AIRLINES AS UNITED EXPRESS FLIGHT 6291, WAS ON A SCHEDULED FLIGHT FROM DULLES INTERNATIONAL AIRPORT TO PORT COLUMBUS INTERNATIONAL AIRPORT, IN GAHANNA, OHIO. AT 2321 EASTERN STANDARD TIME, WHILE ON AN INSTRUMENT LANDING SYSTEM APPROACH TO RUNWAY 28L, THE AIRPLANE STRUCK A CONCRETE BLOCK BUILDING THAT WAS ABOUT 1.2 MILES EAST OF THE RUNWAY. THE PILOT, CO-PILOT, FLIGHT ATTENDANT, AND TWO PASSENGERS WERE FATALLY INJURED. THE THREE OTHER PASSENGERS, A HUSBAND AND WIFE AND THEIR 5-YEAR-OLD DAUGHTER, SUSTAINED MINOR INJURIES. THE AIRPLANE WAS DESTROYED BY POSTCRASH FIRE.

Recommendation # A-94-173

Overall Status CAA

Priority CLASS II

THE NTSB RECOMMENDS THAT THE FEDERAL AVIATION ADMINISTRATION: ENSURE THAT THE TRAINING PROGRAMS FOR 14 CODE OF FEDERAL REGULATIONS PART 135 PILOTS PLACE AN INCREASED EMPHASIS ON STALL WARNING RECOGNITION AND RECOVERY TECHNIQUES, TO INLCUDE STICK SHAKER AND STICK PUSHER, DURING TRAINING.

FAA	Closed - Acceptable Action	11/14/1995

12/21/1994	Addressee	THE FAA AGREES WITH THIS RECOMMENDATION. THE FAA WILL ISSUE A FLIGHT STANDARDS INFO BULLETIN DIRECTING PRINCIPAL OPERATIONS INSPECTORS TO ENSURE THAT THEIR APPROPRIATE OPERATORS PLACE EMPHASIS ON STALL WARNING RECOGNITION & RECOVERY TECHNIQUES, INCLUDING STICK SHAKER & STICK PUSHER, DURING TRAINING.
4/27/1995	NTSB	THE BOARD NOTES THAT THE FAA WILL ISSUE A FLIGHT STANDARDS INFO BULLETIN DIRECTING ALL PRINCIPAL OPERATIONS INSPECTORS TO ENSURE THAT THEIR APPROPRIATE OPERATORS PLACE EMPHASIS ON STALL WARNING RECOGNITION & RECOVERY TECHNIQUES, INCLUDING STICK SHAKER & STICK PUSHER, DURING TRAINING. THEREFORE, THE BOARD CLASSIFIES A-94-173 "OPEN--ACCEPTABLE RESPONSE & AWAITS RECEIPT OF A COPY OF THE SUBJECT BULLETIN.
8/7/1995	Addressee	THE FAA ISSUED FLIGHT STANDARDS INFO BULLETIN 95-10A, INSTRUMENT APPROACH PROCEDURES & TRAINING. THIS BULLETIN BECAME EFFECTIVE 6/26/95, & DIRECTS PRINCIPAL OPERATIONS INSPECTORS TO ENSURE THAT THEIR APPROPRIATE 14 CFR PART 135 OPERATORS PLACE EMPHASIS ON STALLWARNING RECOGNITION & RECOVERY TECHNIQUES, INCLUDING STICK SHAKER & STICK PUSHER, DURING TRAINING.
11/14/1995	NTSB	THE BOARD NOTES THAT THE FAA ISSUED FLIGHT STANDARDS INFO BULLETIN 95-10A, "INSTRUMENT APPROACH PROCEDURES & TRAINING," WHICH BECAME EFFECTIVE 6/26/95. THE FSIB DIRECTS ALL PRINCIPAL OPERATIONS INSPECTORS TO ENSURE THAT THEIR APPROPRIATE OPERATORS PLACE EMPHASIS ON STALL WARNING RECOGNITION & RECOVERY TECHNIQUES, INCLUDING STICK SHAKER & STICK PUSHER, DURING TRAINING. BECAUSE THE FSIB COMPLIES WITH THE INTENT OF THE RECOMMENDATION, A-94-173 IS CLASSIFIED "CLOSED--ACCEPTABLE ACTION."

Recommendation Report

Monday, May 11, 2009

Log Number 2576
Issue Date 11/15/1995 RALEIGH-DURHAM NC 12/13/1994

ON 12/13/94, A FLAGSHIP AIRLINES JETSTREAM 3201, DOING BUSINESS AS (DBA) AMERICAN EAGLE (AMR) FLIGHT 3379, CRASHED ABOUT 4 NAUTICAL MILES SOUTHWEST OF THE RUNWAY 5L THRESHOLD DURING AN INSTRUMENT LANDING SYSTEM APPROCH TO THE RALEIGH-DURHAM INTERNATIONAL AIRPORT (RDU). THE FLIGHT WAS REGULARLY SCHEDULED PASSENGER FLIGHT UNDER 14 CODE OF FEDERAL REGULATIONS (CFR), PART 135. THIRTEEN PASSENGERS & THE TWO CREWMEMBERS WERE FATALLY INJURED, & THE OTHER FIVE PASSENGERS SURVIVED. THE AIRPLANE WAS DESTROYED BY IMPACT & FIRE. THE WEATHER AT THE TIME OF THE ACCIDENT WAS CEILING 500 FEET, VISIBILITY 2 MILES, LIGHT RAIN & FOG, TEMPERATURE 38 DEGREES F, & DEW POINT 36 DEGREES F.

Recommendation # A-95-116 **Overall Status** CR **Priority** CLASS II

THE NTSB RECOMMENDS THAT THE FAA: REQUIRE ALL AIRLINES OPERATING UNDER 14 CFR PARTS 121 & 135 & INDEPENDENT FACILITIES THAT TRAIN PILOTS FOR THE AIRLINES TO MAINTAIN PERTINENT STANDARDIZED INFO ON THE QUALITY OF PILOT PERFORMANCE IN ACTIVITIES THAT ASSESS SKILLS, ABILITIES, KNOWLEDGE, & JUDGMENT DURING TRAINING, CHECK FLIGHTS, INITIAL OPERATING EXPERIENCE, & LINE CHECKS & TO USE THIS INFO IN QUALITY ASSURANCE OF INDIVIDUAL PERFORMANCE & OF THE TRAINING PROGRAMS.

FAA	Closed - Reconsidered	1/3/2000

2/13/1996 Addressee

THE FAA RESPONDED THAT THE CURRENT REGULATIONS (14 CFR 121 APPENDIX E & F) CONTAIN ADEQUATE MANEUVERS & PROCEDURES, WITH "...STANDARDIZED INFO NEEDED TO ASSESS PILOT PERFORMANCE ADEQUATELY." THEY ALSO COMMENTED ON THE RECENT ISSUANCE OF A FINAL RULE, AIR CARRIER & COMMERCIAL OPERATOR TRAINING PROGRAMS, WHICH UPGRADED THE TRAINING, CHECKING & QUALIFICATION REQUIREMENTS FOR 14 CFR 135 OPERATORS, & MANDATED CREW RESOURCE MANAGEMENT TRAINING.

7/15/1996 NTSB

THE BOARD NOTES THAT THE FAA BELIEVES THAT CURRENT RULES, AS SPECIFIED IN 14 CFR PART 121 APPENDIXES E & F, PROVIDE THE STANDARDIZED INFO NEEDED TO ASSESS PILOT PERFORMANCE ADEQUATELY. IN ADDITION, ON 12/8/95, THE FAA ISSUED A FINAL RULE ENTITLED, "AIR CARRIER & COMMERICAL OPERATOR TRAINING PROGRAM," WHICH REQUIRES CERTAIN CERTIFICATE HOLDERS OPERATING UNDER PART 135 TO COMPLY WITH THE TRAINING, CHECKING, & QUALIFICATIONS REQUIREMENTS OF PART121, THUS ASSURING THAT THE TRAINING & CHECKING REQUIREMENTS OF THOSE OPERATING UNDER PART 135 WILL MEET THE SIMILAR REQUIREMENTS OF PART 121. HOWEVER, THE BOARD BELIEVES THAT THE EXISTING REQUIREMENTS OF PART 121 DO NOT PROVIDE THE TYPE OF RECORDKEEPING REQUIREMENTS URGED IN THIS RECOMMENDATION. IN FACT, APPENDIXES E & F WERE IN EFFECT AT THE TIME OF THE BOARD'S INVESTIGATION OF THE ACCIDENT TO WHICH THIS RECOMMENDATION WAS ADDRESSED (THE AMERICAN EAGLE JETSTREAM 3201 CRASH AT MORRISVILLE, NORTH CAROLINA, ON 12/13/94). IN THE INVESTIGATION OF THIS ACCIDENT, THE BOARD WAS UNABLE TO LOCATE THE TYPE OF INSTRUCTOR COMMENTS ON THE QUALITY OF THE CAPTAIN'S PERFORMANCE IN ACTIVITIES THAT TRAIN OR ASSESS THE NECESSARY PILOT SKILLS, ABILITIES, KNOWLEDGE, & JUDGMENT REQUIRED OF PILOTS OPERATING UNDER PART 135 & 121 IN THE CAPTAIN'S OFFICIAL PERSONNEL & TRAINING FILES. MOREOVER, THE BOARD LEARNED THAT THE AIRLINE MANAGEMENT ITSELF WAS UNAWARE OF CRITICAL ASPECTS OF THE CAPTAIN'S PERFORMANCE, DESPITE THE MANAGEMENT'S ADHERENCE TO THE PROVISION OF APPENDIXES E & F, PERHAPS BECAUSE SUCH INFO WAS ABSENT FROM THE AIRLINE'S OFFICIAL PERSONNEL & TRAINING FILES ON THE CAPTAIN. CONSEQUENTLY, THE BOARD CLASSIFIES A-95-116 "OPEN--UNACCEPTABLE RESPONSE" & REQUESTS THAT THE FAA RECONSIDER ITS POSITION ON THIS RECOMMENDATION.

2/11/1997 Addressee

THE FAA BELIEVES THAT THE MANEUVERS & PROCEDURES FOR AIR CARRIER TRAINING & QUALIFICATION CONTAINED IN 14 CFR PART 121, APPENDIXES E & F, PROVIDE THE STANDARDIZED INFO NEEDED TO ASSESS PILOT PERFORMANCE OF PILOTS REQUIRED TO TRAIN UNDER 14 CFR PART 121, SUBPART N & O.

Recommendation Report

Monday, May 18, 2009
REC:A-05-014

Log Number 2931
Issue Date 5/31/2005 Memphis TN 12/18/2003

On December 18, 2003, about 1225 central standard time, Federal Express Corporation (FedEx) flight 647, a Boeing MD-10-10F (MD-10),1 N364FE, crashed while landing at Memphis International Airport (MEM), Memphis, Tennessee. The right main landing gear collapsed after touchdown on runway 36R, and the airplane veered off the right side of the runway. After the gear collapsed, a fire developed on the right side of the airplane. Of the two flight crewmembers and five nonrevenue FedEx pilots2 on board the airplane, the first officer and one nonrevenue
pilot received minor injuries during the evacuation. The postcrash fire destroyed the airplane's right wing and portions of the right side of the fuselage. Flight 647 departed from Metropolitan Oakland International Airport, Oakland, California, about 0832 (0632 Pacific standard time) and was operating under the provisions of 14 Code of Federal Regulations (CFR) Part 121 on an instrument flight rules flight plan.

Recommendation # A-05-014

Overall Status: OAAR
Priority

The National Transportation Safety Board recommends that the Federal Aviation Administration: Require all 14 Code of Federal Regulations Part 121 air carrier operators to establish programs for flight crewmembers who have demonstrated performance deficiencies or experienced failures in the training environment that would require a review of their whole performance history at the company and administer additional oversight and training to ensure that performance deficiencies are addressed and corrected.

FAA	Open Acceptable Alternate Response
9/8/2005 Addressee	Letter Mail Controlled 9/14/2005 3:07:09 PM MC# 2050430 Marion C. Blakey, Administrator, FAA, 9/8/05: The Federal Aviation Administration agrees with the intent of this safety recommendation. Many 14 CFR Part 121 certificate holders already have, in place, voluntary programs of review, oversight, and remedial training developed in cooperation with their respective pilots' collective bargaining unit representatives. These voluntary programs have been shown to be effective. The FAA will issue a notice by December 2005 recommending that all 14 CFR Part 121 certificate holders develop and implement a program consistent with the intent of this safety recommendation. I will provide the Board with a copy of the notice as soon as it is issued.
1/19/2006 NTSB	The FAA stated that many 14 CFR Part 121 air carriers already have voluntary programs of review, oversight, and remedial training. The FAA further stated that it will issue a notice recommending that all 14 CFR Part 121 certificate holders develop and implement a program consistent with the intent of this safety recommendation. The Safety Board believes that the FAA's proposed action of issuing a notice instead of requiring the establishment of these programs may be an acceptable alternative, so long as the FAA can readily report to the Board how many carriers have established a program. Pending issuance of the notice and confirmation that all Part 121 carriers have established the recommended program, Safety Recommendation A-05-14 is classified "Open-Acceptable Alternate Response."
4/13/2007 Addressee	Letter Mail Controlled 4/27/2007 8:49:34 AM MC# 2070178:Marion C. Blakey, Administrator, FAA, 4/13/07 The Federal Aviation Administration has issued Safety Alert for Operators (SAFO) 06015 (copy enclosed), recommending implementation and incorporation of a voluntary remedial Part 121 pilot training module to supplement air carriers' approved training program. Directors of Safety of Part 121 certificate holders that do not have a voluntary remedial training module for pilots should recommend this type of program to top managers of air carriers. This remedial training program should initiate the review of pilot's performance history, provide additional remedial training and engage the representatives of pilots to accomplish the objectives of SAFO 06015. I believe that the FAA has satisfactorily responded to this safety recommendation, and I look forward to your response.

Recommendation Report

Tuesday, August 05, 2008

Log Number 1955

Issue Date 3/19/1987 MILWAUKEE WI 9/6/1985

AT 1521 C.D.T. ON SEPTEMBER 6, 1985, MIDWEST EXPRESS AIR LINES, INC. (MIDWEST EXPRESS), FLIGHT 105, A MCDONNELL DOUGLAS DC-9-14 AIRPLANE, CRASHED INTO AN OPEN FIELD AT THE EDGE OF A WOODED AREA ABOUT 1,680 FEET SOUTHWEST OF THE DEPARTURE END OF RUNWAY 19R SHORTLY AFTER TAKING OFF FROM GENERAL BILLY MITCHELL FIELD, MILWAUKEE, WISCONSIN. THE WEATHER WAS CLEAR WITH VISIBILITY 10 MILES. DURING THE INITIAL CLIMB, ABOUT 450 FEET ABOVE GROUND LEVEL (A.G.L.), THERE WAS A LOUD NOISE AND A LOSS OF POWER ASSOCIATED WITH AN UNCONTAINED FAILURE OF THE 9TH TO 10TH STAGE HIGH PRESSURE COMPRESSOR SPACER OF THE RIGHT ENGINE. FLIGHT 105 CONTINUED TO CLIMB TO ABOUT 700 FEET A.G.L. AND THEN ROLLED TO THE RIGHT UNTIL THE WINGS WERE OBSERVED IN A NEAR VERTICAL, APPROXIMATELY RIGHT 90 DEGREE BANKED TURN. DURING THE ROLL, THE AIRPLANE ENTERED AN ACCELERATED STALL, CONTROL WAS LOST, AND THE AIRPLANE CRASHED. THE AIRCRAFT WAS DESTROYED BY IMPACT FORCES AND POSTCRASH FIRE. THE PILOT, THE FIRST OFFICER, BOTH FLIGHT ATTENDANTS, AND ALL 27 PASSENGERS WERE FATALLY INJURED.

Recommendation # A-87-008

Overall Status CAA

Priority CLASS II

THE NTSB RECOMMENDS THAT THE FEDERAL AVIATION ADMINISTRATION: ISSUE AN AIR CARRIER OPERATIONS BULLETIN DIRECTING PRINCIPAL OPERATIONS INSPECTORS TO REVIEW THEIR RESPECTIVE AIR CARRIER'S FLIGHTCREW TRAINING PROGRAMS TO ENSURE THE EXISTENCE OF NEW COORDINATION PROCEDURES THAT, NOTWITHSTANDING A POLICY ENDORSING NONESSENTIAL CONVERSATION DURING AN EMERGENCY CONDITION, REQUIRE ANY CREWMEMBER WHO OBSERVES A POTENTIAL OR ACTUAL EMERGENCY SITUATION TO VERBALLY CALL IT TO THE CAPTAIN'S ATTENTION.

FAA	Closed - Acceptable Action	4/13/1988

5/29/1987	Addressee	THE FAA CONCURS THAT THE FAILURE OF A CREWMEMBER TO CALL OUT VERBALLY A POTENTIAL OR ACTUAL EMERGENCY SITUATION COULD LEAD TO DISASTER AND BELIEVES THIS FACT SHOULD BE EMPHASIZED. THEREFORE, AN AIR CARRIER OPERATIONS BULLETIN (ACOB) WILL BE ISSUED ON THIS SUBJECT. THE ESTIMATED COMPLETION DATE FOR THIS ACOB IS SEPTEMBER, 1987.
7/21/1987	NTSB	We are pleased that the FAA concurs in these recommendations and will, accordingly, issue air carrier operations bulletins by September 1987. Pending your further response, these recommendations are classified "Open--Acceptable Action."
4/13/1988	Addressee	THE FAA HAS ISSUED ACOB 8-88-2, REQUIRE ANY CREWMEMBER WHO OBSERVES A POTENTIAL OR ACTUAL EMERGENCY SITUATION TO VERBALLY CALL IT TO THE CAPTAIN'S ATTENTION. THIS ACOB DIRECTS PRINCIPAL OPERATIONS INSPECTORS TO ENSURE THAT THEIR ASSIGNED CARRIERS DO NOT TEACH THE CONCEPT OF "SILENT COCKPIT" IN THEIR PILOT TRAINING PROGRAMS. I HAVE ENCLOSED A COPY OF THE ACOB FOR THE BOARD'S INFORMATION.
6/28/1988	NTSB	We are pleased that the FAA has issued Air Carrier Operations Bulletin (ACOB) No. 8-88-2, to require any crewmember who observes a potential or actual emergency situation to verbally call it to the captain's attention. This recommendation is classified as "Closed--Acceptable Action."

Recommendation Report

Monday, May 18, 2009

REC:A-96-106

Log Number 2612

Issue Date 10/16/1996 BUGA COL 12/20/1995

ON 12/20/95, ABOUT 2142 EASTERN STANDARD TIME, AMERICAN AIRLINES (AAL) FLIGHT 965, A REGULARLY SCHEDULED PASSENGER FLIGHT FROM, MIAMI, FLORIDA, TO CALI, COLOMBIA, STRUCK A TREES AND THEN CRASHED INTO THE SIDE OF A MOUNTAIN NEAR BUGA, COLOMBIA, IN NIGHT, VISUAL METEOROLOGICAL CONDITIONS, WHILE DESCENDING INTO THE CALI AREA. THE AIRPLANE CRASHED 33 MILES NORTHEAST OF THE CALI (CLO) VERY HIGH FREQUENCY OMNIDIRECTIONAL RADIO RANGE (VOR) NAVIGATION AID. THE AIRPLANE WAS DESTROYED, AND ALL BUT FOUR OF THE 163 PASSENGERS AND CREW ON BOARD WERE KILLED.

Recommendation # A-96-106

Overall Status: CAA

Priority: CLASS II

THE NTSB RECOMMENDS THAT THE FAA: REVISE ADVISORY CIRCULAR 120-51B TO INCLUDE SPECIFIC GUIDANCE ON METHODS TO EFFECTIVELY TRAIN PILOTS TO RECOGNIZE CUES THAT INDICATE THAT THEY HAVE NOT OBTAINED SITUATIONAL AWARENESS, & EFFECTIVE MEASURES TO OBTAIN THAT AWARENESS.

FAA	Closed - Acceptable Action	3/1/1999

12/31/1996	Addressee	THE FAA WILL FUND A RESEARCH PROJECT TO DETERMINE CUES WHICH FLIGHT CREWMEMBERS CAN READILY RECOGNIZE TO INDICATE SITUATIONAL AWARENESS PROBLEMS. THIS PROJECT WILL FOCUS ON DEVELOPING SPECIFIC CUES FOR SITUATIONAL AWARENESS IN AUTOMATED COCKPITS. AS SOON AS THIS PROJECT IS COMPLETED, THE FAA WILL REVISE ADVISORY CIRCULAR 120-51B TO INCLUDE GUIDANCE ON TRAINING THE CREWS ON CUE RECOGNITION. I WILL KEEP THE BOARD INFORMED OF THE FAA'S PROGRESS ON THIS RECOMMENDATION.
4/11/1997	NTSB	A-96-106 ASKED THE FAA TO REVISE AC 120-51B TO INCLUDE SPECIFIC GUIDANCE ON METHODS TO EFFECTIVELY TRAIN PILOTS TO RECOGNIZE CUES THAT INDICATE THAT THEY HAVE NOT OBTAINED SITUATIONAL AWARENESS, & PROVIDE EFFECTIVE MEASURES TO OBTAIN THAT AWARENESS. PENDING THE BOARD'S EVALUATION OF THE FAA'S COMPLETED ACTION, A-96-106 IS CLASSIFIED "OPEN--ACCEPTABLE RESPONSE."
6/29/1998	Addressee	Letter Mail Controlled 7/7/98 3:57:35 PM MC# 980845
8/3/1998	Addressee	(Letter Mail Controlled 8/6/98 3:49:30 PM MC# 980977) THE FAA FUNDED A RESEARCH PROJECT TO DETERMINE CUES WHICH FLIGHT CREWMEMBERS CAN READILY RECOGNIZE TO INDICATE SITUATIONAL AWARENESS PROBLEMS. THE RESEARCH FOCUSED ON DEVELOPING SPECIFIC CUES FOR SITUATIONAL AWARENESS IN AUTOMATED COCKPITS. THE RESULTS OF THIS RESEARCH PROJECT ARE OUTLINED IN A REPORT ENTITLED "GUIDELINES FOR SITUATION AWARENESS TRAINING," WHICH WAS PUBLISHED IN FEBRUARY 1998. THE REPORT INCLUDES AN OVERVIEW, SPECIFIC TRAINING TIPS, & SAMPLE TRAINING COURSES FOR USE BY THE AVIATION COMMUNITY. THE REPORT HAS BEEN WELL-RECEIVED BY AIR CARRIER OPERATORS & CONTAINS CONCEPTS & GUIDANCE FOR INSPECTORS IN ASSESSING CREW RESOURCE MANAGEMENT TRAINING OF THEIR OPERATORS. THE REPORT IS ALSO POSTED ON THE FAA AIR CARRIER TRAINING HOME PAGE(HTTP://WWW.FAA-GOV/AVR/AFS/TRAIN.HTM>). THE FAA WILL INCORPORATE GUIDANCE ON CUE RECOGNITION TRAINING FOR CREWMEMBERS IN ADVISORY CIRCULAR (AC) 121-51B, CREW RESOURCE MANAGEMENT TRAINING. I WILL PROVIDE THE BOARD WITH A COPY OF THE AC AS SOON AS IT IS REVISED.
11/2/1998	NTSB	A-96-106 ASKED THE FAA TO REVISE ADVISORY CIRCULAR 120-51B TO INCLUDE SPECIFIC GUIDANCE ON METHODS TO EFFECTIVELY TRAIN PILOTS TO RECOGNIZE CUES THAT INDICATE THAT THEY HAVE NOT OBTAINED SITUATIONAL AWARENESS & PROVIDE EFFECTIVE MEASURES TO OBTAIN THAT AWARENESS. PENDING PUBLICATION OF AN UPDATED AC, A-96-106 IS CLASSIFIED "OPEN--ACCEPTABLE RESPONSE."

Recommendation Report

Monday, May 18, 2009

Log Number 2482
Issue Date 2/3/1994

U.S. AIR CARRIER OPERATIONS ARE EXTREMELY SAFE, AND THE ACCIDENT RATE HAS DECLINED IN RECENT YEARS. HOWEVER, AMONG THE WIDE ARRAY OF FACTORS CITED BY THE NATIONAL TRANSPORTATION SAFETY BOARD AS CAUSAL OR CONTRIBUTING TO AIRPLANE ACCIDENTS, ACTIONS OR INACTIONS BY THE FLIGHTCREW HAVE BEEN CITED IN THE MAJORITY OF FATAL AIR CARRIER ACCIDENTS. RECOGNIZING THAT DEFICIENCIES IN VARIOUS ASPECTS OF THE AVIATION SYSTEM MAY UNDERLIE THE ERRORS MADE BY FLIGHTCREWS, THE SAFETY BOARD CONDUCTED A STUDY TO LEARN MORE ABOUT FLIGHTCREW PERFORMANCE BY EVALUATING THE CHARACTERISTICS OF THE OPERATING ENVIRONMENT, THE FLIGHTCREWS AND ERRORS MADE IN MAJOR ACCIDENTS OF U.S. AIR CARRIERS.

Recommendation #	Overall Status	Priority
A-94-001	CAA	CLASS II

THE NTSB RECOMMENDS THAT THE FEDERAL AVIATION ADMINISTRATION: APPLY THE RESULTS OF RESEARCH CONDUCTED TO DATE ON THE DESIGN AND USE OF CHECKLISTS TO IMPROVE THE ERROR-TOLERANCE OF AIR CARRIER CHECKLIST PROCEDURES FOR TAXI OPERATIONS, BY ENHANCING FLIGHTCREW MONITORING/CHALLENGING OF CHECKLIST EXECUTION, PROVIDING CUES FOR INITIATING CHECKLISTS, AND CONSIDERING TECHNOLOGICAL OR PROCEDURAL METHODS TO MINIMIZE THE OMISSION OF ANY ITEMS ON A CHECKLIST. PROVIDE SPECIFIC GUIDANCE TO AIR CARRIERS FOR IMPLEMENTING THESE PROCEDURES.

FAA	Closed - Acceptable Action	2/16/1997

4/26/1994	Addressee	THE FAA AGREES WITH THIS RECOMMENDATION & IS ISSUING AN ADVISORY CIRCULAR TO ADDRESS THE BOARD'S CONCERNS. PRESENTLY, ORDER 8400.10, AIR TRANSPORTATION OPERATIONS INSPECTOR'S HANDBOOK, CONTAINS EXTENSIVE GUIDANCE ON THE SUBJECT OF CHECKLISTS. THIS GUIDANCE IS BASED ON THE RESULTS OF VARIOUS STUDIES & RESEARCH & IS AVAILABLE TO ALL AIR CARRIERS. THE FAA HAS ALSO DEVELOPED & ISSUED SUBSTANTIVE GUIDANCE ON CRM THAT WILL BE USEFUL TO AIR CARRIERS IN THE DEVELOPMENT & USE OF AIRCREW CHECKLISTS...
7/5/1994	NTSB	THE BOARD IS PLEASED THAT THE FAA PLANS TO ISSUE AN ADVISORY CIRCULAR THAT ADDRESSES THE BOARD'S CONCERNS. PENDING THE BOARD'S RECEIPT & REVIEW OF THIS AC, A-94-1 IS CLASSIFIED "OPEN--ACCEPTABLE RESPONSE."
12/18/1996	Addressee	IN A DECEMBER 18, 1996, LETTER THE FAA RESPONDED TO THE BOARD DETAILING ACTIONS TAKEN TO ADDRESS A-94-001. THE FAA'S ACTIONS INCLUDED: (1) MANDATING CRM TRAINING FOR CERTIFICATE HOLDERS REQUIRED TO COMPLY WITH 14 CFR PART 121 TRAINING REQUIREMENTS (2) REVISING ADVISORY CIRCULAR 120-51B "CREW RESOURCE MANAGEMENT TRAINING" TO ADDRESS TRAINING IN CHALLENGING ERRORS INVOLVING INADEQUATELY COMPLETING CHECKLISTS & TO PROVIDE CLARIFYING CRM GUIDANCE IN RESPECT TO CHECKLIST PROCEDURES, (3) ISSUING FLIGHT STANDARDS INFO BULLETIN 95-20, WHICH INSTRUCTS POIS OF 14 CFR PART 121 & 135 CARRIERS TO REEMPHASIZE THE NEED TO STRICTLY COMPLY WITH STANDARD OPERATING PROCEDURES & IN-FLIGHT CHECKLIST PROCEDURES, & (4) ISSUING A REPORT IN JANUARY 1995 ENTITLED "HUMAN PERFORMANCE CONSIDERATIONS IN THE USE & DESIGN OF AIRCRAFT CHECKLISTS," WHICH SUMMARIZES CONTEMPORARY HUMAN FACTORS PRINCIPLES AFFECTING THE DESIGN & USE OF ALL AIRCRAFT CHECKLISTS, NOT ONLY TAXI CHECKLISTS AS STATED IN A-94-001. THE REPORT ALSO PROVIDES GUIDANCE ON CHECKLIST DESIGN.

Recommendation Report

Friday, May 15, 2009

REC:A-03-053

Log Number 2900

Issue Date 12/2/2003 Eveleth MN 10/25/2002

On October 25, 2002, about 1022 central daylight time, a Raytheon (Beechcraft) King Air A100, N41BE, operated by Aviation Charter, Inc., crashed while the flight crew was attempting to execute the VOR approach to runway 27 at Eveleth-Virginia Municipal Airport, Eveleth, Minnesota. The crash site was located about 1.8 nautical miles southeast of the approach end of runway 27. The two pilots and six passengers were killed, and the airplane was destroyed by impact forces and a postcrash fire. The airplane was being operated under the provisions of 14 Code of Federal Regulations (CFR) Part 135 as an on-demand passenger charter flight. Instrument meteorological conditions prevailed for the flight, which operated on an instrument flight rules flight plan.

Recommendation # A-03-053

Overall Status: OAA

Priority

The National Transportation Safety Board makes the following recommendation to the Federal Aviation Administration: Convene a panel of aircraft design, aviation operations, and aviation human factors specialists, including representatives from the National Aeronautics and Space Administration, to determine whether a requirement for the installation of low-airspeed alert systems in airplanes engaged in commercial operations under 14 Code of Federal Regulations Parts 121 and 135 would be feasible, and submit a report of the panel's findings.

FAA	Open - Acceptable Response

4/12/2004 Addressee

Letter Mail Controlled 4/12/2004 12:32:08 PM MC# 2040165 The FAA shares the Board's concern regarding flightcrew awareness of low airspeed situations. As noted in the Board's letter dated December 2, 2003, failure to maintain adequate airspeed can result in unsafe circumstances like loss of control, impact with terrain or water, hard landings, and tail strikes. The Board further states that it has investigated numerous accidents and incidents involving commercial flightcrews that inadvertently failed to maintain airspeed. For example, the Board has investigated at least 11 events since 1982 involving 14 CFR Part 135 flights and at least seven events involving 14 CFR Part 121 flights in which stall or failure to maintain airspeed during approach or landing phases was cited as a causal or contributing factor and in which icing was not cited as a factor.

Current rules require stall warning (stick shaker or natural buffet) for both small airplanes and transport airplanes. The Board acknowledges the existing requirements for stall warning, but challenges the premise that stall warnings and flightcrew vigilance provide adequate low airspeed awareness. The Board states that a low airspeed alert, which would be activated at some airspeed higher than stall warning, would provide additional protection against low airspeed conditions that may lead to stall. The Board noted the existing installation of a low airspeed alert in the Embraer 120. The FAA required this alert as an interim solution until Embraer redesigns the stall warning system to account for icing conditions adequately.

Many current transport airplanes include additional cues on airspeed indicators. These cues are intended to provide improved low airspeed awareness. While not alerts, these color-coded symbols indicate the low airspeed region (the maneuver margin, typically at about 1.3 Vstall) in which the airplane is approaching the stall warning speed. As noted by the Board, such displays are now becoming available for use in less sophisticated general aviation airplanes.

Additionally, the Board has recognized that there are unresolved technical, operational, and human factors issues that will need to be carefully evaluated and addressed in connection with the design and implementation of a low airspeed alert system.

On January 21,2004, the Board provided the FAA with more complete information on the 18 accidents cited by the Board to support these safety recommendations. The FAA will include a review of these 18 accidents in determining what action needs to be taken to address the safety issue. The FAA will also consider efforts already accomplished or in progress under the Safer Skies programs and other initiatives dealing with airspeed awareness.

I will keep the Board informed of the FAA's progress on these safety recommendations.

Recommendation Report

Monday, May 18, 2009

Log Number 0392
Issue Date 8/28/1972 NEW HAVEN CT 6/7/1971

ALLEGHENY AIRLINES, INC., ALLISON PROP JET CONVAIR 340/440, N5832, OPERATING AS ALLEGHENY FLIGHT 485, CRASHED DURING AN APPROACH TO THE TWEED-NEW HAVEN AIRPORT, AT 0949 E.D.T., ON JUNE 7, 1971. TWENTY- EIGHT PASSENGERS AND TWO CREWMEMBERS WERE FATALLY INJURED. TWO PASSENGERS AND THE FIRST OFFICER SURVIVED. THE AIRPLANE WAS DESTROYED. THE FLIGHT, OPERATING BETWEEN WASHINGTON, D.C., AND NEWPORT NEWS, VIRGINIA, WITH STOPS AT GROTON AND NEW HAVEN, CONNECTICUT, AND PHILADELPHIA, PENNSYLVANIA, WAS MAKING A NONPRECISION INSTRUMENT APPROACH AND STRUCK COTTAGES AT AN ALTITUDE OF 29 FEET M.S.L., 4,890 FEET FROM THE THRESHOLD AND 510 FEET TO THE RIGHT OF THE EXTENDED CENTER-LINE OF RUNWAY 2.

Recommendation # A-72-140 **Overall Status** CAA **Priority**

THAT THE AIR LINE PILOTS ASSOCIATION AND THE ALLIED PILOTS ASSOCIATION IMPLEMENT A PROGRAM WITHIN EXISTING PROFESSIONAL STANDARDS COMMITTEES TO PROVIDE AN EXPEDITIOUS MEANS FOR PEER GROUP MONITORING AND DISCIPLINING THE VERY SMALL GROUP OF AIR CARRIER PILOTS WHO MAY DISPLAY ANY UNPROFESSIONAL (INCLUDING HAZARDOUS) TRAITS AS EXEMPLIFIED BY THIS ACCIDENT.

FAA	Closed - Acceptable Action	2/20/1975

9/14/1972 Addressee INADEQUATE ACTION INITIALLY. BUT SUBSEQUENT ACCIDENTS PRECIPITATED NEW RECOMMENDATIONS TO FAA.

Recommendation Report

Monday, May 18, 2009

MODE:AVIATION ISSUE DATE:1/1/2008 - 12/31/2008 KEYWORD 1:fatigue

Log Number 3010
Issue Date 6/12/2008 Kirksville MO 10/19/2004

On October 19, 2004, about 1937 central daylight time, a BAE Systems BAE-J3201, Corporate Airlines flight 5966, struck trees on final approach and crashed short of the airport in Kirksville, Missouri. Both pilots and 11 passengers were killed, and 2 passengers received serious injuries. The pilots had been executing a nonprecision approach at night in instrument conditions at the end of a 14.5-hour-long duty day for which they reported to duty early and during which they had conducted five previous landings in poor visibility. The National Transportation Safety Board determined that the probable cause of the accident was the pilots' failure to follow established procedures and properly conduct the approach and to adhere to established division of duties. The Safety Board also determined that the pilots' fatigue likely contributed to their degraded performance.

Recommendation # A-08-044

Overall Status: OAA

Priority: CLASS II

The National Transportation Safety Board recommends that the Federal Aviation Administration: Develop guidance, based on empirical and scientific evidence, for operators to establish fatigue management systems, including information about the content and implementation of these systems. (A-08-44) (This safety recommendation supersedes Safety Recommendation A-06-11)

FAA	Open - Acceptable Response

8/11/2008 Addressee

Letter Mail Controlled 8/22/2008 8:34:53 AM MC# 2080510: Robert A. Sturgell, Acting Administrator, FAA, 8/11/08 The Federal Aviation Administration hosted an international symposium on the subject of fatigue in aviation operations June 17 through 19, 2008. The purpose of the symposium was to gather and make public the best available knowledge on fatigue and fatigue mitigations. Staff members from the Board were key presenters at the symposium and Vice Chairman Sumwalt was a keynote speaker. The Board's contribution to the symposium was a direct and valuable part of its overall success.

This symposium was part of an overall "systems" approach that the FAA is taking regarding fatigue in aviation operations. We agree with the safety intent of these recommendations and seek to educate the industry on the reality of fatigue and ways to effectively mitigate its dangers.

As part of our planned approach to fatigue we have established the following priorities:

- We are consolidating into proceedings the information derived from the fatigue symposium. We expect the proceedings of the symposium to be distributed by September 30, 2008;
- We are developing operations specification guidance for fatigue management in ultra long range (ULR) flight operations -flights greater than 16 hours in duration. This is our immediate focus since there is no existing guidance for this flight regime. We believe that lessons learned from this action likely can be applied to other flight profiles; and
- Parallel and related to the ULR fatigue management effort is a scientific data gathering effort that will collect data on fatigue aspects of ULR and other flight operations. This data effort will form the basis for improved fatigue guidance documents and will lead to standardized protocols for such data gathering. These standardized protocols will provide us with reliable tools to validate air operators' fatigue management actions and also will give solid basis for policy guidance to the industry.

U.S. House of Representatives
Committee on Transportation and Infrastructure
Washington, DC 20515

James L. Oberstar
Chairman

David Heymsfeld, Chief of Staff
Ward W. McCarragher, Chief Counsel

John L. Mica
Ranking Republican Member

James W. Coon II, Republican Chief of Staff

June 24, 2009

The Honorable Mark V. Rosenker
Acting Chairman
National Transportation Safety Board
490 L'Enfant Plaza East
Washington, D.C. 20594

Dear Acting Chairman Rosenker:

On June 11, 2009, the Subcommittee on Aviation held a hearing on **"Regional Air Carriers and Pilot Workforce Issues."**

Attached are questions to answer for the record. I would appreciate receiving your written response to these questions within 14 days so that they may be made a part of the hearing record.

Sincerely,

Jerry Costello

Jerry F. Costello
Chairman
Subcommittee on Aviation

JFC:pk
Attachment

JUNE 11, 2009
SUBCOMMITTEE ON AVIATION
HEARING ON
REGIONAL AIR CARRIERS AND PILOT WORKFORCE ISSUES
QUESTIONS FOR THE RECORD
TO:

THE HONORABLE MARK V. ROSENKER
ACTING CHAIRMAN
NATIONAL TRANSPORTATION SAFETY BOARD

1. Mr. Rosenker, in the National Transportation Safety Board's experience, is the time carriers are currently dedicating to pilot training (i.e., initial, recurrent, upgrade etc.) academic and job performance training adequate? Does it need to be expanded?

2. Mr. Rosenker, in the Board's view, should the Part 121 minimum hours for initial, recurrent and upgrade training be increased?

National Transportation Safety Board
Washington, D.C. 20594

July 8, 2009

The Honorable Jerry F. Costello
Chairman
Subcommittee on Aviation
Committee on Transportation and Infrastructure
U.S. House of Representatives
2251 Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Costello:

Enclosed please find the responses of Acting Chairman Mark V. Rosenker to questions submitted for the record regarding his testimony at the June 11, 2009, hearing on "Regional Air Carriers and Pilot Workforce Issues." If I may be of further assistance to you in this matter, please do not hesitate to contact me at 202-314-6121.

Sincerely,

Mildred H. Starek
Government and Industry
Affairs Liaison

Enclosure

**RESPONSES OF ACTING CHAIRMAN MARK V. ROSENKER
NATIONAL TRANSPORTATION SAFETY BOARD
TO QUESTIONS SUBMITTED FOR THE RECORD
REGARDING THE JUNE 11, 2009, SUBCOMMITTEE ON AVIATION HEARING
ON "REGIONAL AIR CARRIERS AND PILOT WORKFORCE ISSUES"**

Question 1:

Is the time carriers are currently dedicating to pilot training (i.e., initial, recurrent, upgrade, etc.) academic and job performance training adequate? Does it need to be expanded?

Response 1:

If warranted, the NTSB's accident investigations suggest areas in which additional training is needed. During the last 15 years, the NTSB has issued multiple safety recommendations on pilot training for air carriers. Some of the areas addressed by these recommendations include: airmanship and the use of automation, effective monitoring and command presence, stall training, situational awareness, fatigue awareness, improved weather training, high altitude training, stabilized approach training, crosswind and bounce recovery training, and landing distance assessments with an adequate safety margin for every landing.

The training and evaluation of pilots is of concern to the NTSB. For example, as compared to 20 years ago, new airline pilots often have less experience when advancing to captain or to more complex airplanes. In addition, recent investigations have shown that some pilots involved in accidents have repeated evaluation failures during their careers. All pilots should be able to reliably perform with a high level of professional competence. To accomplish this involves not only the concept of training hours, but consideration that training reflects an integrated system that also includes instructional methods, evaluation tools, and oversight/feedback methods. For example, the allocated hours should provide pilots with the necessary skills and abilities; the instructional methods should incorporate the most realistic training aids, simulators, and scenarios to allow pilots the opportunity to practice and reinforce the training objectives; the evaluation tools should be sensitive and accurate in their assessment of pilot competence; and both the company and the FAA should continue to actively assess the quality of the pilot produced by the training and make corrections as necessary to assure safety.

Determining the number of hours required for training requires a study or an assessment of the best methods and optimal time needed for pilots to master the necessary systems, maneuvers, and procedures. Other elements critical to an assessment of training adequacy would include determining the length of time between training events and identifying the best methods to reliably evaluate professional competence. A comprehensive study of training requirements should include the FAA, airlines, training facilities, instructional design experts, airplane manufacturers, safety organizations and other organizations deemed necessary to ensure the best results.

Question 2:

Should the part 121 minimum hours for initial, recurrent and upgrade training be increased?

Answer 2:

The NTSB is not in a position to prescribe additional training hours. As noted in the answer to Question 1 above, our investigations have identified areas in which additional training is needed and a robust determination of the minimum hours for training should be accomplished using a systems approach with a study group incorporating the resources of multiple subject matter experts. Any examination of the adequacy of Part 121 air carrier training hours may be equally valid for Part 135 training requirements because, even though the required hours are generally less for Part 135, the aircraft operated are similarly complex.

When areas in need of additional training for flight crew are identified, the additional training time should not be taken from other subjects that are currently adequately treated. Therefore, consideration needs to be given to the subjects of the training and the amount of time necessary to adequately train flight crews in these subjects. These determinations should be made based on the training need, not on how an arbitrarily set number of training hours are divided.

Current training requirements were developed over many years and may have been sufficient in the past. However, an evaluation of the adequacy of these requirements may prove beneficial because the experience levels of pilots entering the airlines have changed, in addition to an increasing prevalence of highly automated aircraft. A challenge facing the industry in the absence of increased training requirements is how to accommodate additional areas of emphasis in training without compromising existing content.

Ultimately, we believe that the issue of pilot performance is not singularly addressed by hours of training but must also consider the quality of training, its oversight and management, and ultimately a measurement of its effectiveness. These elements of a training system work together to improve safety.

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

James L. Oberstar
Chairman

David Heymsfeld, Chief of Staff
Ward W. McCarragher, Chief Counsel

Washington, DC 20515

John L. Mica
Ranking Republican Member

James W. Coon II, Republican Chief of Staff

July 15, 2009

The Honorable Mark V. Rosenker
Acting Chairman
National Transportation Safety Board
490 L'Enfant Plaza East
Washington, D.C. 20594

Dear Acting Chairman Rosenker:

On June 11, 2009, the Subcommittee on Aviation held a hearing on **"Regional Air Carriers and Pilot Workforce Issues."**

Attached are questions to answer for the record. I would appreciate receiving your written response to these questions within 14 days so that they may be made a part of the hearing record.

Sincerely,

Jerry F. Costello
Chairman
Subcommittee on Aviation

JFC:pk
Attachment

JUNE 11, 2009
SUBCOMMITTEE ON AVIATION
HEARING ON
REGIONAL AIR CARRIERS AND PILOT WORKFORCE ISSUES
QUESTIONS FOR THE RECORD
TO:

THE HONORABLE MARK V. ROSENKER
ACTING CHAIRMAN
NATIONAL TRANSPORTATION SAFETY BOARD

Mr. Rosenker, 49 U.S.C. § 1135 requires the Secretary of Transportation to provide a formal written response to each National Transportation Safety Board (NTSB) recommendation within 90 days of receiving the recommendation. The statute requires the Secretary's response to indicate whether the Secretary intends:

1) to carry out procedures to adopt the complete recommendation;
2) carry out procedures to adopt part of the recommendation;
3) refuse to carry out procedures to adopt the recommendation.

Are you satisfied with the statutory 90 day responses to NTSB recommendations that you have been receiving from the Secretary? If not, what is lacking and what could be improved?

National Transportation Safety Board

Washington, D.C. 20594

July 30, 2009

The Honorable Jerry F. Costello
Chairman
Subcommittee on Aviation
Transportation and Infrastructure Committee
U.S. House of Representatives
2251 Rayburn House Office Building
Washington, D.C. 20510

Dear Chairman Costello:

Enclosed please find the responses of then Acting Chairman Mark V. Rosenker to questions submitted for the record following the June 10, 2009, hearing on "Regional Air Carriers and Pilot Workforce Issues." If I may be of further assistance to you in this matter, please do not hesitate to contact me at 202-314-6121.

Sincerely,

Mildred H. Starek
Government and Industry
Affairs Liaison

Enclosures

**RESPONSE OF ACTING CHAIRMAN MARK V. ROSENKER
NATIONAL TRANSPORTATION SAFETY BOARD
TO QUESTIONS SUBMITTED FOR THE RECORD
REGARDING THE JUNE 11, 2009, HEARING ON
"REGIONAL AIR CARRIERS AND PILOT WORKFORCE ISSUES"**

Question:

Mr. Rosenker, 49 U.S.C. Section 1135 requires the Secretary of Transportation to provide a formal written response to each National Transportation safety Board (NTSB) recommendation within 90 days of receiving the recommendation. The statute requires the Secretary's response to indicate whether the Secretary intends:

1. *to carry out procedures to adopt the complete recommendation;*
2. *carry out procedures to adopt part of the recommendation;*
3. *refuse to carry out procedures to adopt the recommendation.*

Are you satisfied with the statutory 90 day responses to NTSB recommendations that you have been receiving from the Secretary? If not, what is lacking and what could be improved?

Answer:

Typically, the first response received from the Department of Transportation's modal agencies indicates whether they agree or disagree with the intent of the recommendation and may include a course of action. This is sufficient for a 90-day response and allows the NTSB to classify the recommendation in an acceptable or unacceptable manner. The NTSB finds it particularly helpful when agencies adhere to the language in the statute, which includes a timetable for completing procedures. This timetable is often not provided in the 90-day response.

Attached is a table showing, for each modal agency, the number of days to first response and the number of recommendations issued for the 5-year period 2004-2008.

Days to first response to NTSB recommendations issued between January 1, 2004 and December 31, 2008

Modal agency	Days to first response	Number of recommendations issued
FAA	96	340
FHWA	142	32
FMCSA	120	17
FRA	178	37
FTA	55	8
NHTSA	85	16
PHMSA	106	23
USCG	170	28

Before the Committee on Transportation and Infrastructure
Subcommittee on Aviation
United States House of Representatives

For Release on Delivery
Expected at
10:00 a.m. EDT
Thursday
June 11, 2009
CC-2009-075

Regional Air Carriers and Pilot Workforce Issues

Statement of
The Honorable Calvin L. Scovel III
Inspector General
U.S. Department of Transportation

Chairman Costello, Ranking Member Petri, and Members of the Subcommittee:

We appreciate the opportunity to testify today regarding regional air carriers and pilot workforce issues. We would also like to discuss what our past work has shown with regard to the Federal Aviation Administration's (FAA) oversight of the aviation industry. Ensuring that airlines safely meet the demand for air travel is of paramount importance to the flying public and the national economy; this remains one of the top priorities for the Department of Transportation.

Safety is a shared responsibility among FAA, aircraft manufacturers, airlines, and airports. Together, all four form a series of overlapping controls to keep the system safe. The past several years have been one of the safest periods in history for the aviation industry. This is largely due to the dedicated efforts of the professionals within FAA and throughout the industry as well as significant advances in aviation technology.

In January, we witnessed a dramatic example of aviation safety at its best when U.S. Airways flight 1549 made an emergency landing in the Hudson River, and, miraculously, all 155 passengers and crew survived due to the skillful efforts of the pilot and crew. However, the tragic accident in February of Colgan flight 3407, which resulted in 50 fatalities, underscores the need for constant vigilance over aviation safety on the part of all stakeholders.

Last month, the National Transportation Safety Board (NTSB) held a preliminary hearing into the cause of that accident, in which some evidence suggested that pilot training and fatigue may have contributed to the crash. The NTSB has identified these issues as areas of concern for all air carriers; however, they are particularly critical at regional carriers. The last six fatal Part 121[1] accidents involved regional air carriers, and the NTSB has cited pilot performance as a potential contributory factor in four of those accidents.

As a result of that hearing, Mr. Chairman, you requested that our office begin a review to include FAA's oversight of commuter and regional pilot training programs, the number of training hours needed before a pilot can assume pilot-in-command responsibilities, and how U.S. airlines update pilots on the latest technologies on the aircraft they operate. We are also reviewing the information that pilots are required to provide airlines and whether it is sufficient to verify pilot employment and training. In addition, you requested that we review FAA regulations and airline policies regarding crew rest and fatigue issues. We are in the preliminary stages of this extensive review, and, as part of the discussion today, we would like to address how we intend to proceed with that audit.

[1] 14 CFR 121 Operating Requirements: Domestic, Flag, and Supplemental Operations. This FAA regulation governs commercial air carriers, including regional air carriers, with primarily scheduled flights.

A key focus of this review, Mr. Chairman, is that FAA maintains it has one level of safety for all types of air carrier operations. Yet, we have overseen the application of that standard for years and have concerns. In short, our past work has disclosed serious lapses in FAA's safety oversight and inconsistencies in how its rules and regulations are enforced. Today, I would like to cover three areas: (1) pilot workforce issues and differences between mainline and regional air carrier operations, (2) vulnerabilities we have previously identified in FAA's oversight of safety, and (3) our plan to address the Subcommittee's new request for additional safety work.

PILOT WORKFORCE ISSUES AND OPERATIONAL DIFFERENCES BETWEEN REGIONAL AND MAINLINE CARRIERS

As mainline carriers continue to cut their capacity in response to the current economic downturn, regional airlines constitute an increasingly important proportion of operations in the U.S. National Airspace System. Today, regional flights represent one half of the total scheduled flights across the country, and regional airlines provide the only scheduled airline service to more than 400 American communities. Additionally, regional airlines provide passenger air service to communities without sufficient demand to attract mainline service. Regional carriers tend to fulfill two roles: (1) delivering passengers to the mainline airline's hubs from surrounding communities and (2) increasing the frequency of service in mainline markets during times of the day or days of the week when demand does not warrant use of large aircraft.

These smaller airlines typically conduct business as feeder airlines, contracting with a major airline and operating under their brand name in what is essentially a domestic code share arrangement. Code sharing is a marketing arrangement in which one air carrier sells and issues tickets for the flight of another carrier as if it were operating the flight itself. Under both international and domestic code share agreements, a passenger buys a ticket from one carrier, but the actual travel for all or a portion of the trip could be with another carrier's aircraft and crew. For example, Colgan flight 3407 was operating as a Continental Connection flight.

We reported 10 years ago on carriers' growing use of international code share agreements as a means to increase profit while expanding their network and offering passengers more seamless and efficient international travel services.[2] While such agreements were beneficial, we reported that safety was not treated as a major factor in the Department's code share approval process, and FAA did not take an active role in the approval or oversight of these agreements. In 1999, Chairman Oberstar proposed a bill, which would have required U.S. air carriers to conduct safety audits of their foreign code share partners as a condition of approval of a code share

[2] OIG Report Number AV-1999-138, "Aviation Safety Under International Code Share Agreements," September 30, 1999. OIG reports and testimonies are available on our website: www.oig.dot.gov.

agreement. Subsequently, the Department established a Code Share Safety Program implementing this requirement.

Domestic code shares between major and regional carriers follow a similar business model, with the focus on a more seamless travel experience. However, a significant difference is that FAA certificates and oversees both parties to these agreements. Yet, according to industry sources, FAA has no role in the contractual agreements. This is a potential concern since the safety implications of these agreements are unknown. We are examining this issue as part of the review you requested, Mr. Chairman.

Last month's NTSB hearing brought to light the need to closely examine the regulations governing pilot training and rest requirements and the oversight necessary to ensure their compliance. This is a particular concern at regional carriers since the last six fatal Part 121 accidents involved regional air carriers (see table 1 below), and the NTSB has cited pilot performance as a potential contributory factor in four of those accidents.

Table 1. Part 121 Accidents Involving Regional Carriers

Accident Date	Regional Carrier	Accident Site	Fatalities	Potential Factors
12-Feb-09	***Colgan Air Inc*** (DBA Continental Connection)	Buffalo, NY	50	Not yet determined. Training and pilot fatigue issues have been raised.
27-Aug-06	***Comair Inc*** (DBA Delta Connection)	Lexington, KY	49	Pilot performance, non-pertinent conversation during taxi.
19-Dec-05	***Flying Boat Inc*** (DBA Chalks Ocean Airways)	Miami, FL	20	Deficiencies in the company's maintenance program.
19-Oct-04	***Corporate Airlines*** (now Regions Air)	Kirksville, MO	13	Pilots' unprofessional behavior during the flight and fatigue.
14-Oct-04	***Pinnacle Airlines*** (DBA Northwest Airlink) repositioning flight	Jefferson City, MO	2	Pilots' unprofessional behavior, deviation from standard operating procedures, and poor airmanship.
8-Jan-03	***Air Midwest*** (DBA US Airways Express)	Charlotte, NC	21	Deficiencies in company's oversight of outsourced maintenance.

*Doing Business As (DBA)

In addition to these accidents, there were two, non-fatal accidents in 2007 involving regional air carriers. In both of these accidents, the NTSB concluded that pilot fatigue was a contributing factor.

While we have had only a short time to address the Subcommittee's request to examine these issues, we have identified operational differences between regional and mainline carriers. These include differences in operations and flight experience and potential differences in pilot training programs. Our review will examine FAA's role in determining whether air carriers have developed programs to ensure pilots are adequately trained and have sufficient experience to perform their responsibilities.

Differences in Operations, Pilot Fatigue, and Flight Experience

Regional carriers typically perform short and medium hauls to hub airports. This could result in many short flights in 1 day for a pilot with a regional air carrier. While there have been multiple studies by agencies such as the National Aeronautics and Space Administration that concluded that these types of operations can contribute to pilot fatigue, FAA has yet to revise its rules governing crew rest requirements.

FAA last attempted to significantly revise flight duty and rest regulations in 1995, but the rule was never finalized and little or no action has been taken since then. Yet, pilot fatigue remains high on NTSB's list of most wanted safety improvements. As we begin our audits in response to the Subcommittee's request, we will evaluate these operations, their potential effects on pilot fatigue, and FAA's oversight of air carrier programs established to meet the current flight and duty rest regulations.

Coupled with potential fatigue issues, another defining factor of regional air carriers is that their pilots tend to have less experience than pilots with mainline air carriers. Generally, pilots are primarily interested in using regional air carrier experience as a stepping stone to the more lucrative pay at a major air carrier. We will also address the potential impact this issue could have on safety during our pending audit.

Potential Differences in Training Programs

To fly for a regional or mainline air carrier, a pilot must have a commercial pilot's license, at a minimum. To obtain a commercial pilot's license, a candidate must have at least 250 hours of flight time. However, many air carriers require more stringent licensing requirements and may require pilots to have an Airline Transport Pilot's license, which requires a minimum of 1,500 flight hours.

Once pilots have been hired by an air carrier, they are required to undergo training provided by the airline that has been approved by FAA and meets certain minimum requirements. Every Part 121 certificate holder, which includes all scheduled operations with aircraft seating 10 or more passengers, must establish and implement a training program that ensures each crewmember is adequately trained to perform his

or her assigned duties. FAA regulations only provide general subjects to be covered during various training phases and minimum hours for the different training phases. The broad language in the regulations leaves air carriers significant latitude in formulating their training programs.

Additionally, air carrier training programs must be approved by the carrier's FAA inspector. However, the lack of more specific requirements in the regulations may hinder FAA inspectors' ability to determine whether air carriers' established programs will ensure crewmembers are "adequately" trained. As we delve deeper into this issue in our upcoming audit, we will analyze more closely the degree of variance of air carrier training programs.

FAA regulations also provide different instructional hour requirements for different types of aircraft. For example, pilots of piston engine aircraft are only required to have 64 hours of initial ground training, and those flying turbo-propeller powered aircraft must have 80 hours. Jet aircraft pilots must have 120 hours of initial ground training, or 50 percent more than turboprops, as shown in table 2 below.

Table 2. Air Carrier Training Hour Requirements by Aircraft Type

Training Type	Piston Engine	Turboprop	Turbojet
Initial Ground Training	64	80	120
Pilot-In-Command Initial In-Flight Training & Practice	10	15	20
Recurrent Ground Training	16	20	25

Similar differences in instructional hours are found among in-flight and recurrent training requirements. Other turboprop crewmembers, such as flight attendants and dispatchers, are also required to receive fewer instructional hours of training than the crewmembers of jet aircraft. The differences in instructional hours for turboprops are significant distinctions because 23 percent of regional aircraft are turboprop aircraft and 24 percent of U.S. airports receive scheduled air service only from turboprop aircraft operations. Colgan flight 3407 was a turboprop aircraft.

While we need to complete additional work in this area, we are concerned that the broad language of the requirements could result in wide variances between air carrier training programs. We will further focus our efforts to identify any differences and their potential impact on safety.

VULNERABILITIES IN FAA'S OVERSIGHT OF SAFETY

Although there are differences in the operations for regional and mainline carriers, FAA maintains it has one level of safety for all types of air carrier operations. While FAA has made progress toward improving aspects of its safety oversight, such as clarifying guidance to inspectors who monitor air carriers and repair stations, we continue to find weaknesses in FAA's safety oversight and inconsistencies in how its rules and regulations are enforced.

For example, a year has passed since we last testified before this Subcommittee regarding FAA's oversight of the aviation industry.[3] That hearing highlighted weaknesses in FAA's national program for risk-based oversight, known as the Air Transportation Oversight System (ATOS), and in airline compliance with safety directives. While the safety lapses discussed at the hearing indicated problems with one airline's compliance, many stakeholders were concerned that they could be symptomatic of much deeper problems with FAA's air carrier oversight on a systemwide level. Since then, our work has focused on determining whether the kind of problems we reported on last year are unique to one air carrier and one FAA oversight office. We have determined the problems were not limited to that office and carrier, and we continue to believe the key to addressing this problem is better national FAA oversight.

In preparation for this hearing, we have identified serious vulnerabilities in six critical FAA programs for oversight of the aviation industry: risk-based inspections, repair stations, aging aircraft, on-demand operations, disclosures of safety violations made through the Aviation Safety Action Program (ASAP), and whistleblower complaints.

Vulnerabilities in FAA's National Program for Risk-Based Oversight—The Air Transportation Oversight System

More than 10 years ago, FAA initiated ATOS, its risk-based oversight approach to air carrier oversight. ATOS was designed to permit FAA to focus inspections on areas of highest risk and maximize the use of inspection resources. We have always supported the concept of ATOS as FAA would never have enough inspectors to continuously monitor all aspects of a constantly changing aviation industry. However, since 2002, we have reported that FAA needs to develop national oversight processes to ensure the program is effectively and consistently implemented. In 2005, we found that inspectors did not complete 26 percent of planned ATOS inspections—half of these were in identified risk areas, such as maintenance personnel qualifications.[4]

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[3] OIG Testimony Number CC-2008-046, "Actions Needed To Strengthen FAA's Safety Oversight and Use of Partnership Programs," April 3, 2008.

[4] OIG Report Number AV-2005-062, "FAA Safety Oversight of an Air Carrier Industry in Transition," June 3, 2005.

Last year, we reported that weaknesses in FAA's implementation of ATOS allowed airworthiness directive (AD) compliance issues in Southwest Airlines' (SWA) maintenance program to go undetected for several years.[5] We found that FAA inspectors had not reviewed SWA's system for compliance with ADs since 1999. In fact, at the time of our review, FAA inspectors had not completed 21 key inspections for at least 5 years. While FAA has subsequently completed some of these inspections, 4 of the 21 inspections were still incomplete at the time we testified before this Subcommittee; some had not been completed for nearly 8 years.

We have recommended that FAA implement a process to track field office inspections and alert the local, regional, and Headquarters offices to overdue inspections required through ATOS. While FAA has implemented a system to track field office inspections, it is unclear whether it has taken any actions in response to identified overdue inspections. At the request of the Subcommittee, we are currently performing a review of FAA's implementation of ATOS and will address this issue as part of that review.

Thus far, we have determined that lapses in oversight inspections were not limited to SWA—FAA oversight offices for seven other major air carriers also missed ATOS inspections. We have found that these missed inspections were in critical maintenance areas such as AD Management, the Continuing Analysis and Surveillance System (CASS),[6] and the Engineering and Major Alterations Program. Some inspections had been allowed to lapse beyond the 5-year inspection cycle by nearly 2 years.

As part of this review, we are also assessing FAA's recent transition of regional air carriers into the ATOS program. FAA inspectors responsible for oversight of large, commercial air carriers have been using this risk-based system for several years, but the majority of FAA offices responsible for oversight of regional air carriers have only recently transitioned to ATOS. This is a completely new way of conducting oversight, and inspectors we interviewed stated that ATOS applies more to large carrier operations and needs to be revised to fit the operations unique to smaller air carriers. We plan to issue our report later this year.

Ineffective Oversight of Repair Stations

Our work has also shown that FAA's oversight of repair stations has struggled to keep pace with the dynamic changes occurring in that industry. Repair stations are rapidly growing as a primary source for aircraft maintenance as air carriers increasingly outsource maintenance in an effort to reduce costs. This is an area of particular concern for regional carriers since they outsource as much as 50 percent of their

[5] OIG Report Number AV-2008-057, "Review of FAA's Oversight of Airlines and Use of Regulatory Partnership Programs," June 30, 2008.

[6] FAA requires air carriers to maintain a CASS, which monitors and analyzes the performance and effectiveness of their inspection and maintenance programs.

maintenance to repair stations. The NTSB's investigation into the January 2003 crash of Air Midwest flight 5481 (a regional air carrier), in which there were 21 fatalities, identified serious lapses in the carrier's oversight of outsourced maintenance as a contributory cause of that accident.

In 2005, FAA established a risk-based oversight system for repair stations. However, this system does not include non-certificated repair facilities that perform critical maintenance.[7] To address this concern, FAA issued guidance in 2007 that required inspectors to evaluate air carriers' contracted maintenance providers and determine which ones performed critical maintenance and whether they were FAA-certificated. However, the guidance did not provide effective procedures for inspectors to do so, and FAA is now trying to develop a new method to capture these data.

Another issue we identified was air carriers' inadequate training of mechanics at non-certificated facilities. We found carriers provided from as little as 1 hour of video training for mechanics to as much as 11 hours of combined classroom and video instruction.

In 2008, we reported that while FAA established a system for air carriers to report the volume of outsourced repairs, it was inadequate because air carriers are not required to report this information.[8] When they do voluntarily report it, FAA does not require that they list *all* repair stations performing repairs to critical components[9] or that FAA inspectors validate the information. FAA is reevaluating this system in response to our report and expects to implement system improvements by the end of August 2009.

Gathering adequate data to target inspections is important since FAA does not have a specific policy governing when inspectors should initially visit repair stations performing substantial maintenance for air carriers. We found significant delays between FAA's initial approval of repair stations and its first inspections at those locations. For example, during a 3-year period, FAA inspectors reviewed only 4 of 15 substantial maintenance providers used by 1 air carrier. Among those uninspected was a major foreign engine repair facility that FAA inspectors did not visit until 5 years after it had received approval for carrier use—even though it had worked on 39 of the 53 engines repaired for the air carrier.

We again recommended that FAA develop and implement an effective system to determine how much and where critical maintenance is performed. In addition, FAA

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[7] OIG Report Number AV-2006-031, "Air Carriers' Use of Non-Certificated Repair Facilities," December 15, 2005.

[8] OIG Report Number AV-2008-090, "Air Carriers' Outsourcing of Aircraft Maintenance," September 30, 2008.

[9] For the purposes of our report, we used the term "critical components" to identify those components that are significant to the overall airworthiness of the aircraft, such as landing gear, brakes, and hydraulics. FAA does not use this term or include these types of components in its definition of substantial maintenance. FAA defines substantial maintenance as major airframe maintenance checks; significant engine work (e.g., complete teardown/overhaul); major alterations or major repairs performed on airframes, engines, or propellers; repairs made to emergency equipment; and/or aircraft painting.

must ensure that inspectors conduct initial and follow–up inspections at substantial maintenance providers and perform detailed reviews of air carrier and repair station audits and corrective actions. In response to our report, FAA is reviewing its procedures for opportunities to strengthen its guidance. However, it does not expect to complete these reviews until the fourth quarter of this fiscal year.

Differences in Oversight of Aging Aircraft

Following the December 2005 fatal crash of a regional airline, Chalks Ocean Airways, we identified vulnerabilities in FAA's oversight of aging aircraft. FAA rules require inspectors to perform aircraft inspections and records reviews, at least every 7 years, of each multi-engine airplane used in scheduled operations that is 14 years and older. However, the rule does not require a focus on airplane fatigue cracks or crack growth, and these deteriorations can only be detected through supplemental inspections (detailed engineering reviews). FAA requires only those operators using aircraft with 30 or more seats to perform supplemental inspections of areas susceptible to cracks and corrosion.

The Chalks aircraft involved in the crash did not receive a supplemental inspection because it was an outdated aircraft model that fell outside of this FAA requirement. Two months before the accident, FAA did a visual inspection and records review of the aircraft, and no structural issues were noted. However, the NTSB's subsequent investigation determined the probable cause of the accident was the in-flight failure and separation of the right aircraft wing due to fatigue cracking that went undetected by FAA and the air carrier's maintenance program. This incident shows that for those aircraft only covered under FAA's requirements for a visual inspection and records review, the structural integrity of the aircraft cannot be assured. We note that 27 regional operators in Alaska are not required to have any Aging Aircraft Programs.

FAA, Congress, and the aviation industry have made significant strides toward ensuring the structural integrity of aging aircraft. However, as operators continue to operate aircraft beyond their original design service goals, aging aircraft will continue to be an area that bears watching.

Less Stringent Safety Requirements and Oversight of On-Demand Operators

On-demand operators fly aircraft at the request of their customers and are generally configured for 30 or fewer passengers.[10] At the request of this Subcommittee, we recently conducted a review of these types of operations and found that on-demand operators have more risk in their operating environments and receive less oversight from FAA. For example, one on-demand operator we visited flew dozens of flights

[10] Both on-demand and commuter carriers are regulated under 14 CFR 135, but commuter operations differ in that they only conduct *scheduled* operations using aircraft with nine or fewer passenger seats.

daily during the summer to take tourists to glaciers on which the aircraft landed and took off on skis. This operator flies 17 aircraft and was inspected 8 times by FAA in 2008. In contrast, a Part 121 operator with 10 aircraft, overseen by the same FAA oversight office, received 199 inspections in 2008. Industry and the NTSB have made recommendations to strengthen on-demand regulations. While FAA has made efforts to improve safety and adapt its oversight to the increased complexity of industry operations, it has not taken substantive action to address these recommendations.

Renewed focus on this issue is needed since higher risks have translated into more fatal accidents for on-demand operators. Since January 2003, on-demand operators have been involved in 95 fatal accidents, which resulted in 249 deaths. The number of fatalities makes it imperative that FAA address three issues we identified regarding on-demand operations as it plans regulatory and oversight changes for this growing industry segment.

- First, on-demand operators do not have to meet many of the regulatory requirements that mainline and regional commercial air carriers must follow. These differences—which include the areas of flight crew requirements, aircraft equipment, and maintenance inspections—can impact the safety of on-demand flight operations.

- Second, on-demand operators generally have more risk factors in their operations and environment than commercial air carriers. For example, they operate shorter flights and generally perform more frequent take-offs and landings than larger air carriers, which is the most dangerous part of flight.

- Third, FAA oversight of on-demand operators is based on compliance with regulations rather than where risk dictates. Conversely, FAA oversight of large, commercial air carriers is based on risk assessments. Prioritizing inspections based on areas of highest risk is essential for the efficient use of inspection staff and resources.

We plan to issue a report on the first phase of our review of on-demand operators by the end of this month.

Ineffective Utilization of the Aviation Safety Action Program

We recently reported problems in how FAA utilizes ASAP.[11] ASAP is a joint FAA and industry program intended to generate safety information by allowing aviation employees to self-report safety violations of regulations to air carriers and FAA without fear of reprisal through legal or disciplinary actions. When properly implemented, this program could provide valuable safety data to FAA. We found,

[11] OIG Report Number AV-2009-057, "FAA Is Not Realizing the Full Benefits of the Aviation Safety Action Program," May 14, 2009.

however, that FAA's ineffective implementation and inadequate guidelines have allowed inconsistent use and potential abuse of the program. For example, we identified repetitive reports of safety violations indicating that pilot training may need to be strengthened at two air carriers we reviewed.

Further, FAA has limited the program's effectiveness because it has not devised a method to fully compile data reported through ASAP and analyze these data on a national level to identify trends. This impedes a primary intent of ASAP—to identify *precursors* of accidents or fatalities. While ASAP has proven highly beneficial to the airlines, FAA currently obtains only limited aviation safety data through the program for use in proactively identifying systemic safety issues. For example, FAA inspectors' quarterly reports of ASAP activity at participating carriers may only provide general information on the number—not the nature—of ASAP submissions for that quarter.

As a result of these issues, ASAP, as currently implemented, is a missed opportunity for FAA to enhance the national margin of safety. In addition, ASAP is not widely used by regional carriers. While major carriers view ASAP as an integral safety tool, 37 percent of large regional carriers do not participate in ASAP. In response to our report, FAA agreed to clarify ASAP guidance and establish a centralized system for the acquisition and analysis of ASAP and other safety-related information at a national level. We will continue to monitor FAA's progress in this area.

Mishandling Internal Reviews of Whistleblower Complaints

Our work at SWA and Northwest Airlines (NWA)[12] has identified systemic weaknesses in FAA's processes for conducting internal reviews and ensuring appropriate corrective actions. In the SWA case, FAA's internal reviews found, as early as April 2007, that the principal maintenance inspector was complicit in allowing SWA to continue flying aircraft in violation of an AD requiring inspections of aircraft for structural fatigue cracks. Yet, FAA did not attempt to determine the root cause of the safety issue nor initiate enforcement action against the carrier until November 2007.

At NWA, FAA's reviews of an inspector's safety concerns were limited and also overlooked key findings identified by other inspectors, such as findings related to mechanics' lack of knowledge or ability to properly complete maintenance tasks and documentation. Although FAA found that some of the inspector's safety concerns were valid, FAA informed him that all of his concerns lacked merit.

We also have concerns regarding FAA's failure to protect employees who report safety issues from retaliation by other FAA employees. At both SWA and NWA, we

[12] OIG Report Number AV-2007-080, "FAA's Actions Taken To Address Allegations of Unsafe Maintenance Practices at Northwest Airlines," September 28, 2007.

found that FAA managers reassigned experienced inspectors who reported safety concerns to office duties, after an alleged complaint from the airline, and restricted them from performing oversight on carrier premises. Both the SWA and NWA cases demonstrate that FAA must pursue a more reliable internal review process and protect employees who identify important safety issues.

Given the vulnerabilities surrounding FAA's national program for risk-based oversight, ASAP implementation, and protection of whistleblowers, we have made a series of recommendations. Key actions needed from FAA include the following:

- Develop a national review team that conducts periodic reviews of FAA's oversight of air carriers.
- Periodically rotate supervisory inspectors to ensure reliable and objective air carrier oversight.
- Require that its post-employment guidance include a "cooling-off" period when an FAA inspector is hired at an air carrier he or she previously inspected.
- Establish an independent organization to investigate safety issues identified by its employees.

In response, FAA has developed a proposed rule requiring a "cooling-off" period for its inspectors. However, FAA still needs to address our remaining recommendations to demonstrate its commitment to effective oversight. We will continue our efforts to examine FAA's oversight of these segments of the aviation industry and will keep this Subcommittee apprised of our progress as well as other actions FAA should take to ensure safety.

OIG PLANS FOR ADDRESSING NEW WORK ON FAA SAFETY OVERSIGHT

Given the differences in the operating environments among mainline and regional carriers and vulnerabilities we have previously identified with FAA's safety oversight, this Subcommittee requested that we review aspects of pilot training and rest requirements. The NTSB's recent hearing regarding the Colgan accident included evidence suggesting that pilot training and fatigue may have contributed to the crash. We are in preliminary stages of our review and would like to take this opportunity to discuss our overall approach.

We are executing this engagement in two stages. The first review concentrates on several aspects of pilot training. These include FAA oversight of commuter and regional pilot training, the number of training hours needed before a pilot can assume pilot-in-command responsibilities, and how U.S. airlines update pilots on the latest technologies on the aircraft they operate. As part of this review, we are examining

FAA's January 2009 proposed rulemaking on pilot training and evaluating its potential impact on air carrier training programs at both mainline and regional carriers. Currently, the comment period on the proposed rule has been extended to the end of August 2009. We are also reviewing the information pilots are required to provide airlines and whether it is sufficient to verify pilot employment and training.

Our second review concentrates on regulations covering pilot rest requirements. As always, Mr. Chairman, we will adjust the focus of our reviews to address any other specific concerns that the Subcommittee may identify.

CONCLUSION

The importance of airline safety is critical to the Department and the flying public. We will continue to do our part in advancing the Department's goal of one level of safety. While all stakeholders are committed to getting it right, our work has identified a number of significant vulnerabilities that must be addressed. This will require actions in areas FAA has already targeted for improvement as well as other areas where FAA will need to revisit differences in standards and regulations and rethink its approach to safety oversight.

That concludes my statement, Mr. Chairman, I would be happy to address any questions you or other Members of the Subcommittee may have.

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