Attachment 1

to Operations Group Factual Report

DCA06MA064

INTERVIEW SUMMARIES

Interview:	**Timothy Wayne Johnson, Ramp Agent, Comair**
Represented by:	**n/a**
Time/Date:	**1430, August 28, 2006**
Location:	**Lexington, Kentucky**
Present:	**Operations / Human Performance Group (Ellen Tom absent)**

During the interview, Mr. Johnson stated the following information:

He had been with Comair in his present position for approximately one year and eight months. The morning of the accident he reported to work at approximately 0415 and started his shift at 0445.

He worked accident flight #5191. On the morning of the accident, the airplane was parked on the ramp and was located in the middle of three aircraft. Mr. Johnson said the accident crew initially boarded the wrong aircraft and started the Auxiliary Power Unit (APU). The aircraft they had boarded in error was the one on the left side of the correct aircraft as viewed from the terminal building. He told agent-in-charge (AIC) Greg Cotton that the crew had boarded the wrong airplane. The AIC boarded the aircraft and advised the crew that it appeared that they had boarded the wrong aircraft. The crew shut down the APU. Mr. Johnson said the first officer (F/O) came down from the aircraft and was not really disgusted but did not know how he got on the wrong plane. The captain got off and said it was going to be one of those days but oh well what are you going to do. Johnson estimated that about 0540 the crew moved to the correct airplane. Mr. Johnson reported that the crew seemed fine although the first officer seemed disappointed or surprised that they had boarded the wrong aircraft. He recalled no discussion from either crew member about running late. The first officer performed the walk around inspection.

Mr. Johnson loaded passenger bags into the accident airplane's baggage bins. After the bags were loaded, he waited on cleanup [late arriving] bags and for the pink tagged bags [passenger carried]. Once all the bags were loaded, he closed the baggage bin door and shut off lights in the bin. He then picked up the light wands and assisted the pushback of the airplane as a wing walker.

After he gave the crew a salute he walked back inside the operations office and did not talk to the crew or see them again. He did not observe the crew taxi the aircraft.

According to Mr. Johnson the weather conditions were overcast and it was not raining. Sprinkles of rain started after they unhooked the tow bar from the airplane. He said the precipitation was not enough to make the concrete dark before taxi. He described the rain as "moderate" during the time the airplane taxied and "extremely heavy" after the accident. The ramp was lit up. You could see the numbers on the aircraft.

Interview: **Miguel Vivanco, Ramp Agent, Comair**
Represented by: **n/a**
Time/Date: **1455, August 28, 2006**
Location: **Lexington, Kentucky**
Present: **Operations / Human Performance Group (Ellen Tom absent)**

During the interview, Mr. Vivanco stated the following information:

He had been a ramp agent with Comair for about two years.

The day of the accident he reported to work at 0445 and began providing ground support for the accident aircraft about 0520. He saw and heard the accident crew power up the APU on the wrong aircraft. He reported that he saw the accident crew get off the incorrect aircraft at 0515 and go to the accident aircraft at 0520. He said it looked like the captain was in his 40's. He said after coming down off the wrong airplane the captain said "yeah one of those days". He said the crew was close enough to recognize but he had not seen them before.

He reported that he was sitting on the "push back cart" and saw a co-worker (Greg) talking with both the accident captain and first officer. He was not able to hear what they were talking about. The flight attendant arrived at the accident aircraft about ten minutes later at 0530. He also reported that at some point in time, he witnessed a pilot performing a walk around inspection of the aircraft but was unable to recall if it was the captain or first officer. When asked if the crew ever seemed rushed, he replied not rushed or hurried but maybe "worried". He said when the pilot did the walk around of the correct plane he did it with a "little bit of worry" and was just walking fast and looked just to the ground. He was not chatting with the ramp agents.

His duties that morning on the accident aircraft included loading bags, removing the aircraft chocks and taking the copies of the crew completed flight specific paperwork into the operations office at about 0600. The paperwork was not handed to him by the crew, but rather from another ramp agent who received it from the crew.

When asked about any precipitation while he was out on the ramp, he said there was none. It was dark. It was like any regular day. No rain occurred until after he went inside.

Interview: **Douglas Ray Heuer, FAA Air Crew Program Manager (APM) for the Comair Canadair Regional Jet (CRJ) 100/200 fleet**
Represented by: **n/a**
Time/Date: **1545, August 28, 2006**
Location: **Lexington, Kentucky**

Present: David Tew, Lou Johnson, Brian Schimp, Jacques Nadeau

During the interview, Mr. Heuer stated the following information:

He joined the FAA in June 1990 as Assistant principal operations inspector (POI) for Comair. After one year he became the Comair aircrew program manager (APM) for the Brasilia fleet and held that position until he switched to become the APM for the CRJ 100 fleet in 1999. He was also APM for the CRJ 700 fleet until last year.

His total flight time was about 11,300 hours, which included about 9,000 flight hours as pilot-in-command (PIC). He had about four flight hours on the CRJ airplane and about 200 hours in the CRJ flight simulator.

He was a Comair pilot from July 1978 to July 1979. He left Comair because he thought the company was cutting too many corners. The company wrote off a fuel-related airworthiness directive (AD) without checking the aircraft and he consequently had an in-flight engine failure so he quit. He said, in broader terms, the maintenance was not great. The company had its first fatal accident shortly after he left. A Piper Navajo took off from Cincinnati, OH and had an engine failure shortly after lift-off. Instead of landing on the remaining runway, the pilot tried to stay airborne, went below V_{mc}[1], rolled inverted and crashed. Before flying for Comair he was a flight instructor. Prior to joining the FAA, he flew corporate jets for 10 years out of Indianapolis, Indiana.

As APM his duties included the oversight for: pilot training, check airmen, aircrew program designees (APD), and examiners. He also provided recommendations for the operations manuals for the principal operations inspector's (POI) approval.

The Comair Flight Standards Manual (FSM) had been in its current format for a long time.

He observed pilot training (ground school, simulator, etc.) once or twice per week on average. He personally performed about six check rides per year including proficiency checks. About 10% of his check rides were assessed as failures.

He performed enroute checks and about 25 flight inspections [line checks] per quarter. Previously, under the FAA program tracking and reporting subsystem (PTRS), he performed more averaging about 25 flight inspections per quarter under the PTRS on average. Under the air transport oversight system (ATOS), there was no requirement to perform enroute inspections unless a risk was identified but he intended to continue to do enroute inspections anyway. ATOS had been implemented at Comair since June 25th, 2006 and he had done about five enroute inspections (including initial operating experience (IOE)) since then. This FAA Region encouraged inspections (1 or 2 legs) of all new Captains undergoing IOE prior to their release on the line.

[1] Vmc – minimum control speed with the critical engine inoperative

When asked what he expects to see on enroute inspections, he mentioned external and internal pre-flight checks, paperwork, weather, first flight of the day checks, security, weight and balance and a complete Comair briefing as per the FSM if the crew had not flown together before.

The taxi briefing was to be performed every flight. Both pilots were to have their taxi chart out during the briefing. Before taxi, the Captain briefed any hot spots [areas of concern or complexity] and the taxi route. As an example of a briefing in Blue Grass Airport (LEX), Lexington, Kentucky, the Captain would brief that it was a short taxi so he would start both engines at the gate, he would then state which taxiways he would use. The F/O should follow along on the chart and advise if he believed something was incorrect or if he had any questions.

Mr. Heuer said he was not currently assigned to any other certificate but he performed occasional enroute checks on other carriers. He had seen other carriers conduct similar taxi briefings.

When asked what he expected to see displayed on the flight management system (FMS), he mentioned the departure runway. He then described the runway update that was performed using the takeoff/go-around (TOGA) buttons. There was no alarm or similar indication if the airplane was aligned on the wrong runway, but when the pilot selected TOGA, the pilots should see the map display jump during the runway update especially if the display was set at a high enough scale.

At Comair there was no callout of the runway when you taxied into position, he was not aware of any other procedure or callout for this purpose but there may be techniques that pilots used. He confirmed that the Comair procedures do not include checking the aircraft heading once aligned.

He had observed that most take-offs were rolling take-offs. If the pilot needed the engines powered up quicker during bad visibility, there were procedures to hold the brakes. Pilots were always allowed to do that anyway.

Mr. Heuer described a standard Comair takeoff if the F/O was the pilot flying (PF). The Captain taxied into position on the runway, transferred control of the airplane. The F/O set the approximate thrust, called “set thrust”, the Captain adjusted the thrust and replied “thrust set”, while continuing to guard the thrust levers. While guarding the thrust levers, the Captain did not really “hold” the thrust levers, in case there was an inadvertent thrust reverser deployment (which would automatically retard the throttle). As the non-flying pilot the Captain called passing 80 knots to which the F/O confirmed 80 knots on his own airspeed indicator and replied “check”. During the takeoff roll, the Captain called V_1[2]

[2] V1 - Takeoff Decision Speed or Critical Engine Failure Speed
Maximum speed in the takeoff at which the pilot must take the first action (e.g., apply brakes, reduce thrust, deploy speed brakes) to stop the airplane within the accelerate-stop distance

then V_r[3] but not V_2[4]. There was no procedure to check the performance/acceleration of the airplane based on checking the distance down the runway but pilots were expected to judge that the acceleration was normal.

He did not recall if he performed any check ride on the accident captain or F/O. He did not recall hearing anything about either pilot having any problems (training or personal). He performed a background check on both pilots following the accident. There were no violations on either pilot.

The aviation safety action program (ASAP) program had highlighted some reports of confusion regarding taxiways or runways but he did not recall any specific prior Comair occurrence of taxiing/lining up on the wrong runway. There may have been something written up for the LEX airport in the ASAP reports.

FAA inspectors put an emphasis on both pilots having their taxi chart out while taxiing.

In their mailbox, flight crews received the "On Course" quarterly magazine, and it contained selected summaries of ASAP reports.

Due to the number of taxiway/runway incursions, the FAA had mandated that the simulator training put a lot of emphasis on taxi training. As APM he had reviewed the Comair training program and this emphasis had been included.

He did not recall how long the pre-taxi briefing had been in effect – possibly within the last year. It had been brought about by recent runway incursions. The FAA and the Comair flight operations department had agreed to implement this briefing. When asked if he saw any improvement since the addition of the taxi briefing, he replied that it took a while to successfully implement.

When asked if he was aware of any runway incursions by Comair, he said that he had heard through the ASAP system or from air traffic control (ATC) that there were some, but he had no idea how many.

When asked his opinion of the Comair simulator-training program, he replied that it was adequate but that there was always room for improvement and that this was done continuously. When asked what he would like to see changed/improved in the simulator, he mentioned that the graphics of signage could be improved. The taxi signs were not clear or were wrong so it was not realistic. Readability and accuracy of the signs was an issue. He then mentioned that this aspect was therefore emphasized on line checks.

V_1 also means the minimum speed in the takeoff, following a failure of the critical engine at V_{EF}, at which the pilot can continue the takeoff and achieve the required height above the takeoff surface within the takeoff distance.

[3] Vr - rotation speed

[4] V2 - Takeoff Safety Speed

Less than 10% of the line observations were done early in the IOE. It was normally done towards the end of IOE.

He had heard of discussions creeping into the cockpit about job security issues – such as bankruptcy, contract proposals, and whether the pilot will actually have a job. He told crews to keep nonessential conversation out of the cockpit.

He has offered Comair some suggestions of a non-regulatory nature and Comair was considering them. When asked, he answered that Comair saw the APM as a good partner. Discussions between the FAA and Comair were open and frank. Brian Schimp confirmed that they had enjoyed an excellent lengthy relationship. Brian also clarified that although the flight standards manual (FSM) had kept the same format since 1992, it had received numerous revisions since the beginning.

When asked if he was comfortable with the level of experience of the F/Os put forward for promotion, he replied that he was and that they had two to five years of experience in the right seat. He also had confidence that the check airmen would prevent a pilot who could not progress from reaching Captain IOE. It did happen (seldom) that progression was not satisfactory so the pilot was re-trained and re-assigned to the right seat. These cases were generally not due to the lack of basic skills or proficiency but rather to something missing in their captain quality such as their command ability.

He did acknowledge that the experience level of the newly hired F/Os was lower than before. He said this is an industry concern. He attempted to personally observe every pilot check ride after a second failure. If there was a gray area during a check ride, he was confident that the examiner would re-test the pilot. Check pilots were upholding the standard.

He was asked why the APM position was split the previous year. He said an additional person was assigned to the FSDO. As the Comair fleet had reached 143 aircraft they were allowed to split the position. He kept the CRJ100/200 as it had a higher pay grade due to the number of aircraft (complexity).

He was asked if he believed in being proactive and providing suggestions. He said yes and that he met with Brian Schimp weekly. They had numerous discussions prior to Comair making a formal proposal for modifications to their documents.

Interview: **Greg Cotton, Customer Service Agent, Comair**
Represented by: **Mike Merlo**
Time/Date: **0855, August 29, 2006**
Location: **Lexington, Kentucky**
Present: **David Tew, Evan Byrne, Shawn Pruchnicki**

During the interview, Mr. Cotton stated the following information:

Mr. Cotton had worked in his present position with Comair since January 30th, 2006. Prior to that he worked briefly for Cintas and prior to that he worked at the LEX station for Air Wisconsin for 25 years as a passenger service agent. He had worked at the LEX airport since October 1987 but worked in LOU for about 3 years starting in 2002.

The morning of the accident, Mr. Cotton reported to work at 0445. His job was to make sure everything was being done. He said others were there working the flight that morning because it was the first flight of the day and they did not have other planes going out at that time.

The crew checked into operations at 0515. He gave them the flight paperwork and then they went to the airplane. He went to the airplane about 0520 to 0525 to check on the crew. He discovered that the accident crew had boarded the wrong airplane and started the auxiliary power unit (APU). He boarded that airplane and advised the crew that they were on the wrong aircraft. Both pilots were in their seats when he boarded the airplane to tell them they had selected the wrong airplane. Mr. Cotton said that when he told the crew they had the wrong airplane; they checked the paperwork and said that he was correct. After the crew shutdown the APU on the incorrect airplane, they repositioned themselves to the correct airplane and began their checks.

Mr. Cotton said that one of the Comair CRJs was on the jet bridge and the other two were parked on the ramp. The crew had walked past the accident airplane to board the wrong airplane. When asked if he had ever seen another crew board the wrong airplane at either Comair or Air Wisconsin, he reported “no”.

The flight attendant boarded the airplane about 0530. Mr. Cotton reported that at no time did he witness any crewmember perform a pre-flight of the accident airplane. At about 0540, the accident crew gave him the thumbs up signal to board the passengers and Mr. Cotton radioed the gate agent to begin the boarding process.

After the boarding process was complete, Mr. Cotton collected four pink tag bags [carryon bags] and loaded them onto the airplane after which he handed the baggage load slip to the flight crew at 0555. While waiting for the paperwork to be completed, he walked around the airplane verifying that all access panels were closed.

The paperwork was handed out the door to a ramp agent before departure. He did not recall which ramp agent took the paperwork from the crew. He worked the flight with a three-man team. An AIC, a bag runner, and a ramp agent in pit loading bags.

Once ready for push back, Mr. Cotton boarded the push back tug and discovered that the headset was not functioning correctly. He was able to hear the crew but the crew was not able to hear him. Hand signals were agreed upon and the push back procedure was started. Mr. Cotton stated that other than the fact that he could not talk to the crew, the push back process was normal.

During the push back procedure he recalled hearing normal checklist items and an

unidentified pilot saying that his three-month-old baby had his/her first cold. He recalled no other conversation outside of normal cockpit checklist discussion. He said the checklist discussion seemed normal to him.

Mr. Cotton had no recall of hearing any taxi briefing between the crewmembers. He also had no recall of whether the accident airplane or windows were wet or if the crew had used the windshield wipers during the pushback. He did not see any wetness from dew or precipitation on the airplane.

Mr. Cotton reported that he recalled no precipitation during the pushback procedure and "no wind to speak of". The visibility was good but a bit "sticky". After the airplane pushed back, there was still no precipitation. He remembered the concrete as being dry. He reported at 0615, it was beginning to rain at a level he described as very light rain. He said the precipitation never got heavier than light rain. The ramp area was described as well lit and that the ramp personnel had no control over ramp lighting.

Mr. Cotton reported that prior to the morning of the accident he had never met either of the pilots of the accident flight. When asked to describe the flight crew, Mr. Cotton referred to them, as "professional", "courteous" and that everything seemed normal.

Regarding conversation with the accident crew, Mr. Cotton stated that other than saying "good morning" and "the like", there was not much conversation. He did not remember any unusual conversation with the crew or between each crewmember. He also stated that he had no recall of the crew drinking coffee, yawning or rubbing their eyes.

In his career, he said he had not heard any discussion from crews at LEX about taxiway confusion or lining up on the wrong runway.

Interview: **Shawn Glass, Comair Lead Customer Service Agent,**
Represented by: **Mike Merlo**
Time/Date: **0950, August 29, 2006**
Location: **Lexington, Kentucky**
Present: **David Tew, Evan Byrne, Shawn Pruchnicki**

During the interview, Mr. Glass stated the following information:

Mr. Glass had held the position of lead customer service agent for just over two years and had been with Comair for three and a half years.

On the morning of the accident, Mr. Glass came to work about 0430, printed the flight release, and left it on a table in the operations area. He was unsure if the pilots were together or which one picked up the flight release, as he did not speak to either pilot as he was completing other work. He did hear one of the pilots talking to some of the other ramp agents. The nature of the conversation appeared to be casual and laughing was heard.

At some undetermined time, the pilots left operations for the airplane. He stated that, what little he saw of the pilots, they appeared to look "very professional" which was "like they always looked". He said the pilots did not seem tired or in a hurry. They seemed normal to him.

A short time later, the flight attendant showed up and he told him that his airplane was the one that was currently powered up. He had no further contact with any of the accident crewmembers.

He said when he went outside, after the accident, there was no precipitation. He said there was "not a whole lot of wind" and the ramp surface was dry at the time.

Interview:	**Timothy D. Patrick, Comair Line Check Airman** **Crew Resource Management (CRM) facilitator instructor**
Represented By:	**Mike Merlo**
Time:	**1517, August 29, 2006**
Location:	**Comair headquarters, CVG**
Present:	**Operations/Human Performance group**

During the interview, Captain Patrick stated the following information:

His date of hire with Comair was March 9, 1992 as a customer service agent. On May 18, 1994, he transferred into flight operations as an Embraer (EMB) 120 F/O. His total flight time was about 9,000 hours including about 7,000 hours as pilot-in-command (PIC) and about 4,500 hours in the CRJ (both left and right seat). He upgraded to captain in January 1999 (when his IOE began). He became a line check airman in August or September of 2001.

Captain Patrick did not know Captain Clay personally and did not know him as a friend or an acquaintance. He flew with him professionally a couple of times. His most recent flight with the Captain Clay was when he was performing line check airman duties during a regulatory recurrent line check in May 2006. Captain Patrick was seated on the jumpseat. The line check was conducted during two flight legs, Cincinnati-Northern Kentucky International Airport (CVG), Covington, Kentucky to Evansville Regional Airport (EVV), Evansville, Indiana and then a return flight to CVG. The line check went fine and Captain Clay passed. Captain Patrick had to look at the paperwork to recall the events of the day. Captain Clay scored a three on every grade on the advanced qualification program (AQP) data collection sheet. A rating of three was standard and where they wanted the crews to be. Four was the highest grade and he occasionally gave a four. Every line check got a debriefing. He did not remember giving the captain a debriefing so he did not recall any specifics and there were no notes on the paperwork other than grades. He had a positive impression of the captain and offered the word "professional" as a good word to describe him based on his recollections. There was

good CRM and good interaction between the crewmembers. He said that Captain Clay created a good cockpit environment.

He did not recall hearing any positive or negative comments about the captain from his colleagues. Captain Patrick did not recall anything about the F/O and had not heard any positive or negative comments about him. Captain Patrick said he did not recall ever flying with the first officer.

Captain Patrick flew into LEX quite often and recently. He said, based on a review of the airport diagram, he concluded he had not been into the airport with its current taxiway configuration. His last flights occurred about 2 months prior, which was before the work was done on the runway and taxiway alpha was open. He had been into and out of LEX during the day and night. He was shown the taxi clearance that was given to the accident flight. The only issue about LEX he had was whether there was enough distance on the taxiway to be clear of runway 26 after you taxied across it and were holding short of runway 22. He had never had a situational awareness problem during ground operations at LEX. He said LEX was a "staple city" for pilots at Comair. Most pilots have flown into LEX frequently. He said he had never been confused or had problems distinguishing runway 22 from runway 26 on the ground. He had not heard other pilots ever mentioning that they had almost made the same mistake as the accident flight crew in distinguishing runway 22 from runway 26.

Captain Patrick was asked to describe the pre-taxi briefing. He said there were two parts to the taxi briefing according to the operations manual. There was the Comair standard briefing that occurred when the crew came together for the first time. Part of that standard briefing was to discuss the expectations on the part of both crewmembers. This included things that would be briefed ahead of time. For example, writing down difficult taxi clearances, hotspots, runway crossings, etc. Once that was briefed, the protocol was understood. On subsequent briefings they could omit the standard briefing. The second part of the taxi briefing was when they briefed the taxi clearance as it was given to them. They would both get charts out. They discussed areas of the airport that may be of concern, frequencies used, hotspots, etc.

He was asked about a taxi briefing for LEX. He said there were no designated hotspots on the airport diagram. He would brief how to exit the terminal ramp. He would brief the specific taxi route in the pre taxi briefing after receiving the taxi clearance. He would point out taxiways that they would use and the need to cross runway 26. He said they would hold short of runway 26 on taxiway Alpha. Ground control was the only frequency they would use at LEX so that would be it regarding frequencies on that briefing. If runway 26 were in active use, depending on time of day, they would be required to turn on lights if they crossed the runway. They turn on taxi recog [recognition] lights, wing inspection lights, and strobes when crossing runways. He was asked if the procedure for turning lights on was in the flight standards manual and answered he did not know. He said that would have been about it for a taxi briefing for LEX. He thought it would take just a few seconds to brief for LEX. The captain always did the taxi briefing. During line checks he occasionally found some instances where the

briefings were not done correctly. The pilots usually forgot the taxi briefing when they were in a hurry or it was a familiar airport. That was something he would enter on the AQP data collection form as a point of interest and would become a debrief item at a minimum. He said that did not happen often and most pilots gave a thorough briefing and did a very good job. The procedure for taxi briefings had been in effect for as long as he had been at Comair. Some of the specifics had changed in terms of what they wanted briefed, but to his knowledge, they had always been required to do a taxi briefing. Also, his technique was that if it had been a long time since they briefed the initial takeoff briefing at the gate, he reviewed the takeoff initial heading and altitude when he was cleared into position. It was not required, but tended to be a common technique and many people did that.

He was asked to describe procedures in the cockpit after he was cleared into position on the runway and prior to the takeoff. The very first thing they would do was the captain would call for a line up checklist. If it were a position and hold, they would do the checklist up to the hold line. The captain was responsible to determine if the final approach was clear before going on the runway and most pilots verbalized that but it was not a requirement to do so. The captain then ensured the F/O had completed the checklist. That was about it unless there was a transfer of controls. He said, unless he was overlooking something, that was all the book required him to do.

They would also do a runway update with the flight management system (FMS). The reason for the update was that when they pressed the takeoff go-around (TOGA) switch on the thrust levers, that brought up the command bars to the takeoff vertical mode and takeoff lateral mode (TO/TO) and also did a runway position update in the FMS. Sometimes you got a map shift when you pressed the TOGA switch although that depended on several things. Either pilot could press the TOGA switch. He was asked what technique he wanted to see with respect to pushing the TOGA button when he performed a rolling takeoff. To his knowledge, there was not a requirement outlining who pressed the TOGA switch. He made sure one of them pressed the TOGA switch. He said they had discussed different techniques as to who pushed it and when. His preference was making sure it got done, but personally liked to see the captain do it. If it was not done, he included it in the brief so they understood the necessity of doing it. There was no procedure to confirm that TOGA was hit. Only requirement in the flight standards manual about it was that the crews brief during the takeoff briefing what method they would use. They just needed to brief whether they would use raw data versus TO/TO command bars. There was nothing saying it had to be used. The words were “should be used”, the command bars should be used. That meant it was a technique and they did not have to use them.

If you used runway 22 as a departure runway when you programmed the FMS at the gate and taxied into position on runway 26 and pressed the TOGA switch, the update would not be a help in letting you know you were not on runway 22 as the main focus would be on the command bars. The runway update would not have increased situational awareness. A check position (CHK POS) message would indicate that the FMS did not know where it was. The pilot could update the FMS on the ground or in the air or wait

for a good signal to allow the FMS to fix itself. If you got on runway 26 instead of runway 22, it would not generate a CHK POS message. He was asked how much discrepancy the FMS needed to generate a CHK POS message. He answered that there were many things that could cause a CHK POS message such as distance, update times. The pilot had ways to help the FMS out.

He was asked about procedures or techniques he used to confirm he was on the correct runway for departure. He said that, generally speaking, your situational awareness was such that it would be difficult to get on the wrong runway for takeoff. Generally speaking he was looking at the heading bug. The heading bug was a good indicator. There was no procedure in their manual to cross check their heading with the runway heading. The manual said the heading bug was to be on the runway heading unless they needed to turn before 400 feet after departure. If they needed to turn, the heading bug could be set on the turn heading. However, that needed to be briefed. He also tried to create an environment in the cockpit where the F/O and he were backing each other up and to increase each other's situational awareness. He wanted an open environment where the F/O could speak up and they could keep each other out of trouble. Those were some of the human factors things he did to mitigate the risk.

He was not aware of an indication or warning in the cockpit that would tell the crew that they're on the wrong runway. There was nothing in place in the company procedures that would have helped this crew except the crew was responsible for their own situational awareness.

He was involved in the Advanced Qualification Program (AQP) as a member of the CRM committee. At every line checkairman meeting they had AQP representatives (Judy, and Lou) attend and they reviewed AQP data. They came in and give feedback on the data they had collected. He did not recall any AQP data from LEX regarding taxi problems and did not recall any feedback on runway incursions either. He was not involved in the ASAP program beyond doing some ASAP-generated debriefs of flight crews which occurred as the result of some issue that came to the company's attention through the program. Captain Patrick discussed some elements of ASAP and how it was administered. Debriefings were one option for addressing ASAP issues and there may be simulator training, additional operating experience or other actions taken to address them. He had handled four or five ASAP events over the last couple years. He said the debriefings were very positive and he thought it was a very good program. A crew might fill out an ASAP report and once the initial action was completed, the events were de-identified and relevant information disseminated as appropriate. For example, one dissemination method was the On Course publication, which contained information obtained through the ASAP program and was very well received by the crews. On Course was a quarterly safety newsletter disseminated to the general pilot group. If it was more urgent information, a Volume 1 Ops Note was produced. Ops Notes were must read documents before flying. Another method of dissemination could be a pink page in the Jeppesen manuals. Taxi issues had been communicated to pilots in the past, but he was not sure whether they were raised to the company's attention via the ASAP program or another method. He did not recall any instance of a crew getting on a wrong runway

and trying to take off. He remembered an instance about a specific taxiway that was not supposed to be used by aircraft the size of the CRJ.

He was asked about takeoff operations on unlit runways at night. He did not think there was anything in their manual that prohibited it. He had never departed on an unlit runway at night and said he did not think he would. He would communicate with the tower to find out why the runway was not lit. If it were nighttime it would be hard to see.

He said Comair used Jeppesen runway and approach charts. They had some specialized charts tailored for their own operations. He was not sure who produced the pink bulletin pages. The Operations Bulletin page was a pink page. Those pages were generally generated from the flight standards department. Anytime the company needed to provide the pilots information about an airport that was beyond what the crews normally had, they would produce a pink page. For example there was a pink page for John F. Kennedy International Airport (JFK), New York, New York that discussed terminal and operations changes using graphics and text. There were many airports with pink pages. There were "many" pink pages. A pink page contained things the company wanted the pilots to know about to operate safely into and out of the city. Anything to help their pilot do their job better. Pink pages could be text and graphics. He was not sure if it was different than a Comair-tailored page such as a single engine procedure.

He was asked about setting the heading bug. He said he did not recall how the flight standards manual was worded on when/how to set the heading bug. Generally speaking, he taught to set the heading bug during the takeoff briefing. His technique was to use a flow during the takeoff briefing that ensured the cockpit was set up properly and included the heading bug.

The AQP form was in sequential order. There were eight areas of operation. One of the eight areas of operation might be "Taxi" and one element under that area was "briefing." Only information they saw from the flight standards office was occasionally when they would get a communication from a flight standards manager saying here was an area of interest that we want you to talk to crews about. For example several years ago, an issue was that we wanted both pilots to have the taxi charts out. That was not an issue that they had reports about but was an issue they wanted to emphasize to crews.

He discussed transfer of control during a rolling takeoff; specifically what procedures he was looking for. He said he was looking for a positive transfer. Normally the captain lined up and offered to transfer controls. The captain verbalized you have control and the F/O responded that he had control. As long as that was done, it was satisfactory to him. Generally speaking both heads were outside the cockpit. He did not like to see the F/O overloaded. If a captain tried to give the controls to the F/O before the lineup check was accomplished, that was not good as there was too much for the F/O to do at that time.

During takeoff, the flying pilot (FP) was looking outside and the non-flying pilot (NFP) was scanning the cockpit and looking at other places.

He felt the CRM program at Comair was excellent. He noticed during line checks that some first officers were not speaking up when the captain did something in error. This was not out of a hesitancy to speak up but more as a situational awareness reason. He had no specific examples at that time. That was always a debrief item. It was part of the culture at Comair to encourage a tone where a F/O could and would speak up. They reinforced that during training and recurrent training. He absolutely agreed with the statement that most first officers would be very comfortable in speaking up.

Generally, the flight standards manual allowed them to takeoff in several modes, depending on the clearance or departure procedure. If it were a vector departure with no procedure or mountainous terrain for example, both pilots would be in "white data" which referred to the data being displayed by the flight management system. Green data would be manually selected navigation information like a VOR[5]. For a standard condition without the radar being on, he did not believe there was any specification on what range needed to be set on the navigation display.

When asked about a special single engine departure, he said he would not change the heading bug. They would brief the single engine departure procedure. He might have the VOR tuned and on standby. If white or green data was not required, they could choose to display a green needle and the course they would have to fly into the green needle.

He was asked about what map range settings the crews used. He had not had discussions about having the first fix displayed. There was a concept of having the range set on a setting that allowed a good display of TCAS[6] targets. An example would be a 10-mile range for a high-density airport.

There did appear to be some gap in their procedures about confirming the runway. Nothing at that time required them to cross check their position with their assigned runway. He said it was easy to overreact in these situations and make changes to the operations, etc.

Interview: **Richard G. Easterly, Proficiency Check Airman**
Represented By: **Mike Merlo**
Time: **1720, August 29, 2006**
Location: **Comair Headquarters, CVG**
Present: **Operations/Human Performance group**

During the interview Captain Easterly stated the following information:

His date of hire at Comair was February 14, 1994. He had about 6,000 hours total flight time including about 5,000 flight hours as PIC and about 600-700 flight hours on the CRJ. He upgraded to captain in December 1995. He had been in his current position

[5] VOR – very high frequency omni directional range
[6] TCAS - Traffic Alert and Collision Avoidance System

since 1999. He only conducted checks in the simulator and there were no proficiency checks performed in the airplane. He was not a line check airman. He had about 20 years in the United States Air Force as a T37 instructor pilot, helicopter gun ship command pilot, jolly green aircraft commander, and C-141 instructor pilot. He had been a Saab 340 F/O at Comair, and had been on the CRJ since 1995.

He did not know the accident captain and had not heard anything about him.

He gave the first officer his last line oriented evaluation (LOE). It was a point-A to point-B checkride. The checkride was a simulated flight with malfunctions introduced from Miami International Airport (MIA), Miami, Florida to Atlanta Hartsfield International Airport (ATL), Atlanta, Georgia. F/O Polehinke passed. It was a pretty benign and generic checkride and nothing stood out. He did not recall any debrief items done after the checkride. F/O Polehinke had a captain in the simulator with him. The crew coordination between the captain and the F/O was pretty much standard and by the book. He had nothing much to talk about either positively or negatively concerning the checkride. He only saw the F/O for about two hours and nothing really stood out which meant that he met all the standards. Captain Easterly said he did a lot of those checkrides and only saw the pilots for two hours.

He did not recall hearing any good or bad comments about either the accident captain or the accident first officer. He had not flown with either of them.

He had not flown into LEX much. The last time was perhaps five years earlier. He did not have any problems during taxi there. He did not recall hearing any discussion from other pilots concerning LEX other than that it was a short taxi from the terminal to the end of runway 22 and that you got there quickly.

After you received a clearance, you loaded up flight plan, and then performed a pretaxi briefing. He demonstrated a pretaxi brief as: we are here, we are going to push back from the gate, and we are going to taxi to the runway via [taxiway routing]. He said the captain conducted the briefing. The F/O's response was usually an agreement. Captain Easterly usually conducted the briefing using the chart in front of him and the F/O was looking at his/her own chart to follow along with during the brief.

He did not perform line check airman work or IOE. He only conducted proficiency checks in the simulator.

The pretaxi brief, where pilots conducted a taxi briefing, was a recent change that occurred perhaps in the last year or year and a half. Because it was a recent change, it was a "hot button" item. Before the taxi briefing was required, it was the captain's responsibility and there was not a lot of interaction between the crew. He thought the taxi briefing procedure change was a good thing and had absolutely improved things. It was no longer the sole responsibility of the captain as there was a division of responsibility where both the captain and the F/O were involved in the taxi procedures. He could not recall the specific reason for the company's change in the pretaxi briefing

procedure. He said his gut feeling was that pilots liked the taxi briefing and that it was a good thing and made the cockpit safer. He said in the United States Air Force, he always had a follow-me truck and when he first got to the civilian world it was challenging to navigate the airport surface.

He had not heard of any taxi problems at LEX. LEX was kind of unique being as short a taxi as it was. He was asked how unusual that length taxi was in their system and he said it was unusual. He had heard pilots talk about issues going into busy airports such as ORD or JFK. There was nothing specific said about other airports except that you had to be very conscientious. The taxi check was supposed to be done when you were clear of congested areas. Referring to an airport chart, he said in LEX he would probably delay his taxi check until he was north of the terminal on taxiway alpha.

He had never lined up on the wrong runway since he had been flying in the civilian world.

He was asked what kind of company or personal procedures he used to verify he was on the correct runway when he taxied into position. He said that in the Before Starting Engines checklist, you gave the briefing and normally set the heading bug on the departure heading assigned. Out of 30 years of habit, his technique was he personally made sure that all the headings were aligned on the heading that it should be on so that when you lined up on the runway, the bugs should be at the top. Setting the heading bug on the runway heading was a procedure unless you are going to make a turn before 400 feet and then you put that heading into the bug. For example at CVG, if you took off on runway 18, you left the runway heading bug set. If you used other runways, you might get a clearance to turn earlier and then you used the bug to set that heading. Setting the bug would not necessarily be a briefing item. He was asked if there were any other techniques to verify you are on the right runway and he answered none that he could think of.

When you programmed the FMS, you selected the runway you were supposed to depart from. The procedure for all takeoffs was to hit the TOGA button and it would update the FMS and bring the flight director bars to a wings level attitude and a 15-degree pitch attitude. He said you would not see a shift in the FMS if you had programmed runway 22 in the FMS and hit TOGA when you were on runway 26.

He had never taken off on an unlit runway at night while flying at Comair. He did not believe he was authorized to do so.

He was asked if there was a minimum runway width to operate from. He did not recall if there was any 75 foot runway in their runway analysis book. He said if the runway was in the runway analysis book then they could use it for takeoff. Generally, the runways were 150 feet wide and most taxiways were 75 feet wide. He said there was a minimum width runway to do a 180-degree turn.

He got to fly about twice a month. He was required to fly 10 hours a month and 30 hours a quarter. He was normally required to fly three flight days per month.

He performed checkrides, proficiency checks, maneuvers validation, and training during initial F/O training or captain upgrade. He gave about 10 to 15 proficiency checks a month. Under AQP, maneuvers validation[7] was not a checkride. That was a training event. The LOE was the checkride and pilots got an oral exam there. During the LOEs the crews received a complete package (release package, weather package, NOTAMs[8], etc.). The grade was pass or fail. He performed about ten actual LOEs a month. During the LOE, both left seat and right seat pilots were being checked. You could fail either the captain or the F/O, or fail them both. The company was going through a learning curve at that time and most failures were during the oral phase of checkride. There was no specific focal point and there were across the board issues. Since they went to AQP about one year ago, once a crew made it into the simulator, Captain Easterly had not failed a crew or a captain. For F/Os, most of the failures occurred during the oral. He could not remember last time he had failed a F/O during the simulator phase. The LOE began at the gate with the turnaround checklist. The taxi briefing was something that would be expected to occur during a LOE. He had observed crews fail to perform a taxi briefing during an LOE but said it did not occur often. Normally they forgot and the crew was later are debriefed.

There was about 15 proficiency check airman. He reported to Larry Neal who was the manager of training who reported to the director of training, Brian Emmett. The director of training reported to the director of operations.

He did not think there was anything written concerning the transfer of controls during a rolling takeoff. Captain Easterly conducted new hire training and captain upgrade training in the simulator. He tried to emphasize to the students or the applicants that they come to the lesson with the procedural knowledge and he tried to impart to them techniques to help with the procedures. Unfortunately in the simulator, it was never VFR[9] so they came to a stop and do not do a rolling takeoff. It was a simple, clear control transfer.

He thought the CRM program was good. There was CRM training during ground school and recurrent ground school. CRM training changed every year and lasted about two to three hours. During every checkride, you were always evaluating CRM to see how the crew communicated. During the CRM course, the instructor went over some topic and

[7] Maneuvers validation - the maneuvers validation session in the continuing qualification curriculum allowed assessment and attainment of technical proficiency in the training program prior to evaluation in the LOE. In continuing qualification curriculum training, repeats were allowed and were not counted as an evaluation repeat. In a continuing qualification curriculum, maneuvers validation must be successfully completed within the time limits of the standard company scheduled simulator session (national norm was 2 hours per crewmember) or an additional training period was required. If an individual required additional training periods to be able to demonstrate proficiency, consideration should be given to placing the individual in special tracking.
[8] NOTAM – Notice to Airmen
[9] VFR – Visual Flight Rules

normally there were some interactive tasks that the class performed. He said that during the LOE he looked for CRM issues. He was asked if it was taken seriously and he answered that he thought that pilots and instructors were engaged during these classes. Part of his crew briefing was that if the F/O saw something he needed to speak up.

There were no written procedures on how to remember the taxi route. During LOEs, he had seen some captains type the taxi instructions in the scratch pad on the FMS and he had seen F/Os write it on the piece of paper they kept on the yoke. He would not expect crews to use the scratch pad or write it down at a location like LEX.

Interview: **Thomas James Croft, Comair Captain**
Represented By: **Mike Merlo**
Time: **1840, August 29, 2006**
Location: **Comair Headquarters, CVG**
Present: **Operations/Human Performance group**

During the interview Captain Croft stated the following information:

He was hired at Comair on April 15, 1999. He was a 50 seat CRJ captain and a ground school instructor. He had about 6,000 hours of total flight time including about 1,500 flight hours of PIC time in the CRJ and about 4,000 hours total flight time in the CRJ. He taught ground school in the training department but did not perform checkrides. He said he typically taught recurrent ground school. He had done that for about three years. Occasionally he taught new hire pilots oriented subjects like flows category two operations, PRM[10], RVSM[11], FMS, and etc.

He did not recall flying with the accident captain. He went to flight school with Captain Clay. He knew him for about nine years since they met at the Comair Academy in Sanford Florida. They were friends at the Academy. Captain Clay was about 6 months behind Captain Croft in the training program.

He described Captain Clay as an acquaintance. They did not socialize together. He would describe him as a likeable guy with a good personality. He was always upbeat. He was a capable individual and did not seem to struggle during flight school. He was not aware of any difficulties Captain Clay had during training at the academy. He thought Captain Clay would be a very comfortable person to work with in the cockpit. He had never heard anyone talk good or bad about him and said he did not know anyone at Comair who knew him very well. He last saw Captain Clay in passing about 30 days prior.

He flew with the F/O Polehinke back in March. He referred to a printout and said he flew six legs with the F/O. He had to go into the chief pilot's office to see a picture of F/O Polehinke this morning to ensure he had the right person. Once he saw the picture,

[10] PRM – Precision Runway Monitor approaches
[11] RVSM – Reduced Vertical Separation Minimum

he remembered exactly who he was. He did not recall anything in particular about the flights with him. They could fly with two or three people in a day. Nothing stood out about F/O Polehinke. He did not recall any pilots commenting about the first officer. He said he did not remember anything good or bad and just remembered him as "standard". He would remember something real good or real bad or something about a personality that stood out and he did not recall anything about the F/O.

He did not know enough about either of the accident pilots to comment on any personal background issues. He was not aware of any issues for either pilot.

During the initial crew briefing, they were required to talk about company procedures, airport diagrams, clearing procedures, and other standard company policies. Apart from that, they performed a taxi brief for each flight segment. They were supposed to do that before pushback. He conducted a pretaxi briefing every time. He thought it was a good and bad idea. It was a good idea to be familiar with the taxi route, but the problem was you could build a preconceived notion about where you were going and the ground controller might have a different idea. If you briefed alpha bravo runway18 left and the ground controller gave you a different route, your brain was processing what you had briefed and you might want to go that direction. He was not aware of how he would change the taxi briefing procedure. He was not aware of how to get around the problem of preconceived notions. He could not think of a better way.

He had flown into LEX perhaps a couple times in the previous two weeks and overnighted there on the previous Tuesday or Wednesday night. He landed and departed from runway 4 both times. Everything was straightforward when operating on runway 4. He had taxied out to runway22 in the past. He had taxied to runway 22 both during day and night conditions. Daylight was not bad. The hold short lines for runway 26 and runway 22 were close together so if you put your nose on the hold short line for runway 22, there was not a lot of space there. A couple of years prior, he was in LEX at night and he was instructed to taxi to runway 22 and he came up to taxiway A4 and turned and that was not correct. It was at night and had been a long day, but everyone caught the error.

He was not aware of anyone having problems during taxi at LEX and had not heard of anything from other pilots after the accident.

He said he had discussed issues with the taxi brief with his first officers. He had not raised the concern further in the company. There were ways to do so however and one of them was the crew communication log (CCL). The CCL was turned in and processed. He had good luck with the CCL program. A couple months earlier, he diverted to Manchester and the station was outstanding, so he used the CCL to send an "attaboy". He was not aware of a confidential safety reporting system.

He was asked about the reserve pairing process and changing crews and he said it was more work than flying with the same person. He said they were all trained to the same

standard so it is not that hard to jump in and fly with different pilots. It was usually pretty seamless to fly together.

Sterile cockpit was fairly well observed. He wanted a relaxed atmosphere and open discussion in the cockpit; however pilots knew he towed the line.

He was asked about the Delta Request for Proposal (RFP)[12] being a distraction. He did not think people were taken by surprise by the announcement. It seemed to happen every year. He did find that the contract proposal was a distraction that spring and it created a lot of discussion and a lot of opinions. The pilot group was very polarized. You were either very for or very against. There was lots of discussion on ground and in the cockpit. The last announcement, which occurred a couple of week ago, did not generate much discussion.

From a personal standpoint, he felt the labor distraction needed to be settled. From a professional standpoint, he felt it needed to be settled. Serious issues generated conversations. The conversations were especially major in January when they went through the vote and the contract was a huge issue.

He was asked about checklist discipline and was it relaxed. He responded he did not believe so and did not see a more relaxed operation by the F/Os lately.

He was asked whether Comair required any procedure to verify the correct runway or heading upon lineup. He said he was not sure where he had read it but it may be in the flight standards manual to reference the heading on the compass. He was not sure what the exact wording was but thought there was a reference there about checking the runway heading against the compass. He was asked whether he checked the compass against runway heading. He said that he tried to set the heading bug early. He usually set the heading bug on the runway heading. Before starting engines, he checked the FMS, checked altitude, checked whose leg it was, checked the airspeed settings, and checked the heading bug. He was not sure if he checked the compass heading against the runway heading. He used the numbers on the runway for reference. In places like LEX or places like BOS or other areas where there were close intersecting runways (HOU, etc) he liked to brief the risk of getting on the wrong runway. One of the things he used is the numbers painted on the runway. Did the runway numbers say the correct number?

He was asked whether the quality of briefings decreased on a trip with reserve crews with the high turnover of first officers. He said he was pretty consistent with his briefing but could see how there could a temptation for shortcuts later in the day.

He had not taken off on an unlit runway at night. He was not aware of whether there was a prohibition on that, and said it would take some digging through the book to find the right answer about whether there was guidance on that or not.

[12] Request for Proposal – sent by Delta Airlines to various operators asking them to bid on flying for Delta. The original due date was September 18, 2006 but this was extended to October 2, 2006 due to the Comair accident.

Interview: **Paul Steichen, Comair First Officer**
Represented By: **Mike Merlo**
Time: **1930, August 29, 2006**
Location: **Comair Headquarters, CVG**
Present: **Operations/Human Performance group**

During the interview F/O Steichen stated the following information:

He was hired at Comair on August 25, 2000. . He started in the EMB airplane at Comair. In January 2001, he started training on the CRJ. He had about 5,500 hours total flight time including 1,800 hours PIC flight time but no PIC time in the CRJ. He had about 4,000 hours total flight time in the CRJ

He flew with Captain Clay two days before the accident. They flew six legs on August 25 and 26 during a two-day trip in good weather conditions. He had no complaints about him. He did not know him personally.

F/O Steichen described Captain Clay as very personable and professional. He said he was easy to talk to, easy to get along with, and his CRM was good. He was friendly but was definitely by the book and followed checklists. He did not recall anything unusual. He would describe him as a typical captain.

Captain Clay appeared to be in very good health and there were no apparent problems. He had no recollection whether the captain had any sick call last few weeks. He said he had no recollection whether Captain Clay took medications. Clay was a nonsmoker. Nothing stood out to F/O Steichen concerning Captain Clay's habits and hobbies.

Since Captain Clay lived in CVG, he did not mind being on reserve and it was not a big deal for him. He had been on reserve for quite a while and was happy with his "reserve window".

He did not know whether Captain Clay was a morning or evening person. He said he was wide-awake in the morning in Minneapolis-St. Paul International Airport (MSP), Minneapolis, Minnesota. He did not notice whether Captain Clay used coffee or caffeine.

Captain Clay mentioned that his wife worked out of their home. He also learned that Captain Clay bought stock for his nephews' birthday. He did not recall hearing how Captain Clay got into aviation.

He was asked about Captain Clay's satisfaction with his career at Comair. He said they talked about the low morale at Comair. Captain Clay was not unhappy at Comair. He was in a good mood and they discussed Captain Clay's prospects about moving on to UPS.

Captain Clay talked about his father having a business in New Jersey running dump trucks and the difficulty he had finding employees there. They talked about the situation with the RFP coming up with Delta and what we thought about that. At Gerald R. Ford International Airport (GRR), Grand Rapids, Michigan, they had a jumpseat rider on board as an observer. She was a newly trained F/O doing her observation before IOE. F/O Steichen said the sterile cockpit discipline was very good and he noted that Captain Clay briefed the jumpseat rider about it.

Captain Clay did pretaxi briefings. F/O Steichen tried to think back and he remembered a taxi briefing performed on every leg that he could recall.

He did not recall any opportunity to challenge or correct the captain during the legs. He said he would not have any problems speaking up to him. Captain Clay set a good atmosphere in the cockpit and he was sure that he would not have felt uncomfortable speaking up. On the first flight of day, they were not rushed or hurried in any way. He did not recall any problem arising. There was a good tempo. The checklists were done.

They landed in MSP about 1906 and overnighted. They had to wait for the crew van. It took about 25 min before the van showed up. Captain Clay and the F/A were standing around talking about children and did not mind the delay. They got to the hotel and went to their rooms and that was it. He did not recall what Captain Clay did for dinner. He did not observe Clay consume any alcohol in MSP. F/O Steichen was asked whether Captain Clay used alcohol in social situations and he said the topic never came up. Captain Clay mentioned that he ran and looked for the workout room and a treadmill.

They reported downstairs in the hotel about 0530 the next day. He did not recall anything that stood out. He did not think there was a breakfast because of the early start.

When they arrived in CVG from MSP on the first leg of the second day, the captain saw on the Ramp Information Display system (RIDS) that he was to call scheduling. Captain Clay contacted scheduling and learned about the deadhead trip to LEX. F/O Steichen said the captain wanted to go home and commented that it was unfortunate, but he took it in stride. He was not distracted by the change of schedule. He spoke to his wife before going to LEX, and told her that he wanted to get there and work out as soon as he arrived. No other comments were made about it. He said Captain Clay had a good conversation with his wife on the phone, she was going shopping, and he hoped that she could drive down to meet him so he could see the kids. He was happy his wife was driving to LEX.

They had a thrust reverser that would not stow after their last landing in CVG.

He did not know F/O Polehinke. He did not recall any other pilots talking about him either.

He had flown into LEX but not recently. He had not made any mistakes there, but he said you did taxi over the threshold of runway 26 and noticed that you were on a runway but then your brain kicked in and said it was the wrong one. He was asked to elaborate

on his statement "brain kicks in" when crossing runway 26 at LEX. He said it had happened specifically to him at LEX where the fact was that you were taxing onto the threshold of the runway and that made your brain think "we're here" but then you continue the thought and say "that's not the correct runway." When asked how he figured out it was not the correct runway, he answered it was probably using signage. He had never heard anyone else talking about problems at LEX. A lot of people complained about General Edward Lawrence Logan International Airport (BOS), Boston, Massachusetts having confusing taxiway layout. That was one airport that stood out.

They alternated legs on the trip and usually did two at a time. That was consistent with other captains.

He was asked to describe Captain Clay's greatest strength as a captain and F/O Steichen answered just being a good manager. He kept everything flowing throughout the day. He never got flustered by the operational tempo. He observed no areas where Captain Clay could improve. F/O Steichen did not recall any specific mistakes or awareness issues.

Interview: **Angela Page, Comair Captain**
Represented By: **Gordon Rose**
Time: **0939, August 30, 2006**
Location: **Comair Headquarters, CVG**
Present: **Operations/Human Performance group**

During the interview Captain Page stated the following information:

Her date of hire at Comair was August 5, 1985. She had about 18,000 hours total flight time including about 16,000 flight hours as PIC and about 10,000 flight hours as PIC in the CRJ.

Before Comair, Captain Page flew as a flight instructor and flew EMB 110's for American Central, a company in Iowa. She started at Comair flying the Metro. She then flew the Saab for nine years, three years as F/O and six as captain.

Captain Page did not know the accident captain and had not heard anything about him. She did not know the accident first officer and had not heard anything about him.

During the previous two months, Captain Page had flown into LEX about 16 times [about 8 times a month she estimated]. She said most of the takeoffs had been in the dark. Before they repaved runway 4/22, Captain Page had no confusion at LEX because she had been doing it for so long and it was the same for so long. After they repaved the runway, she said that whenever you were taxiing out for runway 22, the ATIS would tell you that taxiway alpha was closed north of runway 26. She said that, in the morning, the controller just instructed you to taxi to runway 22 and they did not give you any specific instructions. You had to turn slightly onto runway 26 to get onto taxiway A5 that was

now taxiway Alpha. However, according to the Jeppesen charts, the taxiway had not changed and still said taxiway A5. The first time she took off from the repaved runway it was morning, with a low overcast, was dark, was not raining, and it was her first experience to go to a paved runway 22 with taxiway alpha closed like that. When they taxied out, they were looking around and had to take their time because it looked different. She had not taken off on runway 22 with taxiway alpha closed prior to the accident. There was not any clarification about the split between old alpha taxiway and the new alpha taxiway and it was confusing. When you got onto the end of the taxiway before runway 22, it was like an intersection takeoff because you were not at the start of the runway and so you had to back taxi a bit down the runway to turn around to takeoff. She said you had to stop, think about what you were doing, and get used to it, because you were not used to things looking like that.

Normally the tower would give you a clearance to back taxi in that kind of situation but the tower did not do it that day.

She had never turned onto runway 26 for takeoff by mistake and had never heard anyone else mention that they have made that mistake. She said she could see it was a lot easier now because of the taxiway alpha closure and because you are now turning onto A5 [the new A].

Generally she used the heading bug and had that set on runway heading to help with confirming which runway she was on for takeoff. She described the use of the heading bug as a technique and said most pilots did the same thing. Her technique was that she looked at the heading bug to make sure it was aligned with the aircraft's orientation on the departure runway. She hit sync as a final step. She pushed the middle of the heading bug to center the bug to the runway heading. She looked at the heading bug before they pressed sync. If it was set to 22 when she was aligned on 26, she would notice the difference. She was not aware of any company procedure for confirming the correct runway before takeoff roll begins. She said she did not usually reference the runway numbers as part of her personal technique. She said if she lined up on runway 26 with the bug set for runway 22, she would have noticed the difference and it would make her think.

No other issues that could be confusing about LEX came to mind. She had not heard any other pilots complain about other taxi problems at LEX either.

She said a lot of the big airports could be confusing but no other specifics came to mind when she was asked about taxi issues at other airports in their system.

She had not taken off on an unlit runway at night and did not think that she would. She thought that they were not allowed to do so at Comair. She was asked whether there was any limit on a 75 foot runway. She said no, but would think that the eye would recognize the difference in width.

The first part of runway 26 did not look too dark when she was at LEX recently. She said it was kind of dark at the end but had quite a bit of light at the start.

After the accident, she flew out of LEX on runway 22 after the closure of alpha. Today day the lighted closure sign (X) was in place on runway 26. She had only used the old alpha taxiway when using runway 22 before.

At LEX, the taxi time to runway 22 was very short. After you pushed back, it took you a minute or less to get to the runway. You did what you needed to do. At LEX, you held at the end of the runway, as it was not busy there. Most of the time, you had everything done there.

She had never had any complaints by first officers about the pacing of operations at LEX. Said she thought the first officers she flew with would have no problems speaking up if they felt rushed.

Comair CRM training was good and very worthwhile. Most first officers would speak up.

She thought that the F/Os she flew with were listening and paying attention to what she was saying during the taxi brief and that generally they had their charts out during the briefing and were an active participant during the taxi brief. She said she generally did the taxi briefing and always did it at the busier and unfamiliar airports. She believed that the first officers were required to have their charts out during the taxi brief. At a complicated airport, they definitely had the charts out and were following along. The pretaxi brief helped to get both pilots in the loop and make sure they both understood the same thing.

During the taxi at LEX, the F/Os may not be as involved in helping maintain crew situational awareness because they were busy doing the first flight of the day items so they were not as attentive. Before the accident she did not brief anything special about runway 26 at LEX during the taxi briefing because the crew had been doing the same flight for a month.

You could not see the full length of runway 22 because of the hump in the runway. She estimated she could see a couple thousand feet of distance down the runway. With rain, the sight picture may be a little less clear.

She said with a short taxi like LEX she was looking outside 90 percent of the time but there were a few times where she had to look inside. She could see what the F/O was doing in her peripheral vision. There was a little distraction with checklists at the beginning of the taxi. The distractions were typically over before crossing runway 26.

She was asked if she had an EFIS[13] COMP MON[14] issue at LEX and she said no.

[13] EFIS – Electronic Flight Instrument System
[14] COMP MON – comparator monitor

The fact the Jeppesen chart was not correct was part of the confusion and the controller said taxi to runway 22 via alpha. The signs say alpha but the Jeppesen chart said A5. She said an American Eagle crew that morning had to ask the controller for additional clarification because of confusion they had about the taxiway configuration. She thought it would be more helpful if the LEX tower controllers were more specific with the taxi guidance in this area of confusion.

Interview: **Charles Kyle Duncan, First Officer**
Represented By: **Gordon Rose**
Time: **1050, August 30, 2006**
Location: **Comair Headquarters, CVG**
Present: **Operations/Human Performance group**

During the interview F/O Duncan stated the following information:

His date of hire at Comair was June 14, 1999. F/O Duncan had about 7,500 hours total flight time including about 1,200 flight hours of PIC time before arriving at Comair and about 6,000 flight hours in the CRJ. He had chosen not to upgrade to captain to maintain more control over his schedule as a senior first officer.

Before Comair, he spent 24 years in the United States Marine Corp where he was involved in aircraft weapons systems in several aircraft but was not a pilot. He first started flying in 1980. He attended the Comair Academy. At the academy, he was a flight instructor and section manager for the certified flight instructors (CFI) section and commercial section. He was not an instructor before his time at the academy.

In June, he flew the LEX CD[15] line and flew into LEX about 14 times. In July, he flew a regular line trip into LEX about one or two times. In August, he flew the LEX CD line and flew into LEX about 14 times. In regard to early morning departures, during the month of June it was starting to get more daylight. In August, it had been dark coming in and dark going out and the takeoffs were mostly dark. His last flight out of LEX was about 0630 on August 29.

Over the previous month, LEX had a lot of closures and changes. The changes occurred because they had been doing a lot of construction there. Each day it would be something different. Alpha taxiway was closed for the first part of the month.

[15] CD – At Comair, a Continuous Duty assignment was a trip pairing that was within the legal limits of the Federal Aviation Regulations (FAR) for report and release time (duty day), but had an overnight rest period that did not meet the legal limits. Thus, the crew was on duty (thus the term Continuous Duty) for the duration of the evening. These flights typically only operated one flight out and then one flight back to the domicile, but could have up to two additional legs. The crew did go to a hotel, but the duration of the time at the hotel was less than the minimum required rest period.

Most of the information came from NOTAMS[16]. There were a lot of items that were listed out on the NOTAMS during the previous month including the instrument landing system (ILS), lighting systems, taxiways, etc. You would hear the ATIS[17] and not want to listen to it because it was long and you were busy during the approach phase but you would have to force yourself to listen to it to make sure you got all the new information. Not everything was on the NOTAMS. Sometimes the controller would tell you some information.

He did not recall that the alpha taxiway closure was on the ATIS on Monday night. He had remembered speaking to someone concerning the fact that taxiway alpha was closed but could not remember where it was closed, so he was looking for where it was closed. He had special use data informing him a portion of runway 22 was closed on Monday night but not anything telling them exactly what was closed.

With regard to taxi briefings, F/O Duncan said that he would get the ATIS and start looking at what they may be facing. The captain conducted the taxi brief and both pilots were looking at the charts. F/O Duncan would point out any NOTAMS or items that might be applicable during the briefing. He was not sure when the briefing was made a requirement. Some captains would specifically say open your chart up and we would go through it together. Others just started the brief and expected both pilots to go over it together. This was just a difference in technique.

The taxi to runway 22 was one of the shorter taxi routes and there was a lot to do. It was not the shortest in the system but it was a short one and you stayed pretty busy with all your departure checks. It was a high workload but it was not beyond what we had in the system. His experience with captains he had flown with was that you took your time and made sure that you got everything done. He had never felt rushed but he had felt busy. When it was raining or low visibility, they taxied and waited at the end to do the pre-departure checklist. He had never had a captain say no to that. Some captains said hold the checklist until they got to the end so both pilots could be looking outside during the taxi, especially if the weather was bad or it was a new airport to them. At LEX, the tower controller usually cleared you for takeoff as you were taxiing out. During taxi, there were lots of inside activities for the F/O to do and it kept him busy.

Generally speaking, F/O Duncan ran the pre-departure checklist during the taxi. This included the first flight of the day items that needed to be completed. The captain usually called for it when they were comfortable and clear. At that time, the F/O began doing the checklist. The F/O read the checklist and checked the items. He said it took a minute to a minute and a half at the most to complete the checklist. If there were lots of radio calls, then the checklist might have to be restarted three or four times. When the checklist was complete, the last thing on the checklist was confirming with the F/A that the cabin was ready for departure. Then he ran the verbal portion of the checklist. He looked at the

[16] NOTAMS – Notices to Airmen
[17] ATIS – Automatic Terminal Information Service

CAS[18] first and then called out the CAS indications. The captain made sure that the seven items on the CAS were there and if there were others, they were discussed. They verified that they saw was what they were supposed to see. If correct, the CAS was cleared. He called out the CAS step on the checklist, and the captain responded "Checked and clear." Then you waited for the tower to clear you onto the runway. Before you took the runway, the checklist was completed. LEX had the single controller there and he could be very busy, so F/O Duncan usually called him to tell him that they were ready to go.

At LEX he had actually asked captains to stop near runway 26 so they could confirm and verify that they knew where they were. There had been occasions where he had his head down and looked up and momentarily did not know where he was and asked the captain to stop. He had been confused whether he was at runway 26 or runway 22 and asked the captain to stop. This could especially occur at night or if it was raining.

On Monday night, it was very confusing at the end of runway 26. Taxiway Alpha 6 was closed. The special use data[19] they had for runway 22 was for 6,600 feet versus 7,003 feet. That implied a departure on runway 22 at A5. There was a momentary confusion for both of the pilots as there was no clearance for an intersection takeoff. There were no NOTAMS indicating it was an intersection takeoff from A5. There was nothing other than the special use data from the company that showed it was a shorter takeoff distance, and the controller said nothing. Normally when you got an intersection departure, they told you to go to the intersection. When they used runway 22 on Monday, they were cleared to runway 22 and were totally surprised that taxiway Alpha was closed between runway 26 and runway 22. There was nothing written to confirm it. The week before they used taxiway Alpha (old Alpha) to taxi all the way to runway 22. He could not recall if they back taxied or not onto runway 22. When asked to clarify if the closed portion of taxiway Alpha was on NOTAM, he replied not on Monday. At that time of the morning, there was a single controller on duty and he was handling clearance, ground, departure, and tower all at the same time. The first part of the month, he did not recall hearing on the ATIS "contact ground on 121.9 for the clearance". Throughout the month you could hear him talking to someone else who was on another frequency. He described the controller as very busy. As far back as he could remember, there had only been one controller at LEX- at least in the last couple of months that he had been going there.

He did not see taxiway A5 on Monday but A5 was listed on the chart he was using. He said it was an extremely tight area around runway 26 and runway 22 and the chart did not do it justice.

[18] CAS – Crew Alerting System was messages provided by the Engine Indicating and Crew Alerting System for an Emergency [red], Abnormal [yellow], Advisory [green], and Status [white].

[19] Special Use Data – when the Runway Analysis data [takeoff/ landing performance data] changed due to runway construction, revised data, or other reasons, Comair issued new data referred to as Maximum gross data or Temporary Runway Analysis data. This data superseded the data contained in the Runway Analysis manual, thereby ensuring that crews had the latest available information for determining performance calculations.

He had not been on a flight where the captain lined up on runway 26. He had not heard of anyone doing that either.

When asked about procedures for verifying the correct runway, he said he did it on his own. He could not say why, but said it went back to his early days of flying when they checked the compass and directional gyro (DG) and confirmed that they were matched. He could not say he remembered doing it all the time but it was something he had always done. He was not sure if he was referencing the runway heading too, but he would like to think that was what he was doing. He said it was easy to speculate now that was what he had done but he can only say that he crosschecked the compass against the DG as a final check. He liked to think that he did it whether he was the flying pilot or non-flying pilot. If he lined up on runway 26, he would like to think that his technique would have caught it. He said it was not really his habit to use runway numbers as a cue to verify he was on the right runway. He could not recall looking at the actual numbers on runway 26 as he was crossing it except one time he looked at them when he thought they were crossing runway 22.

He was asked about runway heading bug usage and said it would be set on the runway heading 90 percent of time except where early a turnout was required. For example, at DCA he might have it off runway heading to make sure that they made that turn after takeoff. When it was his leg, he synced the heading bug when they were lined up on the runway. A lot of times they would have the heading bug set already on the runway heading.

He could not recall anyone talking about anything special about LEX.

At the gate you might get an EFIS COMP MON (EFIS comparator monitor) message. It was a continuous nuisance while you're sitting at the gate. Down at the very end gate, it came on quite a bit. He did not know why it came on and whether it was the result of the heading. He just knew they cleared it when it came on. He said it would clear after you left the gate, depending on gate location.

During a rolling takeoff, the last thing he always did was to look back over his shoulder to make sure there was no one on approach, and then as they lined up on the runway he would sync the heading bug. If he told the captain he was not ready, they would stop and reject the clearance. If he did not feel ready at that moment, he had no qualms about asking to stop. Only a couple times in seven years has he had to ask to stop. No captain has challenged him about these requests or how he has doing things.

F/O Duncan could not recall knowing the accident captain. He knew he was at the Academy about the same time but did not recall talking to him. He had never heard anyone talk about his abilities. F/O Duncan recognized F/O Polehinke's picture and knew that he had seen him but did not know him personally or professionally.

He was asked if he had ever taken off on a dark, unlit runway. He said he could not recall taking off on an unlit runway. He could not fathom anywhere that they would. He

said he did not know if they were allowed to depart on an unlit runway and that he would have to look at the manual. When they landed on runway 4, more than half of the lights were dim on the left side but it did not affect their operation.

When you pulled out onto runway 22 at LEX and looked onto the runway, you could see to the hump and it appeared short. He could not estimate how far down the runway he could see to the hump. He agreed with the statement that it looked like a shorter runway. At night it was totally black down there. There was no centerline lighting on runway 22 at that time. There were only sidelights. They had been very weak on both sides of the runway over the previous couple of months. Earlier in the month he made a comment as they approached runway 4 that it looked like some of the lights were out on the left side. When they flew in on Monday (the day after the accident), the east side of the runway lights were brighter than the other side.

He said he has never experienced anyone who did not cooperate and do good CRM when he was flying with captains.

There were usually six Comair airplanes parked at the gates in LEX when he got there. He got instructions in operations on which aircraft to go to. They would get their release and verify their airplane and go out to it. Sometimes they did not have release ready and they told you to go out there. He had never had the problem of going to the wrong airplane at LEX. He had never gotten on the wrong aircraft and started the APU.

Several times they had received a takeoff clearance for runway 22 before they had crossed runway 26. That was not unusual and had happened multiple times in the past.

He was asked if he had the heading bug set on 220 and lined up on runway 26 would he have noticed he was on runway 26 when he synced the heading bug. He said he did not know if he would. He did not know if he would notice, as it might be a pretty subtle movement. He said he would not necessarily recognize the reason for a swing in the heading bug if it occurred when it was synched. He would not have caught it as anything out of the norm.

He did not think LEX station personnel were overbearing or pushy. They were good, cooperative people there. The maintenance guys were good. He had never been rushed or felt rushed at LEX. They worked well with us.

Interview:	**Jarrod Orr, Bellman, Radisson Plaza Lexington**
Represented By:	**Larry Bell**
Time:	**1530, August 30, 2006**
Location:	**via telephone from Comair Headquarters, CVG**
Present:	**Evan Byrne, Lou Johnson**

During the interview, Mr. Orr stated the following information:

On the morning of the accident, Mr. Orr came on duty at 0430. He made a van run at 0430 and got back at 0500. The accident crew was waiting in the lobby. He took them to the airport arriving about 0513.

Nothing stood out about the crew. They were standing and waiting. He did not notice any food or beverages. They had the normal rolling bags. They made small talk during trip, nothing remarkable. He asked them the normal questions about their day and where are they were going etc. They seemed fine, typical. They were not excited or "chomping at the bit" to go. When asked how much talk occurred in the van, he described it as a happy medium. They were not silent, but it was small talk. He dropped them off in front of the baggage claim area.

Crew did not appear tired. He saw no yawning or stretching. They tipped him a dollar each. Nothing remarkable about them came to mind. Crew seemed pretty familiar with each other. He said he thought that because typically crews that know each other do not talk as much in the van ride.

The flight attendant interaction with the pilots was described as very typical. It was a male flight attendant. He did not recall a discussion. He had no recall of plans for the day discussion; or where they ate. No discussion about landmarks etc. There was nobody else on the van other than crew.

Interview: **Andrew Blake McGuire, Comair First Officer**
Represented By: **Mike Merlo**
Time: **0838, August 31, 2006**
Location: **Comair Headquarters, CVG**
Present: **Operations/Human Performance group**

During the interview, F/O McGuire stated the following information:

His date of hire at Comair was July 11, 2005. He had about 1,500 hours total flight time including about 700 flight hours PIC and about 550 flight hours in the CRJ. He attended the Comair Academy for all his initial flight training. The Comair Academy was located in Sanford Florida. He was a flight instructor at the academy for about 2 1/2 years.

He did not know the accident captain personally before he flew with him. On August 20, 2006, they flew two legs from CVG to University Park Airport (UNV), State College, Pennsylvania and back. The flights were in the afternoon between 1400 and 1700. The weather was fine with clear skies. There were no problems and no mechanicals at all during the flight. They split the legs. The captain flew to UNV and F/O McGuire flew the return leg to CVG.

He described the captain as an average good guy who seemed to have his head on straight like others he had flown with before. He only had an opportunity to observe him for one flight. He did not see anything out of the ordinary.

Checklists were done on both legs. He did not see anything out of the ordinary with either his flying or his procedures and the flights were conducted according to the operations manuals. The captain did perform a pretaxi briefing. He gave the pretaxi brief as part of the pre-takeoff brief. It included what the departure was and the expected taxi clearance from where they were located to the runway. The brief was not super detailed, but it consisted of going over the specific taxi steps from where they were to the runway.

He was asked whether he had to prompt the captain to begin the takeoff briefing. F/O McGuire answered that he usually prompted captains to do the taxi briefings when he received the data.

Both of the flights were on time. The speed during taxi both times was average. He thought they took off on runway 27 in CVG and the CVG taxi length to runway 27 was average. It was a very short taxi in UNV. He did not have to hold up the taxi on the way out of UNV because he was able to get his checklists done.

The busiest time was at UNV. They landed on runway 27 and took off runway 27. It was a little rushed getting back out, but it was not the first flight of the day so he did not have as much to do. They accomplished all checklists without the need to stop. He was asked if he was rushed on the taxiway and whether he had to ask the captain to hold to get the checklists done and he said he did not have to.

At UNV, F/O McGuire's briefing to captain included the departure altitude and the instrument flight rules (IFR) altitude in case the controller gave them a turnout. F/O McGuire conducted the takeoff briefing. Captain Clay conducted the taxi briefing.

Captain Clay was a nice guy, family guy. They discussed his family and children.

CRM was good and they worked well as a team. He had no problem speaking up to him. He felt he could speak up to any captain.

He had never heard anything good or bad about the Captain Clay. He did not know F/O Polehinke.

F/O McGuire had flown into LEX about two months earlier. It was his first time into LEX, but the captain he was with had been there before and was very familiar with it so there were no problems.

He had not heard anyone comment about LEX before the accident. After the accident, the captain he was flying with was talking to him about the smaller taxiway between runway 26 and runway 22 and how it could be confusing. Looking at an airport diagram F/O McGuire identified the taxiway as A. He was asked about when he would have had the checklist done and F/O McGuire said when he was there he thought he probably had

it done before reaching runway 26. He did not remember which runway he flew into and departed from at LEX.

When they did the departure briefing, he said he set his heading bug on the runway heading. For LEX, it would be 226. He said the manual stated to set runway heading. He said it was also taught to him during IOE. They had the radios and navigation aids set for the departure runway and also the FMS. If holding short of the runway and cleared for takeoff, they did a lineup checklist, turned the transponder on, checked packs were on, and closed the 10th stage bleeds. Once cleared for takeoff, anti-ice was set as needed and the last thing he was looking for a takeoff OK message on your ED2[20], EICAS[21] display. The only time he changed the heading bug was if they had been given a different heading assignment on departure. He did not sync it. He had seen some other pilots do that and thought they did it to align it with runway heading. He estimated 50 percent of the captains he had flown with sync the heading. He did not know if the bug was set before sync is pushed.

He did not recall Captain Clay's use of the heading bug. He said that use of sync was more pronounced at outstations but at CVG the heading was usually set because they know the headings from memory.

UNV was a short runway and had mountains nearby. It was an uncontrolled field and the runway gradient may have had a dip but you could see the end of the runway. There was nothing special to brief if you could not see the end of runway.

Typically the captain transferred the flight controls when they were stopped on the runway. Captain Clay did that and then finished the before takeoff checklist for F/O McGuire. He could not recall if it was a rolling takeoff or stopped. On a rolling takeoff, once they were centered on the runway the captain would generally say you have the flight controls. He said that had been pretty standard.

During the flight to UNV, F/O McGuire was reading through the pink pages en route and their discussion was about the pink pages because it was the first flight there for F/O McGuire. Captain Clay was helpful in briefing him on the procedures and issues for arrival into that airport. He felt prepared. Discussion with the captain during the return flight was mostly about family and his likes outside of work.

He described Captain Clay's command authority as OK/normal. He said his operations tempo and pacing was average. Captain Clay called for both the checklists at UNV.

He described the captain as healthy but maybe a little lacking of sleep from having a newborn baby. He did not see any performance issues from fatigue but he got that impression based on conversations about life with a newborn.

The end of the flight at CVG was the last time he saw the captain.

[20] ED2 – electronic display #2
[21] EICAS – Engine Indicating and Crew Alerting System

He said his workload was probably the greatest when it was the first flight of day, a short taxi, and a rolling takeoff. The worst-case scenario was like the LEX flight. He would be performing the taxi checklist and the before takeoff checklist and trying to get everything done prior to reaching the runway. He could easily see that a first officer on the first flight of the day would be inside the cockpit heads-down and not outside looking where they were going. He did not know if there needed to be a procedural change or not. He thought it might help if the checklists for the first flight of the day were done at a stop to reduce the workload.

During the first flight of the day, you were checking a lot of items. You were checking functional operation of say the anti-ice for example to make sure the valves were opening and closing, etc. On the second or subsequent flights, you were just making sure they were on. He estimated the first flight of the day checks took about a minute longer than the normal checks he did on subsequent flights.

For F/O McGuire it was important to be aware of his position on the ground. He knew that captains made mistakes. He had some who had been confused. When asked about examples of captains making mistakes, he said he had a captain start to turn on a taxiway that did not match the one F/O McGuire had written down on his notepad. He felt it was his job to help out the captain for positional awareness. He just told the captain that they were cleared to the other taxiway and the captain was very thankful. He never had an instance where a captain had tried to turn onto the wrong runway or a different runway. He had developed a habit of writing down taxi instructions.

Normally you had signs for identification when you were pulling onto the runway and then if it were a larger airport you would have the runway numbers in front of you. At the smaller airports you were right over the numbers.

He did not recall too much small talk with Captain Clay. There was not too much talk on the ground during taxi. There was not too much talk enroute to UNV. There was a bit more conversation on the return flight as they started talking about his family.

Generally at busier airports, captains would do a rolling takeoff. Asked about the last actions that the captain would do on a rolling take off, he replied he was pretty sure that the captain's hands would be in their lap until F/O McGuire called set thrust. Normally he hit the TOGA and he did not remember the captain doing it.

Interview: **Thomas Scharold, Comair Captain/Line Check Airman**
Represented By: **Mike Merlo**
Time: **1000, August 31, 2006**
Location: **Comair Headquarters, CVG**
Present: **Operations/Human Performance group**

During the interview, Captain Scharold stated the following information:

His date of hire at Comair was May 12, 1999. He had about 7,000 hours total flight time including about 6,000 PIC flight hours and about 2,000 flight hours in the CRJ of which about all of it but his IOE was as PIC. Before Comair, he flew at Vintage Props and Jets, which was a Part 135, scheduled charter operations. He was there for about nine months before Comair hired him. He also flew corporate flights and did flight instructing. He flew single engine and light twin aircraft. The Comair Academy did not exist when he was learning to fly.

He did not know Captain Clay personally. He had not heard anything about him from other crewmembers. He was not aware of any problems associated with him.

Captain Scharold last flew with F/O Polehinke on the 9th, 10th, 11th, 12th, and 13th of August. Their first night was in Boston, Massachusetts. Their last 3 nights were in Bangor Maine. They met in the restaurant/bar and sat together and talked. They had a beer together. Comair's policy on alcohol was 12 hours. He had flown with him three or four times before that. The flights with F/O Polehinke were not a part of any line check.

He said the F/O liked to exercise, was healthy, in good shape, and was not overweight. He did not observe the F/O use any medication or supplements at meals. The F/O mostly drank water and Captain Scharold said he had no recall of his use of coffee or caffeine. He did not recall whether the F/O was a morning or evening person. They had no food on the way to the airport and he did not know if the F/O had eaten anything in his room.

He described the F/O as a good family man who liked his family life and his four dogs. The F/O had no other job to his knowledge. F/O Polehinke lived in Fort Lauderdale, Florida and commuted to JFK. They spoke about commuting and the F/O liked that he could live in Florida. They talked about being away from family and how they commuted. He usually flew up on Delta or Jet blue. They discussed Comair's contract, which took the pressure off commuters. He was enthusiastic about flying and was planning to upgrade to captain. He did not know what the F/O did before coming to Comair.

He described the F/O's greatest strength as smooth handling of the airplane. He adhered to operations standards, used standard phraseology, ran checklists at a good pace and had good pronunciation. He was what you would expect from a seasoned F/O. He said the F/O had no areas for improvement that came to mind. He did not see any violations of their standards. He thought he would make a very good captain because of his standards adherence. His CRM work was good. His experience and maturity level was also very good.

When he flew with F/O Polehinke, it was during clear weather. The last flight was from Bangor, Maine to CVG. They kept swapping legs. He described the F/O as a very thorough pilot, very good to standards. He had no uncomfortable feeling with him at all. He was a straight forward by the book pilot.

On one morning of the trip, it was quiet in the crew van on the way to the airport. There was just small talk about the fact that they did not like the hotel in particular as the hotel was not particularly friendly with flight crews. The F/O did not appear tired.

He was definitely a very knowledgeable F/O. He was very experienced. He had no suggestions to improve anything about the F/O. He had very good CRM because he was not shy about anything and had no hesitancy to do things. He was very well established in the right seat. The F/O's skills were appropriate for his time and experience. He was smooth operating the aircraft when hand flying was required and had good use of automation. He thought the F/O kept good situational awareness and would rank him at the top of the list. He did not have to prompt the F/O to be situationally aware. He kept good awareness and would manage his tasks with where they were on the taxi route such as not asking to start the engine while crossing a runway. F/O Polehinke would look out his side to say it was clear when crossing a runway. He said the F/O had good discipline about sterile cockpit procedures during taxi and below 10,000 feet.

Outside the sterile cockpit, they had good technical conversations. The F/O was preparing for upgrade to captain later that year and was asking about procedures and issues related to upgrade so he could prepare himself. F/O Polehinke looked at the checklists and read them. He did not do them from memory. He did not recall the F/O asking him to slow down or stop so he could complete his checklists.

Briefings were done as required before each flight. F/O Polehinke would have his diagram out during the taxi briefing. During the taxi briefing at JFK, they conducted a briefing together about operating at the airport including how to do the checklists and keep awareness in the congested environment. Same issue in Bangor since it was a single runway environment and there were some issues with the ramp about engine use. Bangor, Maine was a short taxi. They completed the first part of the checklist in the ramp area at a very slow pace so they would not be rushed. It was the captain's idea and the F/O was appreciative.

On the last day, they had a first flight of the day for the airplane and it was right by the book. The pacing was not too fast and not to slow.

When asked about transfer of control during a rolling takeoff, Captain Scharold said he did it very smoothly and made sure the airplane was lined up and then asked if the F/O was comfortable and then handed off the controls. F/O Polehinke pushed the power up very smoothly and then asked for power to be set. On the runway, F/O Polehinke would always reach up and hit heading sync automatically and that was the captain's procedure too.

He was asked about Comair's use of automation on the CRJ and he responded that Comair's policy was to maximize use of automation unless otherwise required by procedures.

The first part of runway identification was to start planning for it during the taxi briefing. Both pilots had the airport diagram and both understand the taxi route. He wanted F/Os to write down the taxi clearance. He said most F/Os wrote it down at the bigger airports. Both pilots agreed on the taxi route. When asked about F/O Polehinke and his writing down taxi clearances, he replied that the F/O would not write down simple ones such as Bangor, Maine. However, at BOS and JFK, he would definitely write it down. Part of the briefing was making sure the FMS was set for the runway.

Cues that he was on the right runway would be the sign on the taxiway saying where you were (white number, red background), and the runway number on the ground. The heading bug was usually set on the runway heading unless an immediate turn was required after takeoff. If the turn was delayed, you still set the bug to the runway heading. It was in the operations manual to do that. He said it was the company's procedure to set the heading bug that way and most of the pilots did that. Before takeoff, he synced the heading bug by pushing the control knob, but usually it was not necessary because the airport diagram gave you the runway heading and there may only be a one or two degree offset. If he got on the runway and the heading bug was not centered then it was because he was turning early. If he was not turning early, he questioned why the bug was not centered. He would note an offset and question why to confirm whether it is an early turn or not.

He did not recall ever taxiing onto the wrong runway. He had never heard of anyone at Comair doing it.

He was based at CVG until July 05. He had flown into LEX about 10-15 times. He had not flown into LEX recently and had not seen the new layout.

The last time he flew into LEX was with alpha taxiway open and it was a normal operation. He had no discussions with other pilots about confusion at LEX, but there were discussions about other airports though mostly big airports. He got good guidance about that during his IOE.

He had been a check airman since February 2006. He liked being a check airman and wanted to do it for the experience. He said you learned more and you got more expertise. He liked it and was glad he was chosen.

He was asked whether Comair operated off of runways 75 feet wide in the CRJ. He said "nothing jumped out at him" and he would have to look at the diagrams to make sure.

He had never taken off on a dark runway at night. He did not think he was allowed to and if it was dark on takeoff, he would definitely stay on the ground.

He had no explanation why the accident in LEX happened. F/O Polehinke was a pleasure to fly with.

Interview: **Timothy M. Schoenauer, Comair First Officer**
Represented By: **Linda Schneider**
Time: **1110, August 31, 2006**
Location: **Comair Headquarters, CVG**
Present: **Operations/Human Performance group**

During the interview, F/O Schoenauer stated the following information:

His date of hire at Comair was December 9, 2002. He had about 4,100 hours total flight time including about 1,050 flight hours as PIC and about 2,800 flight hours in the CRJ as a first officer. He had flown the CRJ since he was hired at Comair. Before Comair he started at zero time at the Comair Aviation Academy in December 2000. He received his flight ratings there (CFII, MEI).

He did not know the accident first officer and had not heard anything about him at all.

He flew with the Captain Clay for a total of two days and four legs. They flew on August 1 for one leg and on August 2 for three legs. It was a four-day trip for the first officer but was shorter trip for the captain, but they did overnight together during the time their schedules overlapped. The weather was visual conditions for the first leg. On the first leg, they were arriving into Dayton, Ohio and were on a right downwind for the south runways [the 24 runways]. They had been cleared from a higher altitude down to 4,000 feet and they saw on the TCAS that there was traffic about 1500' below them that was approaching from their one to two o'clock position and they got a TCAS[22] traffic advisory (TA) to monitor traffic. Captain Clay disconnected the autopilot and started a climb. The F/O let ATC know that they were climbing. When they leveled off about 1,000' above their assigned altitude, they were clear of the conflict and ATC cleared them for the visual approach. ATC was surprised they made a climb, but the captain did a great job climbing it to keep it from becoming a resolution alert. He thought the captain was a very good pilot and did a great job. He handled that situation well and it said a lot about the captain as a pilot. After they landed, the captain asked him to ask ground control for the number to approach control so he could ask about the sequencing in the terminal environment and why they were vectoring so close. The next day, the captain told the F/o that he had forgotten to call. He used standard procedures and called for checklists them at the appropriate time. They switched flying every other leg. There were no mechanical issues during the flights.

He described the Dayton, Ohio overnight. They had a 1320 arrival and were released at 1340. The hotel van picked them up at the airport. At the hotel, they checked in and got keys. They stayed at Hampton Inn. Captain Clay went for a run. The F/O had his logbook with him and was updating it. The F/O was in his room for four or five hours and called the captain to meet for dinner but he was not there. The F/O went to dinner on his own. After going to dinner, he went back to the hotel and went to bed. He awoke for a 0705 report time. He was not sure whether Captain Clay ate before leaving the hotel in the morning. The captain was a non-smoker and the F/O did not recall if he used caffeine

[22] TCAS – Traffic Alert and Collision Avoidance System

or alcohol. He described the captain as being in really good health. He seemed physically fit and in good shape. Captain Clay did not complain about waking up early.

They had an early morning departure and reported at 0705 for a 0830 flight from James M. Cox Dayton International Airport (DAY), Dayton, Ohio to ATL. He could not recall the taxi length at DAY when they departed there.

At LEX, it was a short taxi to runway 22. He did not recall having a short taxi when flying with Captain Clay. He always felt he had time to do his checklists and never felt rushed when flying with the captain.

The captain did the pretaxi briefings. They were standard briefings, for example, at Baltimore/Washington International Thurgood Marshall Airport (BWI), Baltimore, Maryland, they briefed the hotspots there.

He was asked about the procedure or technique he used to designate the runway he was going to and he answered that there are four things in the before takeoff check. The checklist called for FMS runway, so you double check that the FMS was set for the departing runway. Second, after he got the clearance from ATC, he put the runway heading on the heading bug as part of his flow, which was transponder, heading, and altitude. Third thing was when you hit the runway update on the departing runway; you could usually see that was the actual departing runway in front of you. He also looked out to see what it said on the paint on the ground. When he verified that the TOGA was selected, he looked at the heading indicator to see what it said and see what the runway numbers say for his orientation. Syncing was a company procedure.

If the bug was set for the runway and he did not see it then either he forgot to set it during the takeoff briefing, they had a turn after takeoff, or he “screwed up”.

They performed rolling takeoffs. There was a positive exchange of flight controls. He would say you have the flight controls and I have the radios and checklist. He described these transfers of control as smooth.

Discussion in the cockpit included what was happening with Comair, and his two daughters (he had a newborn). Captain Clay seemed like a normal guy.

He did not recall that Captain Clay had any hobbies or second job. He did not observe the captain use any medications or supplements.

His greatest strength as captain was that he was authoritative but with respect to F/Os. He was easy to fly with and did not over control or micromanage, but you knew he was in command. He was in control and being safe and was a good guy to fly with. He saw no areas that the captain could improve on. He was very approachable. He was calm and kind of timid. He was not an aggressive personality, just a nice guy.

Captain Clay went to the academy too but they did not talk about why he went. Captain Clay discussed trying to get on with United Parcel Service (UPS). The stress of the Comair situation was his impression of why Captain Clay wanted to move onto another airline, just to get out from the uncertainty here. It did not seem to affect the captain's attitude toward the company or his performance.

He had never departed on a dark runway with no lights at night but believed they were able to do so as long as ATC authorized it, the runway was open, there was adequate visibility and length, and it was a Comair authorized runway. He did not know if anyone had taken off on a dark runway with no lights.

CRM at Comair was very good. Captain Clay's CRM was good, especially given the abnormal operations at DAY with the TCAS TA. He said the TA did not fluster the captain he responded calmly to it and did not dwell on it.

The Comair situation was typically discussed. He did not think the situation with Comair and Delta was a distraction because he did not let it rise to that level. He personally would change the topic to make sure it did not come to that. Captain Clay talked about the situation (Delta RFP) as a matter of fact and was not reactive or emotional about it.

There was no casual conversation during the taxi out.

They had no problems with surface navigation at the airports on any of the legs.

He did not observe the captain use reading glasses and was not aware whether he used corrective lenses.

The F/O flew into LEX on August 27th after the accident occurred. The captain on that flight called ATC and queried about the taxi route. ATC explained that alpha was closed and alpha 5 was technically now alpha and it was resigned at the airport. The F/O got the clearance first, and then the Captain got on the radio to get clarification from ATC. Their taxi out of LEX was during daytime on August 27th. The F/O said they were very alert.

Interview:	**Derek Q. Judd, Captain, Skywest Airlines**
Represented By:	**Dave Faddis**
Time:	**1244, August 31, 2006**
Location:	**via telephone from Comair Headquarters, CVG**
Present:	**Operations/Human Performance group**

During the interview, Captain Judd stated the following information:

He had been at Skywest for 11 1/2 years.

They observed the accident crew as they came into the terminal area in the airport. They went through security at the same time in adjacent lines. He and the accident captain

exchanged pleasantries. He made note of both the captain and first officer. When he initially saw the accident captain, he thought it might be one of his friends and that prompted him to say good morning to him. They made their way towards respective areas of the terminal. They nodded and said good morning. The accident captain appeared absolutely normal. He was a clean-cut professional looking crewmember. Both pilots had hats and coffee mugs and nothing seemed out of place. The captain was carrying an aluminum coffee mug. He did not see the captain drink from the coffee mug but just saw it go through the screening. He saw nothing out of the ordinary about the F/O. He looked just like a professional crewmember. He did not overhear any conversations between the accident captain and his first officer. Their body language indicated to him they were a comfortable crew together. He did not see any of the accident crew rubbing their eyes or yawning.

On the morning of the accident, there were some visible puddles in places on the ramp as it looked like it had rained some time in the past. The concrete looked dry to him but it looked like there had been rain before.

The Comair and Skywest airplanes were pushing back at the same time on the morning of the accident. It was dark that morning, very dark. There was no inclement weather. There was nothing to reduce visibility. There was no moisture. He heard Comair make a courtesy call that they were pushing back. He did not hear Comair or American Eagle call for taxi clearance

The tower controller did not appear that busy when he was on frequency with him.

The taxi was straightforward and they had no communications difficulty

There were no restrictions to visibility and no cloud vapor or moisture at all. To the best of his recollection, there was no dew adhering to the windscreen. He did not use the windshield wipers.

He did not remember seeing any NOTAMS about the taxi route to runway 22. He did not listen to the ATIS as their company procedure was for the F/O to do that. There was no mention of any obstruction to the taxi to runway 22 in the briefing of the ATIS that he got from the F/O. The route they taxied was what they expected and was similar to the route he took on the 1st of August.

To the best of his recollection, the taxi clearance was “Skywest taxi to runway 22.”

He had flown into LEX on the 1st of August on an identical trip. The 1st of August was his first time flying into LEX. He did not remember seeing barricades on the 1st of August but he did see them on Sunday, the morning of the accident. He first noticed the barricades when he was clearing the ramp area. They did not impede his normal progression to runway 22. As they were taxiing out to runway 22, there appeared to be some barricades off to the west area of the ramp that precluded taxi across a narrow taxiway off to runway 8 or the west side of the airfield.

They took a straight taxi route to runway 22 and saw no barricades on taxiway Alpha. He did not recall seeing barricades on the other side of runway 26. They went across runway 26 at a normal rate of taxi. He remembered seeing the runway identification box [sign] to his left saying 26 and then going out on the runway. He saw the runway 26 identification sign to his left, not the runway markings.

He clearly remembered taxiing out across runway 26 and seeing the runway indicators lit and operational. He did not recall the taxi lines that were diverging across runway 26 or the barricades on taxiway Alpha across from runway 26. He did not look down runway 26 as he crossed, he just looked forward. He had been trying to remember that. The taxiway marking indications were lit up but he did not know if the runway edge identification lights were on. He taxied onto runway 22 and departed from it without a back taxi because he was at the end of the runway. He recalled seeing the runway numbers for runway 22 as he was entering the runway. He did not recall seeing the numbers for runway 26.

He had not had any confusion or problems while taxiing at LEX. He heard nothing from other pilots about any problems taxiing at LEX.

He was asked whether his F/O made any comments about the taxi out while running the checklist and he said that no comments were made. There was no discussion of the markings or lights or short taxi. During a short taxi, there were lots of procedures for the F/O so there was not a lot of time for him to look out.

The lighting on runway 22 seemed normal. It certainly was not on high intensity. His professional opinion was it was on medium intensity, which would be normal for a night takeoff. He could not see the end of the runway because there was a hump midway down the runway that to his opinion was visibly preventing seeing the end of runway 22.

There was a weather cell just off the departure end of the runway. They had the radar set to the ten-mile range and the cell was inside the 5-mile range. It was a narrow band not affecting the airport at that time. They did not see any lightning visible from the small cell. They saw some weather towards Louisville, Kentucky and some lightning north of the field. The winds were about four knots from the south about that time. He did not know the direction of the weather cell movement. On departure, the cell was not a concern that they paused to study it. They just requested a deviation for weather and a few moments later were on their way. There was no impact to their operations.

Interview: **Rafael Nazario, Jr., Captain**
Represented By: **Gordon Rose**
Time: **1338, August 31, 2006**
Location: **Comair Headquarters, CVG**
Present: **Operations/Human Performance group**

During the interview, Captain Nazario stated the following information:

His date of hire at Comair was November 11, 1996. He worked a year on the ramp and three years in dispatch. He started flying as a pilot on November 28, 2000. He had about 4,800 hours total flight time including about 1,300 flight hours as PIC, about 4,000 flight hours on the CRJ, and about 600 flight hours as PIC on the CRJ. He was previously a member of the United States Air Force and worked as an air traffic controller. He went to Louisiana Tech until 1995 and was in an aviation program. Then he moved to Cincinnati, Ohio and took a job at Comair working on the ramp. He finished up flight training locally. He had about 900 hours time when he became a pilot for Comair. He was not a flight instructor.

He did not know the accident captain. He had not heard his name until the past week and had not heard any comments about him.

He flew with the accident first officer one day for three legs. The first impression he had was that the F/O was a pretty sharp individual. The F/O appeared to him to be experienced due to the way he presented himself. He was not sure if the F/O wore glasses or not. He said he may have at night, but he was not sure.

Their trip began on a Friday afternoon on August 25. He was supposed to start a two-day trip and the F/O and F/A were starting a four-day trip. They were supposed to fly from JFK to Greater Rochester International Airport (ROC), Rochester, New York, then to JFK, then to BOS, then to BWI, then to BOS. That did not happen. It was raining in New York all day, so they diverted to ROC. When they arrived in ROC, airplanes were backed up to go to JFK. It was about a 45-minute update time when they got there. Then the update time was extended another 30 minutes. They were on the ground in ROC for about 90 minutes. On the return trip to JFK, they were given S-turns all the way down then a 180-degree turn as the JFK area was not accepting traffic. Then they received more vectors and a hold and decided to divert to Bradley International airport (BDL), Windsor Locks, Connecticut for fuel. They arrived in JFK about two-three hours past the next departure time. They were asked to ferry the airplane to LEX. They were supposed to leave at 2100 but were not airborne until about 2300. They flew into LEX and blocked into the gate about 0140 on Saturday morning. They went to the hotel and checked in about 0210 on Saturday. He saw the F/O go into his hotel room shortly afterwards. Captain Nazario did not see any wakeup calls requested by anyone on the form. That was the last he saw the F/O and the F/A. He did not know how the F/O planned to spend his time in LEX on Saturday. The F/A and F/O got along well, but the captain was not sure if they had met before or not.

There was no mention of the F/O's previous schedule. He took no naps during day. Captain Nazario was supposed to depart the next day at 1045 but called in sick due to something he ate and deadheaded to CVG and then to JFK.

At ROC, it was a pretty easy taxi. The BDL taxi was pretty similar to ROC. The most complicated taxi was at JFK, but they were used to that. The F/O put the clearance into the FMS scratch pad at JFK.

They landed on runway 22 at LEX. The ATIS stated that part of the runway lights were inoperative. On the way in to runway 22, the left side lights were all lit but only about 1/8th of the right side lights on the approach end were lit. When the lights were turned up all the way, the captain saw only one string of lights. He pointed to the chart and indicated it was the area between the approach end and the intersection of runway 26. The rest of the lights on the right side were not lit. The controller had turned the runway lights up all the way. There was no VASI[23] and no glide slope, so they discussed the lights as it related to the approach. It was VFR and clear so the lights were not a problem. Both pilots were very aware of the lighting configuration during the approach. The localizer was the only part of the ILS working as the glide slope was inoperative. The weather was clear and there was hardly any cloud coverage. He did not know if there was a restriction about landing on a runway with lights on only one side but the lights were not completely out on that side.

They landed on runway 22 and turned off on taxiwayA1. They taxied back on taxiway A and taxiway C. They did not get near the runway 22 or runway 26 areas that night.

They did not see any obstructions. They could see some construction markers there and some reflectors. That night, he heard on the ATIS about the taxiway being closed between runway 26 and runway 22. He saw some short, possibly two feet high markers with flashing lights. He did not recall if the construction was on a NOTAM or not.

The next day he did not fly out of LEX. He was at LEX earlier in the week on the 21st and 22nd of August but landed and took off on runway 4. He had not flown to LEX since the accident.

He described F/O Polehinke as average pilot who was pretty much in line with what the company standards were. Only issue they had during the flights was being delayed because of weather. The F/O was very good and very useful during that period. He could not think of anything that could be improved in the F/O's operation or flying. His strong points were that he was very good at being involved in the decision-making. He helped work together on their diversion, both pilots communicated what they saw about their fuel situation and he was very vocal about what he saw would be a good point to divert to. He did not see any weak points in the F/O.

The F/O performed checklists well. He rated the F/O's speed in performing checklists as slightly above average. They never had a short taxi on any of the legs he flew with the F/O and he never seemed to be rushed. He thought the F/O had very good situational awareness. Every time they would taxi out, the F/O had his chart out as well. Captain Nazario said he always made sure that the F/O had his charts out. F/O Polehinke already had his chart out and did not need to be prompted.

[23] VASI – Visual Approach slope Indicator

He had no indication that the F/O had a cold or allergy or used any medications.

During the flights on Friday, F/O Polehinke had some kind of wrap that he purchased from the JFK cafeteria and brought with him. He ate it about 2100. He did not recall if the F/O drank coffee or had any caffeine, but he did drink a lot of water. The amount of water consumed was not abnormal. The F/O snacked on crackers during the day.

Captain Nazario always did a pretaxi brief. He learned that F/O Polehinke was looking forward to upgrading. He had been at Comair for four or five years. Before that he flew Beech 1900s somewhere in south Florida. He had no concerns or questions about the upgrade, but he wanted to know when it would happen, as he was on the bubble seniority wise. The F/O flew two legs. His abilities were consistent and "on par with" what someone needed to upgrade.

Asked about the F/Os personal life, Captain Nazario said he had a wife and four dogs in Florida. He wanted to give a dog or two away, but he could not do it because the dogs were like children to him. The F/O told a story that he had found a home for one of their puppies, and he wanted to make sure it was a good home for the dog. The reason they were letting the dog go was that they did not have enough room for all the dogs.

The F/O was in pretty good physical condition. He thought the F/O may have been starting to working out with free weights, so they talked about that.

One of the things that could help prevent the accident was better marking of where runway 22 was perhaps using directional arrows. He had seen signs like that at similar intersections.

He said he asked F/Os if they wanted transfer of control on a rolling takeoff or when stopped. He said that F/O Polehinke would have spoken up if he needed to stop.

Usually he set the heading bug with the magnetic heading on the charts. He then centered the bug on the runway. He did not believe that the F/O would reset the heading bug on taxi but would if the heading was different for departure.

Interview: **James Michael Maito, Jr., Comair Captain**
Represented By: **Gordon Rose**
Time: **1445, August 31, 2006**
Location: **Comair Headquarters, CVG**
Present: **Operations/Human Performance group**

During the interview, Captain Maito stated the following information:

His date of hire at Comair was June 17, 1996. He had about 9,000 hours of total flight time including about 6,000 flight hours of PIC time, about 3,500 flight hours as PIC on

the CRJ and about 7,000 total flight hours in the CRJ. He owned his own fixed base operation (FBO) up until two years ago. The FBO handled certified flight instruction, corporate flying, and charter flying.

He knew Captain Clay professionally. He talked to him in the lounge but never flew with him. They talked about normal company things, trading trips and accepted aircraft at outstations. He last saw him over a year ago and had not heard anything about him. He knew he had a wife and a couple of kids.

He knew F/O Polehinke. They were personal friends outside of the company. They met each other through Comair. They had common interests as they were both building log cabins and they enjoyed fly-fishing. They both ran and had knee injuries. The F/O had four dogs. He never heard anyone talk higher about his wife than F/O Polehinke. They had been married a while, but he did not know exactly how long. He said that he thought it was F/O Polehinke's first marriage, but he was not sure. He said the F/O's wife had a medical problem and concerned and preoccupied F/O Polehinke, but did not interfere with his flight operations.

He described the F/O's heath as good except for his knee. Captain Maito did not observe him taking medications, vitamins, or nutritional supplements. The F/O did not wear glasses. The F/O drank coffee in the morning and diet coke in the afternoon. He said he had observed the F/O consume alcohol on layovers, in ROC when he had BBQ and two beers. His alcohol use was normal social drinking. He was more of an evening person and they both of talked about early reports, specifically how you could not go to bed at 2100. You could go to bed at 2300, which would be a shorter but better sleep. He had no idea about the hours the F/O kept when he was not flying. Before their last trip, the F/O said he had an interview with Emirates at the end of the month. His wife wanted to go there. He wanted to stick around at Comair for PIC time as he was close to upgrade. He described the F/O as not necessarily a Chuck Yeager but at the higher end especially for pilots from JFK where you got more of the new hire pilots. Being easy going was his greatest strength. He was not easily rattled or ruffled. The F/O would have no difficulty upgrading. He did not know of any areas that the F/O needed to work on.

He always enjoyed flying with F/O Polehinke. They had flown together three times including the last trip together, which was a three-day trip that started on August 20th and ended on the 22nd. The trip began in the morning about 0730-0830. The F/O appeared normal. It was a very uneventful trip. They had a long layover at ROC. The next day was a short day and they were done at 1100. When they got to the hotel, they both went for a run. They went to the weight room and later went to lunch. They walked around town. They went back to Captain Maito's room and watched ultimate log homes on the travel channel. About 1530, the first officer went back to his room. The next time Captain Maito saw the F/O was about 0530. The F/O had coffee in the lobby but there was nothing to eat. They had no food until JFK. Their departure was at 0630. The weather was great. Nothing stuck out as abnormal about the trip. Everything operated on time.

He said the F/O's cockpit ability was good. He was smooth with the airplane. He had good knowledge. Captain Maito was confident if he had to step out and use the rest room. The F/O tried to give the passengers a good ride. He was not easily flustered. The F/O's situational awareness as a whole was good, even when he was doing the checklist. The F/O's checklist tempo was described as pretty slow and was a little slower than average. He was articulate with it. He was conservative and he made sure the captain was with him and he verbalized any item so that the captain could hear him before continuing on with the checklist. The situational awareness on the ground was not an issue as it was not an issue for Captain Maito. F/O Polehinke called for the taxi clearance and then read it back to controller. Most of the time, Captain Maito would not write down the taxi clearance. If they got anything out of the norm, he would write it on the note pad on the yoke. He never saw the F/O use the FMS scratchpad to write the taxi clearance.

The F/O would challenge on the altitude if he thought it was different. He said the F/O had the correct amount of assertiveness you wanted in a F/O. The FO would not squawk about little things like the cabin temperature.

It had been at least six months since he had flown into LEX. Only issue that he had with LEX was the mural was a bit distracting when landing on runway 22. Also, with a hump in the runway it was hard to tell how the airplane was accelerating, as you did not see the full length of the runway because of the hump. If you lost engine on takeoff, you could not tell how much runway you had left.

You just needed to keep in mind that taxiway A5 was at the intersection of runway 26. Anytime a taxiway or two runways are on the same piece of concrete it could cause confusion. He knew a lot of people had some confusion at the hold line for runway 26 and you had to make a mental note that you had to cross that runway and go to the other one. There were other similar locations such as Cleveland-Hopkins International Airport (CLE), Cleveland, Ohio. It could be quite a bit more confusing at night or in low visibility conditions.

He was asked about any techniques for takeoff that he used which were outside the checklist and he responded there were none that he could think of. He had no techniques outside of the company procedures.

Captain Maito said that the first time he flew into William P. Hobby airport (HOU), Houston, Texas, there were two runways about 15 degrees apart and he realized the risk associated with having his initial vector in the heading bug. He then put the heading bug on the runway heading. He said that most F/Os dial in the first radar vector and he would correct them and tell them to put it on the runway heading.

He also had the numbers on the runway as you were rolling over them to make sure you were on the right runway. He made sure that when he was aligned on the runway, the heading bug was centered and if it were off a bit, he would update it.

During the taxi out, Captain Maito said he tried to keep discussion out of the cockpit from the time the door closed until they reached 10,000 feet. He did this because he knew it helped keep him [Maito] out of trouble because he was a talker.

The company attitude, the bankruptcy, and the pay cuts were sometimes a distraction. That was the discussions that were going on in the company now. It affected the F/Os more because they were the lower end of the pay scale and because they were already struggling. The company situation was not necessarily a concern for the F/O. His biggest concern was with the Dubai [Emirates]issue.

Interview: **Erik Soyland, American Eagle Line Captain,**
Represented By: **n/a**
Time: **1532, August 31, 2006**
Location: **via telephone from Comair Headquarters, CVG**
Present: **Operations/Human Performance group**

His date of hire with American Eagle was May 1992. He had previously been a check airman on the Saab but was not one at that time. On Sunday morning, August 27, 2006, they blocked out of the gate at LEX at 0555 and departed about 10 minutes later. Since his F/O listened to the ATIS and received the clearance, he did not recall that information.

He did not see accident flight crew on the morning of the accident.

Captain Soyland had flown into LEX for a couple months. He had seen the construction come and go. There was always something about the construction on the ATIS. He did not recall specifically what information was on the ATIS.

He said he knew for sure that they departed off the full length of runway 22 as taxiway Alpha was not closed.

On taxiway Alpha, the distance between the hold short line for runway 26 and the hold short line for runway 22 was so short that you could only stick one CRJ there. If there were two CRJs, you would not be clear of runway 26. He said Skywest was holding short of runway 22 and his airplane was behind Skywest on taxiway A and he was concerned that his tail was going to be hanging over runway 26. He thought he was on runway 26 and thought he might get stuck on 26 just past the centerline if the United Express[dba Skywest] had not gotten a position and hold clearance. When he was holding short of runway 22 behind the United Express jet, he knew there was grass to his right but he was not sure if he was on A5.

He identified the LEX airport chart he was referencing as plate number 11-1,dated July 05, 2006.

He had a lot of experience going into LEX and taxiing there had never been a concern for him. He had never heard of anyone else expressing concerns at LEX.

He did not remember seeing construction barricades.

When they arrived the night before on runway 22, the left side runway edge lights were bright and the right side runway edge lights were dim. When he departed in the morning prior to the accident, he did not recall one side of the edge lights as being brighter than the other.

One thing about LEX was that if you lined up on runway 22 you could only see 2,000-3,000 feet ahead of you. He said you could always see the hill or hump on the runway when looking down runway 22. If you lined up on runway 4 you would see the same thing. He did not know if you are sitting at CRJ height and looking down 26 if the same runway curvature was there.

On the morning of the accident, he said he was cleared onto runway 22 and was not given a back taxi. He recalled seeing the numbers on the runway in front of him when he taxied into position on position 22. He said he saw 22. On August 28th, the morning after the accident, he was cleared to taxi via taxiway A5 and back taxi onto 22. He did not remember seeing an A5 sign anywhere. They departed from the A5 Intersection, which was only a plane length back taxi from the end of the runway.

On the morning of the accident, there was weather in the area but not on the field at LEX. It was not raining because they departed using reduced thrust and there was no contamination that he knew of. The weather was overcast, broken, and darkish. It was night at 0600. He ran the wipers one swipe when he got into the cockpit.

They had clearance to depart on runway heading to 6,000 feet and then turn to join airway V-171 or whatever they were filed. Within 15-20 miles after takeoff, after a 30-35 degree right turn, there was a very clear return on the radar that indicated a good building cumulus type cloud that had no lightning. They deviated around it. Tops on the cloud buildups in the area were about 12,000 feet. There was nothing you had to deviate around but it would have given you quite a bump.

Interview: **Eric Villeda, American Eagle First Officer**
Represented By: **n/a**
Time: **1615, August 31, 2006**
Location: **via telephone from Comair Headquarters, CVG**
Present: **Operations/Human Performance group**

During the interview, F/O Villeda stated the following information:

On the morning of the accident, they pushed out of the gate at LEX at 0555. It was not raining on the field but there were some cells in the area to the west. It affected their

departure once they started heading in that direction but it didn't affect their operations at the airport.

He did not recall the exact wording of their taxi clearance. He said they were cleared to runway 22. He recalled the taxi because he was confused himself because of the runway layout. He had not been into LEX for a while, possibly last year. It was an early morning departure with 0430 wakeup calls and it was dark.

It was a short taxi from the gate to the runway threshold. He definitely picked up a sign for runway 22. He said the captain was familiar with LEX and had been flying there all month. He was confused after he had done his duties and then looked up to try to figure out which was the right runway. What originally confused him was he saw the captain starting to turn as they were going onto runway 26 and he then realized the captain was turning to go to runway 22. He assumed that the captain was turning to avoid construction. He did not notice the construction at all. He recalled taxiing across the end of runway 26. Part of what confused him was that they were not turning onto the runway when they crossed runway 26. He was confused for just a split second, but finally noticed the sign that said 22. There was not enough time for him to say anything before he saw the sign for runway 22. He never shared his concern with the captain as it was just a fraction of a second and he resolved his confusion a moment later when he saw the sign for 22. He did not recall seeing any flashing lights and saw no construction lights.

As they were holding short of runway 22, they took a minute to do their checklist. He thought Skywest was in front of them.

When they were ready, he thought they were just cleared for takeoff. He did not recall a back taxi. He was not sure if he just was not paying attention or was just too tired to remember. He remembered the hill in the middle of the runway. He did not recall seeing the actual runway numbers.

He had not heard anyone talk about LEX being confusing. It might have been because the times that he had gone into LEX, it was daylight.

They rode in the hotel van to the airport with the Skywest crew and they were just ahead of them on departure. He could not remember if Skywest back taxied on the runway or just took the runway. He said he did not hear them express any confusion on the radio.

Interview:	**Mark David Berner, Comair Director of Corporate Safety**
Represented By:	**Mike Merlo**
Time:	**0820, September 1, 2006**
Location:	**Comair Headquarters, CVG**
Present:	**Operations/Human Performance group**

During the interview, Mr. Berner stated the following information:

His date of hire with Comair was November 19, 1991. He had been in his current position since October of 2004. Before that he was manager of technical support in systems operational control (SOC). In SOC, he was responsible for dispatcher training, aircraft performance analysis, and the computer systems. Prior to working in SOC, he was manager of fuel purchasing. Before that, he was a duty manager in SOC responsible for daily operations of the airline. He had previously been an aircraft performance analyst in SOC, an aircraft dispatcher, and a customer service agent. He worked for Midway Connection as a ramp agent before coming to Comair. He held a certified flight instructor instruments (CFII) pilot rating and an aircraft dispatcher certificate.

Organizationally he reported to the Corporate Compliance Committee, which was comprised of the officers of the company and the president. Dave Soaper, the Senior VP of Aircraft Operations, was his main contact. Mr. Berner was responsible for the Corporate Safety Department. Direct reports to him were the Manager of Security and Regulatory Compliance, the Manager of Internal Audit, and the Manager of Flight Safety Paul Vislosky. The Manager of Flight Safety position was created within the previous week. This was a change being made before the accident and went into effect when the paperwork was signed.

As Director of Safety and Security he was responsible for the safety of the employees, passengers and everyone associated with the airline. What that meant was he was responsible for looking at each department to make sure they were safe. He took in staff suggestions to improve safety. He was responsible for measuring performance in those areas and reporting it to the Corporate Compliance Committee.

He did the budget. Generally speaking, he got what he asked for. That was true for every department at Comair. Most of what he asked for that time around he got. He had asked for a full-blown asbestos inspection program but got funding for 40 percent, which was realistically what he could do in the fiscal year. The rest of the asbestos inspection program was pushed to 2007.

Historically, he had a very strong flight safety staff. He was asked about his time budget and how much time was allocated to flight safety issues versus other safety issues. He said it depended on the day. Lately about he had been spending about 80 percent on flight safety issues. Before the accident, back in February, he spent about 40 percent of his time on flight safety issues, because they had an occupational safety event. It depended on what events were occurring at the company. He had a great staff and he relied on them heavily.

He said that the company had a written safety policy. He said it was on the EPIC[24] web page, and in the corporate program safety manual, among other places. He said it was

[24] EPIC – Employee Personalized Information Center was an employees website that provided general company information as well as important information for flight crews through the dissemination of Operations notes classified as Volume I and Volume II. Volume I Operations notes contained only critical flight operations information and must be read prior to assignment. Volume II Operations Notes contained information that was essential to operation, but could be read at the pilot's convenience.

not a static document. It was a letter. The last change occurred when Don became president.

Pilots got safety information through the dispatch release, which contained the day-to-day stuff or information, specific to a flight. Pilots also had access to bulletin boards, the On Course magazine, and the Operations Notes. The flight safety staff participated in the recurrent ground schools, initial ground schools and did a briefing and presentation. They worked actively with the training department to make sure that trends were addressed.

Pilots could communicate their safety concerns multiple ways. There were Irregular Operations reports (IOR), which went to flight operations management. Copies of an IOR went to them in the Safety Department. ASAP program. They got about three reports a day. There was a Comair Communication Log (CCL) program. Every form (electronic or paper) had a safety box that could be checked so that it was routed to him.

The ASAP program began in May 2004 and currently the ERC board meets once a week. The reason for it was continuous safety improvement. ASAP was established before he took this position, which was about six months later. Paul Vizlosky was brought in to administer ASAP. There was great cooperation with union, FAA, and management in the program. The ASAP program had been deployed in Flight operations and dispatch at that time. They had started down the path for the maintenance program.

He was asked how Comair identified hazards. Quarterly there was a flight safety committee that met. In the flight safety department, they tracked the ASAP and IOR reports and identified trends. They discussed those at the flight safety meeting. Recently they identified some navigation deviations and using the ASAP database, they did a study to identify and establish recommendations so they could cut the deviations by 70 percent. They made about six recommendations. They were also looking at altitude deviations.

They were in the process of looking at the Safety Management System (SMS) advisory circular. Comair had just instituted an independent evaluation program (IEP). They became an Air Transportation Oversight System (ATOS) carrier in June 2006. They had their IATA [International Air Transport Association] Operational Safety Audit (IOSA) audit in September 2005 and were certified a month ago. He said that with these actions they were moving towards SMS.

He was asked about company audits and said they had an ongoing internal audit process. They had been running ATOS checklists on their different departments. They had three auditors doing that on flight operations, maintenance, SOC, and customer service. It was an ongoing process. There was a Gap analysis was done last spring before the IOSA audit. It was done by a group of retired Delta captains. Some issues from the IOSA audit were pilots were not guarding the 121.5 frequency, which was a minor thing because their aircraft could not do that because they only had two radios. They also identified chain of command and process control issues with respect to documentation.

He did not see himself as having any budget constraints. If they had an issue he went to the corporate compliance committee and said they had a problem and they would fix it. At the beginning of the year, there were no dollars committed to bring global positioning systems (GPS) to aircraft and funding was given. Another example was a problem with bag cart handles, which was also fixed once he requested resource be applied to the problem. Corporate compliance committee meetings were held quarterly. If urgent it can be done right a way.

He stayed abreast with flight safety issues in multiple ways. He participated in Regional Aircraft Association (RAA) safety director meetings about three meetings a year. The Delta Partners in Safety met four times a year. It was comprised of the Directors of Safety at the associated Delta partners. That was a steering committee organization that oversaw other aspects of the operations too such as flight safety and ground safety. He was a member of the Flight Safety Foundation (FSF), the National Safety Council (NSC), and received periodicals, etc. Asked about training, he said he had earned the Aviation Safety Certificate at George Washington University. Training for his staff was important to him and part of his budget was for training and he tried to get his staff to two or three classes a year. For example, University of Southern California (USC) training and training by Occupational Safety and Health Administration (OSHA).

He communicated with other CRJ operators via RAA and Delta Partners in Safety (DPIS).

He was asked to describe the role Delta had in providing input to his area of responsibility. He said Comair was an independent carrier but was held accountable. They shared things with Delta. For example a safety shoe program for maintenance and customer service was done jointly. Delta previously conducted audits as part of the code share agreement, but has not since the IOSA audit was performed.

He described the incident investigation process. He said they were notified and his staff worked the issue and he oversaw things. It used to be Paul McClaskey's job now was Paul Vislosky's. They produced a 24 hour preliminary report which was a fact based report that told what happened. The investigators spent time with the maintenance people, and downloaded the flight data recorder (FDR) for analysis, they did crew interviews, wrote the report and made recommendations to the flight operations department. They then held flight operations accountable to the recommendations.

Other audits that they had previously were: Department of Defense (DOD) audits in spring/summer 2006. No findings come to mind from that audit. There had been no special inspections by the FAA.

Jim Wohlhueter was their principal operations inspector (POI) and was his primary contact at the FAA. He saw him about once every two or three weeks. They had Quarterly meeting with the certificate management unit (CMU). He described it as a stable relationship. He said there were maybe one or two letters of investigation (LOI) that were open with FAA, one was six or seven years old and was on cargo/dangerous

goods, and perhaps another was concerning noise violations by Transport Canada. The Rest was concerning the Transportation Security Administration (TSA).

He said the safety department had a great relationship with their counterparts at Delta and Bombardier. They provided high level of support non-aircraft specific. For example, when they built a bridge over a highway for a new runway at ATL, they painted yellow strips, which looked like high-speed turnoffs. He got complaints through CCL/ASAP. He then called RAA and called Delta. Delta called and got it resolved.

He had a great relationship with the Air Line Pilots Association (ALPA). They interacted with safety folks when they were here. The navigation deviations investigation was done with the ALPA flight safety group participating.

He was asked how did the RFP from Delta affect safety. He said it was on people's minds. He tried to make sure that whenever the company officers got in front of the employees, they talked about safety. They talked about the tough times but also the importance of keeping focus because we were working in a dangerous environment. He said it was a tough battle but it was working.

He was asked about the company's formal training in safety for its management. They had put the entire management staff through three day ATOS training. Different departments received different training depending on missions – customer service for example was very focused on safety.

His compensation was not tied to safety performance indices. That was also the case for other managers.

FOQA[25] was in the budget for next year. They were still trying to figure out which fleet to deploy it on first but might try to get 15-20 quick access recorders (QAR) on the CRJ 100/200 as a trial.

The line operations safety audit (LOSA) program had been evaluated in the past and not done. It was behind FOQA right now as the IOSA audit had put pressure on that. ASAP program was successful and they think they were getting similar data through that. As to priorities, he said that the flight analysis data was the most important piece.

Before the accident, his biggest challenge was ensuring that although they have had a rough year, he needed to be making sure everyone was focused on safety. Officers and high-level mangers were focused on safety. He needed to make sure that the rank and file workers were and that was his main concern.

[25] FOQA - Flight Operational Quality Assurance - means an FAA-approved program for the routine collection and analysis of digital flight data gathered during aircraft operations, including data currently collected pursuant to existing regulatory provisions, when such data is included in an approved FOQA program. FOQA programs gave the FAA access to in-flight recorded data collected by airlines to improve safety in the following areas: flight crew performance; training; air traffic procedures; airport maintenance and design; and aircraft operations and design. Airline participation was voluntary

He said it was too soon for them to be making changes as a result of this accident.

He described the safety culture at Comair as good. As an organization they were active in a lot of groups. He had a good staff dedicated to that. A lot of safety activities that went on did not require his prompting. Customer service and ramp service did audits, had safety meetings and briefed safety. Flight operations were a great group and the check airmen were right on top of it. He was very satisfied with staff performance in this area.

Flight safety staff was strong. They had a flight safety investigator, an ASAP coordinator, and two ASAP analysts. When Paul McClaskey left last Monday, he replaced him with Paul Vislosky. Paul Vislosky's replacement as ASAP coordinator was Alan Dean and they brought in a F/O who interned in the safety department to help out. The flight safety staff had five people with one vacancy. Staffing in safety has increased over the last 24 months.

Ops Notes were a one-page report that was posted to flight centers and EPIC. Pilots were required to read them.

He was asked how Delta kept an eye on Comair. He said they were independent of Delta but Delta watched them. There was an organization called Delta Connection Incorporated (DCI) that had five or six employees. Every month he sent the monthly report safety scorecard to DCI. The DCI was comprised of Delta senior management and they reviewed the Comair reports. The DCI provided overall oversight of the Delta connection carriers. Safety was a part of it.

On a voluntary self-disclosure, departments were supposed to come to him first but on occasion they went to the FAA first. Company policy was to have the disclosure come to him and then his requirement was to disclose and have the FAA determine if it was disclosable. He would say that it was not a requirement to disclose if something came to him but he would very seldom not submit it if a disclosure was prepared by a department.

All groups, including maintenance, flight operations, customer service, and dispatch received CRM training.

Contractors working outstations were audited as part of the internal evaluation program (IEP).

Interview:	**James Anthony Wohlhueter, POI for Comair**
Represented By:	**n/a**
Time:	**0930, September 1, 2006**
Location:	**via telephone from Comair Headquarters, CVG**
Present:	**Operations /Human Performance group**

During the interview, Inspector Wohlhueter stated the following information:

He did not work on other certificates. He had been on the Comair certificate for three and 1/2 years. He had worked in FAA flight standards for 10 years. Prior to that, he was an air traffic controller for six years.

He had about 8,000 hours total flight time. His flight time was in light piston twins, Learjets, and DC-9's. He was a designated examiner (DE) for Southern Illinois University, then came to FAA as geographic area (GA) inspector in 1996 in Allentown. Pennsylvania. He came to the Comair certificate in November 2000 as assistant POI and became POI in 2003. He was type rated in the CRJ through Comair's program. All the operations inspectors had to be typed rated and current.

As the POI, Mr. Wohlhueter was the lead person in approving training programs, reviewing and approving manuals, checkairman training and approval, etc. He had two aircrew program managers (APM) and an assistant POI managing the certificate. The APMs did not work for him as he was not their supervisor but they had to coordinate for crew training, checkairman training, checkairman approval. If it was a new checkairman, the APMs observed the checkride and submitted the paperwork. He would sign the letter and paperwork if he concurred. The APMs worked for the Operations Supervisor, Mr. Mark Corrigan. The APMs by definition coordinated with the POI but he was not in a supervisory position classification.

The POI was the lead person responsible who approved things but they also had the two APM, the assistant POI, and a cabin safety inspector. He met with Comair personnel and approved ops specs in conjunction with the director of operations. He did enroute inspections once in a while. Before ATOS he would do ramp checks, enroute inspections, observe simulator training, check airmen, etc., and once in a while fill in for the APM if there was a need to offload work. ATOS went into effect about June 1, 2006. Under ATOS, the POI did much more oversight of the program through the computer program, instead of him observing simulator training and line flights. He had assigned himself an element performance indicator (EPI) to do some observation. Under the new ATOS program, the POI was not as involved. As long as you had APMs, assistant POIs and cabin safety personnel, POIs were not in the field nearly as much as under National Program guidelines (NPG). He would perform one or two enroutes each year. To do an enroute, they had to submit a request to the supervisor and get it approved. He also would do two or three simulator check airman observations annually. It was up to him to decide which check airman to observe.

He could assign EPI's or safety attribute inspections (SAI) to inspectors under the Comair CMU and also assign them to inspectors who are assigned to Delta's CMU who did Delta, Comair, and Atlantic Southeast Airlines (ASA) surveillance. His assignment of an EPI and SAI to these inspectors must get concurrence from their supervisors.

He attended recurrent training once a year and he was scheduled to do it in early September as part of his requirement to maintain currency.

He had been very impressed with Comair's operation. They had very good people and good support. They met with him and discussed revisions for manuals and then they would be quick to implement the change. This accident came as a total shock and surprise because they had been very good to work with.

He was satisfied with the experience level of the crews. The training was excellent. He had not noticed any real low time captains having problems. They monitored the failure rate and went over it with Comair once a quarter. He had not been concerned with the quality of the pilots overall. Off the top of his head, he could not estimate the failure rates for proficiency checks. Looking on data from the quarterly meeting in June, the pass rate was 97 percent for the last 12 months. He said you liked to have 100 percent but this was the real world. He said with a first failure, he get he got a letter from Comair explaining what the failure was. For a second failure, they got an explanation on what Comair intended on doing. They did review the letters. If there were a problem with any of the pilots, often one of the APMs would go up for the recheck. It got our attention with a second failures, but and that did not happen that often, but it was extremely rare. If there were a second failure on a proficiency check, generally the APMs would monitor the next checkride depending on what was put on the report of the failure. They would definitely monitor a third checkride.

He believed that there were some pilots terminated for performance. He said there had been some but none come to mind off the top of his head. Comair would convene a review board and discuss actions like that in the letter to the FAA about the failure.

He said the APMs did not conduct the certification rides in the simulator because the aircrew program designees (APD) from the airline did them. He knew the APDs that did the rides. He did not know the checkairmen, but he did observe them doing checkrides occasionally. Also, when he was in the simulator and they were training and checking him, it was like an observation as it gave him an opportunity to see how they were training and checking.

From his recollection the APMs felt that Comair APDs gave good checkrides and there were no gifts being given in the checkrides. If the APM found an APD that was being too easy, he expected that they would discuss it and correct that issue.

In all the en routes he had done, he had not seen anyone not following the checklist like they were supposed to.

They typically liked to observe IOE's when they were getting close to finishing. He recalled an IOE for a new captain where the FAA observation was not completed and the pilot had to get additional training. The incomplete FAA observation occurred because the checkairman felt that the pilot needed another two or three hours was a result of the pilot flaring kind of high. He did not remember the exact date but it was couple years earlier. He did not recall anything else that stood out like a real eye opener. Usually he let the checkairman debrief the pilot to see how thorough the checkairman was

They had just completed the first three months under ATOS. It was a learning process. After three months they were doing well learning the system. He had not allowed the transfer to ATOS to interfere with oversight. APMs and CSI were doing the work they need to do. ATOS was detailed oriented with EPIs. There was a checklist to go through. There are plusses and minuses about ATOS. Minuses were that inspectors used to go up and look at as many items as they could. They are now doing checklists and entering data into the system. Atlanta did a data evaluation. ATOS added extra computer and paper work. It was time consuming to do and enter into the system. Comair was actually ahead of the game because they understood ATOS was coming and had people in safety and internal evaluation evaluating the SAIs and EPIs before it was implemented. They were ready and up and running when ATOS arrived.

There had not been enough time it to make full comparison of effectiveness between the old system and the new ATOS system. He liked the structure, but the flexibility in directing oversight that they used to have they did not have as much of under ATOS because of the dependence on checklists. For example, on one of the EPI's there was a question about the exit row briefing card and there were 79 job task items (JTI) questions to address. If you were just roaming around and watching things you might notice something. He could not say that the emphasis on the checklists for oversight has hindered them right now, but talk to him a year from now.

Jim Hacker was the ASAP event review committee (ERC) primary representative. That was almost a full-time job for him, but he was doing an en route that day. As far as Jim Hacker working on ops specs, meeting with Comair personnel, etc. on daily basis, he was lost him because of his ASAP ERC duties.

The CMU was in LOU, which was in the southern region. They covered the whole state of Kentucky. Comair's certificate had been at the LOU FSDO. In July 2004 they were separated from the LOU FSDO and assigned to the Delta CMU. They were in their own office. He said there was no effect because of distance between two cities. It was a 90-minute trip. Certificate management team met every Tuesday. Operations side usually had its own meeting after the team meeting. They went to the Atlanta CMO as much as they could to attend the quarterly meetings. Sometimes they had trouble getting funding to go to ATL and they have to do it by telecom instead.

Staffing had been stable on the certificate. He had been there five years. One APM had been on the certificate for 10 to12 years. APM Rich Hudgens had been there for 7 1/ 2 years. The Assistant POI had been there for two years and the cabin safety inspector (CSI) had been there for three years. The staff assigned to the certificate was working very well. He had not had any major certification issues. Staffing was adequate.

He was in contact with the Comair director of operations on a daily basis. He was also in contact with the fleet program manger, the flight standards manager, the director of safety and the director of training among others, many on a daily basis.

None of his staff was authorized flexibility in hours [first 40] work. For example, he had to submit a form for extra hours/comp time to inspect something on a Friday night. The 100 hour limit for comp time was imposed at the local level. As the POI, his personal view was that he was there five days a week eight hours a day. Every day of the week, he was talking to Comair personnel, meeting with them, being available to oversee revisions to ops specs etc. APMs did not have flexibility for first 40 either. They had to request authorization to work outside of normal hours.

Comair had not exercised the exemption to conduct the IOE signoff. They did not have the authority to do it at that time.

He assigned EPIs to the ATOS regional safety inspectors (RSI) for their station facilities and they would go out and look at the stations. He could look into the computer system to see what they found or they could put into the system that they want a principal inspector (PI) response and he would see that and call. If he felt there was a need for more surveillance for some of the outstations, it was difficult to do it from his office so he would ask the RSI, but the RSI's supervisor had to agree. Although it was possible that the RSI's supervisor could reject a request that had not happened to him. When the RSIs were out doing an EPI or SAI and saw anything other than what they were checking, they could fill out a dynamic observation report (DOR). They can put the DOR into the ATOS system if they wanted a response from the POI or they can call him directly. The RSIs work on the Delta, Comair, and ASA certificates.

He had not received approval for all the travel he requested. He said he had seen times where he could not get money to do travel for the first quarter or the last quarter. It seemed to hamper surveillance during that period. It was not that they were not doing surveillance but it was more challenging because they could only really travel from January to June.

He was asked about training for Ops RSIs. He said that when they went to ATOS, Comair developed a two-day training program on Comair procedures and they put all the Ops RSIs through it. Comair had a good PowerPoint presentation and different speakers from various departments to train them. They made a CD with the presentations to give to the RSI's supervisor for training of new personnel conducting RSI surveillance.

He observed the changes in CRM recurrent program at Comair when he went through training.

Initial proficiency checks were done by APMs. The APMs did not do certification rides themselves but they did observe the APDs administering certification rides. They did not observe the APDs on a weekly basis, but they could if they had to. They felt the APDs did a thorough job as they were doing it on a daily basis.

He understood that he had to go to the CRM training that the FAA gave every year in Oklahoma City, Oklahoma once every 3 years. He was to attend FAA CRM in 2007, and he was to attend air carrier ops recurrent in January 2007.

Southern region team had reviewed the designee program at Comair. The results were coming in the next few months.

They got irregular ops reports daily and anything else that they requested. Sometimes another inspector from another part of the country would call and let them know about an event. He would call him to get more info.

Comair had put a computer in their office to get them into the Comair databases for crew qualifications, maintenance etc. He expected the system to be up and running in a few months. They needed DSL to get the broadband data in those systems and Comair put in the line.

He was the union rep in the office. Oversight occupied about 90 percent of his time vs. administrative or other functions. He said they have three government cars for 12 inspectors. On the Operations side especially, he could have the APMs in two different directions so there are not enough government cars.

Jim Hacker was on the ERC for the Dispatch ASAP and he would bring some reports to my attention. Reports were faxed with positive confirmation of recipient to LOU each week before the ERC meeting.

He was asked how the Ops Bulletin was approved. He said they would call him, email or fax it to him, and he would approve it that way.

In five years he had not really seen a problem in the CRM area with crew interaction.

AQP had been in place for about a year and a half and he was not sure if CRM was better integrated as a result of it or was good before that.