COMAIR, INC.'S NTSB SUBMISSION

Comair appreciates the opportunity to present its observations to the NTSB. Comair has and will continue to fully cooperate with the NTSB staff in the preparation of the factual group reports, and in any other way that will be helpful. Those reports fully describe what happened on August 27, 2006. What remains to be addressed is what caused multiple aviation safety system components to fail and how similar failures can be prevented in the future. In this submission, Comair intends to emphasize the airline's safety culture as it is an important element in the investigation. Comair concludes with suggestions for further NTSB consideration that Comair believes could facilitate all parties' interests for continued safety advancements for air service.

Comair submits that an understanding of its safety systems will assist the Board in its analysis of the system failures that led to this accident. Comair understands and accepts that the conduct of one of its flight crews is one of numerous factors which contributed to this accident. However, it is also true that Comair's integrated safety system and established safety culture is pervasive throughout its business and designed to strengthen the totality of its operation. Additionally, Comair incorporates programs and safety audits that are accepted and widely utilized in the industry to continue to strengthen its integrated safety system.

Comair's safety culture begins at the highest level of management. Don Bornhorst, Comair President and CEO, has clearly reemphasized the high priority which Comair places on safety. (See Attachment 1 – Letters from Comair Presidents Don Bornhorst dated July 2006, Fred Buttrell dated February 10, 2005, and Randy Rademacher dated January 6, 2003 and July 20, 2001). Moreover, this emphasis on safety throughout Comair is restated in Paragraph 1.1 of the Operations Manual. The same or similar statements have been contained in Comair's

Operations Manuals since 1998. The strength of this safety culture is formalized in the Corporate Safety Program Manual, which has been in existence since 2001.

Comair leadership's emphasis on safety is implemented through oversight by the Corporate Safety Department and through the participation of all the departments and employees of Comair. The head of the Corporate Safety Department is a Director level employee who reports directly to the Corporate Compliance Committee. This Committee is led by President Don Bornhorst and is comprised of the highest levels of management, including the operating vice presidents. The Committee meets at least quarterly. Its purpose is to provide a formal management review process which continually assesses and seeks to improve upon Comair's safety, compliance, and quality environment. Comair's Director of Corporate Safety facilitates these meetings, which provide a formal, continuous process to update the President on safety issues.

Central to Comair's safety management process is the implementation of the concept enunciated in Don Bornhorst's letter and the Operations Manual. The policy statement contained in Paragraph 11.1, Chapter 11 of the Corporate Safety Program Manual is clear and expressive. (See Attachment 2 – Comair Corporate Safety Program Manual, Chapter 11.) [1]

An effective safety management program depends on accurate and reliable input. Comair has established a number of methods to acquire flight safety related information. The most formal processes with which the Board is familiar and which were in existence well before August 27, 2006 are an IEP (Internal Evaluation Program), an ASAP (Aviation Safety Action

[1] Currently, that policy statement is contained in Chapter 10, Paragraph 10.1 of the Corporate Safety Program Manual.

Program), and a CASS (Continuing Analysis and Surveillance Systems) program. These programs are funded, staffed, and functioning. In conjunction with these programs, Flight Safety Committee meetings are held quarterly. The participants at these meetings include: Director of Corporate Safety, Director of Operations, Manager of Flight Safety, Manager of Flight Training, CRJ Fleet Manager, Manager of Regulatory Compliance, Manager of Flight Standards, a representative from the Maintenance Department, a representative of the ALPA Safety Committee, and the Comair ASAP Coordinator.

On an organizational basis, the effectiveness of the Comair safety system may be judged, in part, by the fact that Comair is an ATOS (Air Transport Oversight System) carrier, and has repeatedly passed FAA inspections and DOD (Department of Defense) audits. Comair's Maintenance Department has won the FAA Diamond Award for the past twelve years. Comair received a positive IATA Operational Safety Audit (IOSA) in September of 2005, making Comair one of an elite group of U.S. IOSA certified carriers prior to August 27, 2006. Comair negotiated, prior to August 27, 2006, with the University of Texas for the institution of a LOSA (Line Operating Safety Audit) program, and has taken steps to institute a FOQA (Flight Operational Quality Assurance) program.

These organizational initiatives are further supported by Comair's rigorous, safety driven focus on crew training. Comair's crew oriented flight safety training begins with basic indoctrination training and continues through formal classroom Continuing Qualification Training (formerly known as Recurrent Ground School.). CRM (Crew Resource Management) and situational awareness are a constant part of the aircrew's basic indoctrination, initial ground school, and Continuing Qualification Training. Another important segment of each crew's safety

oriented training focuses on specific aircraft systems. Two particular portions of the CRJ (Canadair Regional Jet) Electronic Flight Instrument System (EFIS), the PFD (Primary Function Display) and MFD (Multi Function Display), may be of particular interest to the Board, as these displays provide the Captain and First Officer with four of the five heading cues available to them; the fifth is located at eye level in the center of the cockpit. (See Attachment 3, Sample Cockpit Instrument Diagrams.)[2]

Runway incursion and awareness training, which is given in Continuing Qualification Training, reminds aircrews to, among other things, scan outside, use charts, ask for progressive taxi instructions, and use instruments to verify airport orientation. Other Continuing Qualification Training topics include an interactive segment on airport signs and markings, sterile cockpit procedures, and low visibility taxi techniques. All of the classroom training materials given to the flight crew are available to the Board upon request.

Given the complexity of aircraft operations and the resulting, universally recognized need for redundancy through a "system safety" approach, it would be simple but inaccurate to conclude that the only cause of this tragic accident was a mistake by Comair's well trained and experienced flight crew. It is not Comair's purpose or intent in this submission to lay blame or place fault. Rather, it is Comair's goal to help the Board address the safety concerns highlighted by the multiple systemic weaknesses inherent in the conduct of other individuals and organizations that were links in the causal chain that led to this accident.

[2] Attachment 3 is provided in two formats: two printed diagrams, one of which is roughly 100% scale and the other is roughly 50% scale; and a CD containing a .Pdf version of both diagrams, not to scale.

Comair believes and suggests the Board investigate the FAA's approach to runway airport surveillance. Had the controller on duty been required to devote all his attention to the airport environment while aircraft were departing, this accident may have been prevented.

Comair further believes and suggests that the Board investigate the way in which the aviation system can provide more timely, useful, and accurate information to flight crews. The LEX information available to all flight crews on August 26 & 27, 2006 was inaccurate, incomplete and of limited utility. For example, the NOTAM which stated "T/W ALPHA NORTH OF R/W 8-26 CLOSED UFN" was at least partially inaccurate since Taxiway A was open, albeit not in the location represented on the NACO (National Aeronautic Charting Office) or Jeppesen charts. As another example, the NACO and Jeppesen charts were incorrect; a fact known to the Airport Authority and the FAA. The point Comair wishes to make is that consideration should be given to finding a better way to provide useful, timely and accurate information to all flight crews.

According to Roger Cohen, President of RAA (Regional Airline Association), the issue of communications is an important topic among the Association's carriers. Cohen recently shared that "I, personally, am astounded that given today's instantaneous communications and ability to access 'real time' information almost anywhere, that the NOTAM system seems terribly outdated. It is my belief that RAA members would support the FAA making improvements to the communications systems, and the NOTAM system in particular."

The present system, developed in the era of the teletype, is outdated. If we all work together to change it, rather than perpetuate its shortcomings, we can make it better. Comair does believe that if representatives of General Aviation, Part 91/121/135 Operators, Airports, and

the FAA sit down and take a "blank sheet" approach to the design and implementation of a new useful system the result could effect a positive change in the aviation safety system. It is Comair's opinion that many air carriers would support and participate in the process of changing this system.

The FAA may have taken steps in this direction by creating the Qualified Internet Communication Provider (QICP) program and by participating with EUROCONTROL in an exploration of the xNOTAM program. (The Board can find a whitepaper on this concept at www.faa.gov/AXIM/Intro_white_papers/xNOTAM%20Concept%20Overview.pdf).

The accident that took place in Lexington is a tragic example of multiple failures in the aviation safety system. In the interest of continuing the advancement of aviation safety, Comair wishes to express its appreciation for the NTSB's efforts to conduct a thorough review of all the factors which led to the crash of flight 5191, and respectfully offers that this comprehensive review must include the factors highlighted in these remarks.

Don Bornhorst
President
Comair, Inc.