National Transportation Safety Board
Office of Aviation Safety
Washington, DC 20594

October 5, 2006

AIR TRAFFIC CONTROL GROUP FACTUAL REPORT

DCA06MA064

A. AIRCRAFT ACCIDENT

Location:	Lexington-Blue Grass Airport (LEX), Lexington, Kentucky
Operator:	Comair flight 5191 (COM5191)[1]
Date:	August 27, 2006
Time:	0607 Eastern Daylight Time (1007 UTC)[2]
Aircraft:	N431CA, CRJ-100

B. ATC GROUP

Chairman: Hilton W. Hall Jr., NTSB
Washington, DC

Sandra L. Rowlett, NTSB
Washington, DC

Joe Mantello, Federal Aviation Administration (FAA)
Washington, DC

Ken McConahay, National Air Traffic Controller's Association (NATCA)
Atlanta, Georgia

C. SUMMARY

On August 27, 2006, about 0607 eastern daylight time, Comair flight 5191, a Bombardier CL-600-2B19 (CRJ-100), N431CA, crashed during takeoff from Blue Grass Airport, Lexington, Kentucky (LEX). The airplane, which had been cleared for runway 22, taxied onto runway 26 instead and ran off the end of runway 26. Of the 47 passengers and 3 crewmembers on board the airplane, 49 were killed, and 1 received serious injuries. The airplane was destroyed by impact forces and post crash fire. The flight was operating under the provisions of 14 *Code of Federal Regulations* Part 121 and was en route to Hartsfield-Jackson Atlanta International Airport, Atlanta, Georgia (ATL).

1 During ATC voice communications, Comair flight 5191 was referred to as "Comair 191".

2 All times are expressed in Coordinated Universal Time (UTC) unless otherwise noted.

D. IN-BRIEF

On August 28, 2006, the ATC Group met at the LEX Air Traffic Control Tower (ATCT) and met with Deborah Ransdell, ATO-S; Scott Guetzko, ATO-S; Mark Baylens, AGC-400; Pam Teasley, AJO-2E1; Daryl Collins, Cincinnati Hub Manager; Duff Ortman, LEX Air Traffic Manager; Jennifer Post, AOV; Joe Mantello, AOV. Mr. Ortman explained the sequence of events leading to the accident. The team then reviewed training records, listened to recorded voice communications and reviewed a radar replay of the accident. On August 28, the team viewed a demonstration of a CRJ-100 taxi on the airport and runways to determine the conspicuity of the airplane on the airport. The team interviewed appropriate personnel then, on August 30, 2006, concluded the field phase of the investigation.

D. DETAILS OF THE INVESTIGATION

1. History of Flight

At 0447[3], all LEX tower and radar positions were combined and being worked from the local control position in the tower cab. In addition to those functions, the tower controller was responsible for obtaining releases from the Indianapolis (ZID) Air Route Traffic Control Center (ARTCC) Traffic Management Unit (TMU), recording the ATIS[4] broadcast and all other operational and administrative duties required of a tower/radar facility.

At 0943:35, the LEX tower controller issued Sky West (SKW) 6819 an IFR clearance to Chicago O'Hare International Airport (ORD) and, 2 minutes later, issued an IFR clearance to EGF 882 to Dallas-Fort Worth International Airport (DFW).

At 0949:42, the pilot of Comair (COM) 5191 advised LEX they were going to Atlanta and had ATIS information "A."[5] The LEX tower controller provided the clearance: "Cleared to Atlanta Airport via Bowling Green (BWG) ERLIN 2 arrival. Maintain 6000. Expect FL270 10 minutes after departure. Departure [frequency] is 120.75. Squawk 6641." The pilot replied, "Okay gotta uh bowling green uh missed the other part, 6000, 20.75, 6641." The controller advised the flight was cleared via the "ERLIN2 arrival", which was acknowledged by the pilot.

At 0954:27, the pilot of SKW6819 requested to "push" from the gate. The controller instructed the pilot to advise when they were ready to taxi.

At 0955:44, American Eagle flight 882 (EGF882) advised they were pushing from gate C4.

At 0956:27, the controller advised ATIS information "B" was current, and the altimeter was 30.00.

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3 All times in the "History of Flight" were obtained from the LEX recorded air traffic control digital voice recording system (DVRS), which used global position satellites (GPS) as the timing device.

4 The Pilot/Controller Glossary defines ATIS as: Automatic Terminal Information Service. The continuous broadcast of recorded noncontrol information in selected terminal areas. Its purpose is to improve controller effectiveness and to relieve frequency congestion by automating the repetitive transmission of essential but routine information.

5 See section 2 for ATIS information.

At 0957:07, the controller obtained a release from the ZID TMC for SKW6819.

At 0957:38, the pilot of SKW6819 requested to taxi. The LEX controller instructed the flight to "taxi to runway 22, altimeter 30.00 and the winds are 200 at 8." The pilot read back the clearance.

At 0959:05, the pilot of COM5191 advised they were pushing from the gate. The controller instructed him to advise when they were ready to taxi to the runway.

At 0959:33, EGF882 advised ready to taxi with ATIS information "A". The controller instructed the flight to taxi to runway 22 and provided the altimeter, 30.00, and wind 200 at 7. The pilot acknowledged.

At 1000:30, the pilot of SKW6819 advised they were "ready on [runway] 22". The LEX controller replied, "…turn right heading 270, runway 22 cleared for takeoff." The pilot read back, "right turn to 270 cleared for takeoff on runway 22, SKW6819."

At 1001:38, the pilot of EGF882 advised they were ready to depart and the controller instructed him to hold short of the runway.

At 1002:01, the pilot of COM191 advised they were ready to taxi and advised they had ATIS information "A". At 1002:04, the LEX controller instructed the pilot, "COM191 taxi to runway 22, altimeter 3000 and the winds are 200 at 8." The pilot replied, "three triple zero and taxi 22, COM191."

At 1002:12, the LEX tower controller cleared EGF882 for takeoff with the instruction to "fly runway heading." The pilot read back the clearance. The controller then advised SKW6819 they were "radar contact say altitude leaving." The pilot reported they were through 2,100 for 6,000 feet. The controller instructed the pilot to "climb and maintain one zero thousand, 10,000 join V171 and resume own navigation." The pilot read back the clearance.

At 1003:34, the LEX tower controller radar identified EGF882 and asked for the altitude they were leaving. The EGF882 crew responded, "out of 1,700 now." The controller instructed the flight to climb to 10,000 feet, which was acknowledged by the crew.

At 1004:00, the pilot of SKW6819 advised the LEX controller "we need right of course for weather about a 300 heading." The controller approved the request.

At 1004:06, the LEX tower controller called the ZID TMC and requested the release for COM191 advising that the flight was "going to Atlanta over Bowling Green." The ZID TMC released the flight. The LEX controller acknowledged with his operating initials. The LEX controller then coordinated with the ZID LEX sector controller and advised SKW6819 was on a 300 degree heading to "get around some weather." Both controllers terminated the conversation with their operating initials.

At 1004:26, the LEX controller instructed SKW6819 to contact ZID on frequency 126.37, which was acknowledged by the pilot.

At 1004:33, the controller instructed EGF882 to turn right heading 270 to join V171 and resume their own navigation. This crew acknowledged.

At 1005:15, the pilot of COM191 advised, "[unintelligible], Comair121, ready to go". At 1005:17, the controller responded, "Comair 191 fly runway heading cleared for takeoff." At 1005:21, the pilot responded, "runway heading cleared for takeoff, 191".

1005:25, the controller asked the pilot of EGF882, "that heading work for you do you want to go uh northwest around the weather that's ahead of you?" At 1005:31, The pilot replied, "that looks fantastic, thank you very much." At 1005:33, the controller asked the pilot to "say again, please." At 1005:34, the pilot said, "this heading looks great, EGF882." At 1005:37, the controller instructed the pilot, "EGF882, contact Indy Center one two six point three seven, good day." At 1005:40, the pilot replied, "twenty six thirty seven, EGF882, see ya."

During his interview, the local controller stated that after he conversed with the pilot of EGF882, he "turned around" to perform administrative tasks. He heard a noise, saw a fire west of the airport, and at 1007:18, activated the crash phone.[6] At 1007:22, the fire department responded, "go ahead" and the controller said, "This is Lexington, Alert 3[7], west side of the runway with a Comair Regional Jet taking off." The fire department replied, "Alert 3, west side of runway." The controller continued, "yea, west side of the airport just off the approach end runway 8." There was discussion to confirm that the airplane was "off runway 8". The tower controller then stated, "He was taking off runway 22."[8]

2. Weather Information

ATIS Information "A":

> Lexington blue grass information alpha, 0854 automated weather, wind 190 at 8, visibility 8, few clouds 6,000, sky broken 9,000, temperature 24, dew point 19, altimeter, 3000. ILS and visual approach in use, landing and departing runway 22. Runway 22 glide slope out of service, pilots use caution for construction on the air carrier ramp, hazardous weather information available on HIWAS[9], flight watch, or flight service frequencies, all departures contact ground control on 121.9. Advise you have information alpha.

ATIS Information "B":

6 The crash phone was the direct communication to the Airport Fire Department.

7 See section 13 for further information.

8 For a complete transcription of the communications and crash phone conversation, see attachment 1, "Aircraft Accident Package".

9 Hazardous Inflight Weather Advisory Service - Continuous recorded hazardous inflight weather forecasts broadcasted to airborne pilots over selected VOR outlets defined as an HIWAS Broadcast Area.

> Lexington blue grass information bravo, 0954 automated weather: wind 200 at 7, visibility 8, few clouds at 9,000, scattered 12,000, temperature 24, dew point 19, altimeter 3000. ILS and visual approach in use, landing and departing runway 22. Runway 22 glide slope out of service, pilots use caution for construction on the air carrier ramp, hazardous weather information available on HIWAS, flight watch, or flight service frequencies, all departures contact ground control on 121.9. Advise you have information bravo.

Mr. Damron was certified to take Limited Aviation Weather Reporting Service (LAWRS) observations. Due to his workload after the accident and being the only person in the tower cab, the National Weather Service was not notified and a special weather observation was not taken. The 5-minute ASOS weather observation at 1010 UTC was: wind 200 at 9 knots, visibility 8 statute miles, few clouds at 12,000 feet, temperature 24, dew point 19, altimeter 30.00.

3. NOTICE TO AIRMEN (NOTAM)

At the time of the accident, numerous NOTAMs were in effect. (See attachment 1 "LEX ATCT Accident Package for details of those NOTAMs.)

4. Traffic Count

According to LEX Form 7230-10 for August 27, 2006, the hourly traffic count was:
0000-0100 local time: 9 aircraft
0100-0200 local time: 1 aircraft
0200-0300 local time: 4 aircraft
0300-0600 local time: 0 aircraft
0600-0700 local time: 3 aircraft

5. Facility/Airport Information

At the time of the accident, LEX ATCT was a Air Traffic Control (ATC) Level 7 combined radar/tower facility providing ATC services from the surface up to 10,000 feet within 35 miles of Lexington, Kentucky. At the time of the accident, the controller was working the clearance delivery (frequency 132.35), flight data, local control (LC) (frequency 119.1), ground control (GC) (frequency 121.9), and radar departure (DC) and approach control (AC) positions combined in the tower at the local control position, Position 3.

Lexington-Blue Grass Airport had two runways, runway 4/22 and 8/26. Runway 22 was the primary use runway and was 7,003 feet long and 150 feet wide and was equipped with high intensity runway lights (HIRLS) and runway identifier lights. The centerline lights were out of service. Runway 8/26 was 3,501 feet long and 75 feet wide, and crossed runway 4/22 approximately 700 feet south of the threshold of runway 4/22 and no runway lights were operational on that runway. Runway 8/26 was used less than 2 percent of the time and typically by single engine general aviation aircraft. Runway 8/26 had a weight restriction of 12,500 pounds. Winds at LEX were predominately southwesterly, favoring runway 22 operations.

The field elevation was 970 feet at the departure end of runway 26 (approach end of runway 8).

LEX tower was equipped with an Airport Surface Observation System (ASOS). There were no land and hold short (LAHSO) operations at LEX. The facility was not equipped with an Airport Surface Detection Equipment (ASDE) or Airport Movement Area Safety System (AMASS) nor was the facility scheduled to receive either equipment. The day of the accident, the tower radar display (D-BRITE) was slaved from the ASR-7. An ASR-11 was under construction and expected to be commissioned in August 2007.

At the time of the accident, LEX was nearing the end of a 3-year, $35 million, runway safety area project to create 600 feet overrun areas at each end of runway 4/22. The creation of the runway safety areas required runway 4/22 to be moved 325 feet to the southwest. On August 18-20, 2006, LEX was closed in order to resurface the relocated runway and paint new markings. This movement of the runway required the existing taxiway connectors to be renumbered and a new taxiway constructed at the approach end of runway 22. That taxiway, A7, was to be constructed in the Fall 2006. The current taxiway which aircraft use to access the threshold of runway 22 was labeled as "A" on local airport diagrams. Prior to the movement of the runway, this taxiway was known as "A5". The Airport Facility Directory published on August 3, 2006, did not depict this taxiway but instead showed A7, the taxiway to be constructed. The taxiway leading to the old runway 22 threshold was closed and marked with lighted barricades.

6. Taxi Demonstration[10]

On August 28, 2006, at approximately 2315 local time, the ATC Group, Vice Chairman Sumwalt and Member Hersman met at LEX ATCT to observe a taxi demonstration of a Comair CRJ that taxied on taxiways A and C, and runways 26 and 22 to determine the conspicuity of the aircraft on the taxiways and runways at night. The taxiway lights were on step 2[11]. There were no runway lights illuminated on runway 26 and the runway 22 HIRLs were on step 3[12].

From the view in the tower, it appeared the CRJ was clearly visible while on all taxiways until the parking garage blocked it from view. Although the airplane was still visible, the garage blocked the right side of the airplane. The airplane was clearly visible as it exited runway 22 at taxiway C.

When the aircraft taxied on runway 26, the airplane was clearly visible from the tower cab; however, it was difficult to determine whether it was on runway 26 or runway 22. Looking at the runways from the tower cab, the approach ends of runway 26 and 22 appeared to be aligned. Once the aircraft passed the intersection of runway 22, the taxi route became more discernable because the runway 22 lights provided a visual reference. The parking garage lights provided ambient light but not enough to distinguish the runway surface. It was difficult to determine whether or not the aircraft was on a runway or taxiway.

10 For more information on the taxi route, see the Operations Group Chairman's Factual Report.

11 Taxiway lights had 3 settings: steps 1, 2, and 3.

12 HIRLS had 5 settings: steps 1, 2, 3, 4, and 5.

When the aircraft taxied on runway 22, the airplane was clearly visible and it was easy to determine that the airplane was on a runway due to the runway lights. As the aircraft entered runway 22 at taxiway A, the airplane's landing lights appeared brighter. Additionally, as the CRJ proceeded westbound on the runway, the airplane was more discernable due to the illumination from a combination of the runway lights and aircraft lighting.

The flashing red lights on the barricades located on taxiway A north of the approach end of runway 26 were clearly visible from the tower cab.

7. Personnel Information

Christopher R. Damron (Operating initials: CD) LEX Tower/Approach Controller

According to the training records:
Entered on duty (EOD) FAA: October 5, 1988
EOD LEX: January 30, 1989
Tower Visibility certification: January 24, 1989
Control Tower Operator, LEX: November 21, 1989
Facility rated: November 11, 1990
On the job instructor (OJTI): March 16, 1992

On August 29, 2006, the ATC group interviewed Mr. Damron; his representative was Peter Gambrel, NATCA Attorney. In response to questions, Mr. Damron provided the following information:

He entered the FAA in October 1988. He came to LEX in January or February 1989 and had been at LEX since that time. He was an ATCS, FPL, OJTI, (certified but not current) and had been a controller-in-charge (CIC) since 1990 or 1991. He became an FPL in mid 1990. He was not a pilot and no military experience. He had no health or personal issues that would have affected his performance. He felt rested "normal after day shift and sleeping a couple of hours."

His shift the previous week was: Wednesday, 1700-0100 local time[13]; Thursday, 1500-2200 (with one hour of annual leave at the end of the shift); Friday 0800-1600; Saturday 0630-1430 and Sunday (day of the accident) 0000-0800. He came in ½ hour early for credit time.

Mr. Damron explained his activities 24 hours prior to the accident. On August 26, 2006, he woke at 0540 to work at 0630. He was home at 1445 and took the dog out. He laid down at 1530 and woke about 1730-1800. Between 1800-2100 he "messed around" and had dinner. At 2100 he went for a run and between 2200-2230 he took a shower and prepared for work. He arrived at the facility around 2325 and signed in at 2330. It took him 10-15 minutes to commute from home to work, depending on traffic.

When he arrived at the facility he signed in, went to the radar room and checked the "yellow log" (Daily Operations log). About 2337, he relieved the tower controller (John Hawkins) and

13 All times in this section are in local time.

the TRACON was combined by 2345.

Once he signed on, he checked the ASOS for weather and checked the traffic and Flight Data Input/Output and "updated everything". He then worked traffic.

He combined approach and departure control and it's common to combine to 1 person. According to Mr. Damron, there had been 1 person midnight shifts at the beginning of the year then it went to 2 persons. In March, the facility went back to 1 person. He didn't know the reason.

Administrative duties performed on the midnight shift: CRU-ARTS, sign in and certify which people left the shift. If someone called in for sick leave annotate that information. This takes about 2 minutes; Daily log, don't really do anything. He could start the log but normally the 1600-0000 supervisor/CIC will get it started. This takes about 10-15 minutes. Typically he would do both of those items at 0630 when he's downstairs. At midnight, typically he would just work traffic.

He stated that he completed the tower and Supervisor/CIC checklist but couldn't recall items on the list.

Mr. Damron stated that the runway light checklist has several options: "Normal, OTS [out of service], step". He always checked those items. He said runway 22 runway lights were on step 3, taxiway lights were on step 2. He didn't know the reason for those steps but they could be a default setting. The steps were changed based on weather and visibility. The runway and taxiway lighting configuration information was available in FAA Order 7110.65 and on the IDS (Informational Display System) that were readily available to him for reference.

Mr. Damron explained the traffic complexity on the midnight shift. The first 3 hours, there was a little traffic, "nothing overwhelming. There was nothing between 0300-0545." He stated during that time he tried to stay awake. He ran a little bit and listened to the radio. At 0545 the "first guy called for clearance." The traffic level at this time was a normal occurrence. It was busier during the week than on Sunday. The early morning flights were scheduled commuter flights.

Runway 22 was in use. Runway 26 was not available. Runway 26 was only available during daytime VFR operations for aircraft 12,500 pounds or less. He couldn't recall how often it was used but he had not used it the week prior to the accident. He said, "Most want runway 22. It's a better runway, smoother."

Mr. Damron explained the sequence of events as he recalled them: At 0540, SKW6819 requested a clearance. He issued the clearance. A few minutes later EGF882 called and he issued the clearance. There was nothing abnormal about the clearances and the clearances did not require any revisions. A minute or two later, COM191 called for his clearance. SKW6819 asked for taxi instructions, which he provided with the wind and altimeter. The pilot read back the clearance and started out.

EGF882 called ready for taxi and he issued the taxi clearance to runway 22. He obtained a release from ZID TMU for SKW6819 destined for ORD. Mr. Damron explained there was a facility requirement to obtain a release for all flights destined for airports such as ORD, ATL, and DTW. The TMU released the flight.

SKW6819 requested a takeoff clearance from runway 22 which he provided. EGF882 called, then he recorded an ATIS. COM191 requested taxi instructions. EGF882 advised he was ready for departure and Mr. Damron instructed him to hold short. The pilot read back the hold short instruction. Because SKW6819 and EGF882 were both using V171, he wanted to give ZID in-trail spacing. Once EGF882 departed, 10 miles separated both aircraft. Also, SKW6819 turned WNW for weather so it wasn't a factor in the end.

When COM191 was on taxiway A parallel to runway 22 and SKW6819 and EGF882 were already airborne when the pilot of COM191 called ready for departure. At the time, he was on the telephone with flow control. He provided EGF882 a heading and asked if the heading was acceptable because it was taking the flight through the weather. The pilot said he was fine. Mr. Damron then handed off the aircraft to ZID.

COM191 requested a takeoff clearance. Mr. Damron issued the takeoff clearance and turned to the center console to do the traffic count. He heard a noise and saw fire west of the airport and called crash, fire and rescue and told them there was an accident west of the airport. He looked at the D-BRITE, but couldn't tell the location of the accident because it was dark.

When asked what he could see of the airplane while on taxiway A, he said that he saw it straight across from the parking lot. He saw lights and the tail of the airplane. He didn't recall seeing any strobes, red or green lights.

He saw COM191 make the turn "assumed toward [runway] 22."

When asked why he was doing the traffic count, he said that it took about 2-5 minutes. He only had to count the traffic from the first 3 hours. It was common for him to pile all the flight progress strips that he obtained through the night by hour and count them all at once.

After the takeoff clearance, he had no further communications with COM191. He saw the flight make the turn; he scanned the departure end to the approach end of the runway to ensure there were no vehicles and checked the final approach on the DBRITE. He didn't notice COM191 in various locations after he performed those scans.

The last time he was aware of COM191's location was when the airplane was in a turn "like he was going on [runway] 22."

After the accident, he called the Air Traffic Manager (ATM) and advised him of the situation. He called the Atlanta Regional Operations Center (ROC) to notify them. He completed the accident checklist paperwork.

Mr. Damron explained that on Sunday mornings, typically someone comes in at 0630 but on this

day, the controller advised he would be late because of traffic. He arrived at the same time as the ATM. At 0640, Faron Collins (CPC) relieved Mr. Damron who then went downstairs to assist the ATM with notifications. When asked what he thought happened, Mr. Damron explained that he believed the flight took off from runway 22 but didn't know what happened. "Not a possibility in my mind." He prepared his personnel statement and worked on a checklist. At 1330 he had a drug/alcohol test[14] and left the facility about 1415. He was home by 1430.

There had been a lot of construction on the airport. There was a whole weekend when runway 4/22 was closed for repaving and repainting. Taxiways were closed "off and on". Taxiway A5 was closed but plans were in the works to build taxiway A.

He didn't know if the lights worked on runway 8/26 in the tower cab. "Sometime after I got here they disabled the lights."

When asked about the previous departures, SKW6819 and EGF882, he noticed them about the same point, across the parking garage. He noticed EGF882 at the end of the runway because the flight crew had to hold short of the runway.

He didn't know the type of barricade or type of lights that were on the barricades.

When asked what he would do if he saw an aircraft on a runway that was not lit, he said he would say, "it's runway 26, it's closed."

There was nothing unusual about the flight or clearance. He didn't recall hearing "Toledo" or "Comair 121". The pilot didn't appear rushed.

The standard departure to Atlanta was runway heading (220) climbing to 6,000 feet.

He waited to do the traffic count at the end of the shift to do it all together.

At no time did Mr. Damron believe that COM191 would depart from runway 26. "In 17 years, no one [air carriers] had done it. They may only take runway 26 as a student pilot and then they'd question the clearance."

When asked about 2 persons on a midnight shift, he said he didn't know if it would have helped. He didn't mind 1 or 2 people on the midnight shift. It would be better if someone was sick or had a heart attack, but he had no complaints.

All the equipment was working except the runway 22 glide slope, "which wasn't relevant in this accident". He had not filed an unsatisfactory condition report (UCR) while at LEX.

Mr. Damron learned that COM191 took off from runway 26 between 1030-1100 from Randy Dailey, NATCA, who was reviewing the radar data. Mr. Damron "couldn't believe it."

14 Test results were negative.

When asked what he could have done to prevent this accident he said, he probably would not do traffic count at that time. He was not sure if the airplane took a rolling takeoff.

Sometimes he could hear aircraft take off depending on the weather. He said he didn't hear any of the 3 aircraft that morning and said the radio that was playing was not a factor.

When asked if he had ever seen a flight use runway 26 at night he stated that he had seen Cessnas and Cherokees on runway 26 but that was years ago when the lights worked. He thought he had seen it "but it had been years."

When asked about the runway light intensity, he said that sometimes pilots would ask to reduce the intensity, if it was a little bright.

He didn't know if the pilots were confused about the construction, "they could have been".

He indicated that the visibility was 5, 6, or 7 miles in haze with scattered high clouds. He said it was sprinkling after COM191 departed. He saw the rain on the windows. He could see runway 22 because of the runway lights, he couldn't see the actual runway 26. Lights from the parking area illuminate the area.

Mr. Damron explained that 0800 was the end of his shift. He indicated 2 controllers come in for the day shift, 1 controller at 0630 and another controller at 0700. He intended to stay until 0800 but could have left at 0730.

Typically he would take a break at 0630 when the first person came in and he would provide a position relief briefing to the CIC who came in at 0700. The CIC would determine if GC/LC or the TRACON would open.

He explained traffic at 0600 is 3-4 departures, usually between 0545-0615. During weekdays, at 0630 there was 2-3 more aircraft. On a busy VFR day traffic gets heavier around 0830-0900 with mainly general aviation aircraft using runway 4/22.

He stated that there was precipitation 5 – 10 miles west of the airport. There were no levels displayed on the D-BRITE and he could filter it but could not inhibit it. The radar displays in the TRACON do not have the capability to show precipitation levels. He would ask if the pilots have weather radar or he would provide the information.

The facility was equipped with a low level wind shear alert system but it did not activate.

The day of the accidents there were NOTAMs in place for lights. Runway 22 edge lights had been in and out of service during the week. They were out for a few hours earlier but were back in service. He became aware of it because he read it on the daily operations log. They were working the night of the accident.

He stated that one of the duties of the morning shift supervisor was to verify NOTAMs with the Louisville Flight Service Station. He coordinated with the ATL ROC for outages but had not

notified them about an accident.

He stated that he didn't know why he didn't take the flight progress strips downstairs and count them at the end of the shift.

When asked about airport diagrams in the tower, he stated one was in the IDS and another under the plastic on the console. He was not confused about which taxiways were open or closed.

After the accident he wrote a personnel statement at 0700 and another at 0730 after he thought about the situation for a while. He was content with his statements.

When asked how he received learned about airport construction he said the information was in the read and initial binder, or Diane English (staff specialist) or his supervisor would brief the information. He was comfortable with the training.

He stated that the facility could only use taxi in position and hold during the hours of 0800-1800 when there are two controllers in the tower. When asked about his preference of 2 controllers in the midnight shift he said that some prefer to have 2 controllers in the tower and others want one controller in the tower and one in the TRACON. If the weather was bad, he preferred to have it split.

He said the pre-duty read and initial binder was located in the TRACON and he would read it before going to the tower.

When asked if it was good operating practice to restate the runway in a takeoff clearance, he said, "In hindsight, it should be done. But it's not required when there is one runway in use. When it's busy and we're using both runways then I do."

There was nothing to restrict his visibility; there was no rain on the windows. He stated that the morning of the accident, it was darker than normal. He said when he woke that morning he thought he got up an hour early because it was so dark.

He had taken 5-6 familiarization rides on aircraft.

He hadn't instructed any crews to abort in 15-16 years. If he saw an aircraft on the wrong runway he would tell them to abort. When asked whether pilots got lost on the airport, he indicated a "low time general aviation pilot may lose their way but no business class or commercial pilots. No part 135/121 crews took longer to depart because of confusion." He would expect a pilot to ask if he's confused or on the wrong runway.

As a tower controller, he must "slew" and "enter" targets on the DBRITE to automatically hand them off to ZID. He couldn't recall if EGF882 was handed off before or after COM191 departed.

He would typically wait until flights are 6-7000 feet and 10-15 miles out before handing them off to ZID.

He was required to wear glasses while performing ATC functions and he was wearing them the night of the accident.

He said the centerline lights, Touchdown Zone Elevation (TDZE), and runway distance remaining markers were out of service at the time of the accident. It was normal to use a handset and listen to a radio while on midnight shifts. He couldn't recall the last emergency situation he worked on a midnight shift although about 5-6 years ago fire alarms activated in the tower cab, but that wasn't an aircraft emergency.

He couldn't recall if an electrician was working on the runway lights the night of the accident.

The parking garage was built 5-6 years ago. Originally, the lights from the garage were in the controller's eyes and were adjusted. The garage blocks their view of part of taxiway A.

Typically 50 percent of the time they use runway 4 and the other 50 percent use runway 22.

He didn't experience any issues when runway 22 was moved.

He said the traffic count in the tower is separate from the TRACON traffic. Each hour the tower called the TRACON with the information but everything was kept in the TRACON.

It was not his habit to issue the runway number in a takeoff clearance; it was a fluke to issue the runway. He was surprised when he was advised he issued the runway to SKW6819.

He stated that an FBI agent interviewed him and the NATCA representative on the day of the accident at about 1030-1100, before he was aware that the flight had departed from runway 26. The interview took about 30 minutes. He said the FBI agent asked about terrorist activity or intention and about Mr. Damron's background.

Localizer for runway 22 was on.

During the follow up interview, Mr. Damron stated the following information:

Mr. Damron stated that he first became interested in working in air traffic control when he was working in mining support and wanted another line of work. He liked that there was change every day in ATC; it was not the same thing all the time. It was a fun job. He liked working the local control position because one could see outside. He wasn't stuck in a dark room, and he could see changes in the weather.

Asked what he liked about working the mid-shift, Mr. Damron said it made for a longer weekend, which was the primary reason he liked about it. Asked what he disliked about the mid-shift, he said he disliked the lack of sleep sometimes, but he "always managed to deal with it."

Mr. Damron was very familiar with the LEX tower and the local control position, having worked at the tower for 17 years. At the time of the accident, he was working alone, with all the

positions combined to him. Asked how that worked out when he worked all the positions combined, Mr. Damron said, "Normally fine, sometimes it gets a little busy, but normally fine."

Mr. Damron reviewed his work schedule, stating that he worked the following shifts:

Mr. Damron's work schedule the week of the accident:

Day	Start Time	Stop Time	Shift Length	Turn
Wednesday 8/23	1700	0100	8:00	14:00
Thursday 8/24	1500	2200	7:00	10:15
Friday 8/25	0815	1615	8:00	14:15
Saturday 8/26	0630	1430	8:00	09:00
Sunday 8/27	2330 (Sat)	0730	8:00	

One minor scheduling irregularity occurred during Mr. Damron's work week when he took an hour of leave at the end of his shift on Thursday because it was his wife's birthday.

Mr. Damron was asked to review his sleep periods during the 72 hours prior to the accident.

Mr. Damron took a nap on Saturday before going in to work his Sunday mid-shift. He lay down about 1530, and woke up between 1730 and 1800. He described the quality of his sleep as "not real good." He said his afternoon naps prior to working mid-shifts were "Always not restful." He tossed and turned a lot. He had never been able to sleep in the afternoon like that. It was standard for him.

When asked how he felt during his Sunday mid-shift, Mr. Damron said he felt "Fine." He stated that he got a little tired about 4 or 5, but "normally I get up and walk around the room a little bit." Asked how he felt during the few minutes prior to incident, Mr. Damron said he felt "fine." He stated, "The guys start calling and you get your second wind. You know it's coming about 5:30, so you try to wake yourself up." Mr. Damron said strategies he used to wake himself up included walking around, doing jumping jacks, or doing something to get the blood moving. That particular shift he just walked around quite a bit inside the tower.

Mr. Damron was asked how he felt during the shift compared to other mid-shifts, and he stated that he felt, "About the same." Compared to a day or swing shift, he felt, "A little more tired on the mid shift." Asked whether he felt alert during the shift when the accident occurred, Mr. Damron said yes.

Mr. Damron's alarm was set to wake him at 0540 on Saturday morning, and he did get up at that time. He did not feel tired that morning. He had gone to bed about 2230 Friday evening and slept very well for about 7 hours.

Saturday evening before work, Mr. Damron was up by 1800. He had dinner about 1930. He did not eat anything else before the accident occurred. He went for run about 2100 and returned home about 2140. Then he visited with friends at his home for about half an hour before taking

a shower and going to work. Upon arriving for his mid-shift at the tower, Mr. Damron made a pot of coffee and drank two cups during his first hour on shift.

Friday morning he had gotten up about 0715 before going to work. His house was just 15 minutes away from the airport. He felt good Friday morning. Sometimes he did not sleep well during a quick shift turnaround, but he did that time. Thursday night he had gotten to bed about 2330.

Friday afternoon, Mr. Damron had gotten home from work about 1630 and engaged in routine activities around the house. At 1800, he went out and got something to eat with his son. He got home from dinner around 1930 and engaged in routine activities at home until bedtime.

Thursday morning, Mr. Damron had gotten up about 0915, engaged in routine activities around the house, and ran some errands.

Mr. Damron work schedule was routine for him the week of the accident. He had that same schedule every other week. On the alternate weeks, he had a day shift on Sunday instead of a mid-shift. Asked whether he liked his schedule, Mr. Damron said, "It's alright." He would have preferred to have Sundays off, but it was okay.

Mr. Damron said that he normally needed 7.5 and 8.5 hours of sleep per night to feel rested during extended time off, after he had had a few nights of recovery sleep.

Asked whether he had had a chance to get any rest during the mid shift, Mr. Damron said no.

Mr. Damron's Sleep schedule in the 72 hours before the accident:

	Sleep Start Time	Sleep Stop Time	Sleep Period Duration
Wed-Thurs	0130-0145	0915	07:15
Thurs-Fri	2230	0715	08:45
Fri-Sat	2230	0540	07:10
Sat-Sun	1530	1730	02:00

Mr. Damron's last vacation was at the end of July. It was a week. It had been very restful.

Mr. Damron had no young kids living at home with him.

Mr. Damron stated that his health was good. He described his vision as good, although he was nearsighted and had glasses he was required to wear when he was working traffic. He stated that he had them with him during his accident shift. He said he did not wear them the whole night, only when he was working traffic. He stated that he was wearing them at the time of the accident. He described his hearing as good.

Mr. Damron stated that he did not take prescription medication. He occasionally drank alcohol – one or two beers on weekends. His last drink before the accident was Friday night when he had

two beers at the restaurant he visited for dinner. He did not use tobacco products. When asked whether, in the 72 hours before the accident, he had taken any medication, prescription or non-prescription that might have affected his performance, Mr. Damron said no.

Mr. Damron reported no significant life events in the year before the accident in the areas of health, finances, or personal life.

He characterized the outside view from the LEX tower as "Normally good," depending on the weather. There were no obstructions to visibility. Visual displays were easy to see inside the tower. There were no unusual noises prior to the accident that would have interfered with his ability to hear radio transmissions. The temperature in the tower was "Fine."

Mr. Damron was asked what the taxiway to runway 22 was called. He stated that the old A5 was now labeled A7 on the airport diagram. However, "Now they're calling A7 just A. The old A5 is A." He stated that he referred to A7 as A.

Asked whether any special precautions were being taken in issuing instructions to departing airplanes with change in the taxiways, prior to the accident, Mr. Damron said no. Asked whether the change in the taxiways had resulted in any confusion, Mr. Damron said, "Just from a couple of low time pilots or something like that."

Mr. Damron was asked how easy it was to distinguish which runway an airplane was lining up on to take off at night. He stated, "At night it's kind of difficult because you're only seeing the lights out there." Asked whether the takeoff positions for runways 22 and 26 overlapped because of his viewpoint from the tower, Mr. Damron said, "Right. From where you're looking at it."

Asked if he had had any airplanes line up on runway 26 after being told to taxi to runway 22, Mr. Damron stated, "I haven't."

Mr. Damron was asked to describe his location in the tower immediately before the accident and to mark that position on a tower diagram[15]. He stated that he was located at the local control position, standing near the DBRITE display.

Asked to describe whether he moved around the tower in the minute before the accident, Mr. Damron said, "At one point I went over to the CD position." He estimated that this happened about 0955 UTC.

Mr. Damron was asked at what point during his clearing of the departures he walked over to the clearance delivery station. He stated, "It was between the three, but can't remember exactly when." Asked when he turned around to process strips for the traffic counts, Mr. Damron said, "After clearing Comair." Mr. Damron was asked to confirm that his movement about the tower occurred in the following order: local control position, clearance delivery, and local control position, turned around to examine strips.

15 See attachment 8, LEX Tower Position diagram

Mr. Damron stated that he as at the CD position a couple of minutes, long enough to cut the ATIS and get flight progress strips.

Mr. Damron stated that the time period between the times he issued takeoff clearance for the first airplane until the time he cleared the accident airplane was about ten minutes. Asked how he was prioritizing his attention during this ten minute period, Mr. Damron stated, "Issue the clearances, then get releases, then once they got out to the runway to clear them, and then get them to where they were going."

The first departure called and was given taxi clearance. It taxied toward the runway, and Mr. Damron got its release from flow management. The flight crew requested takeoff, and Mr. Damron gave it to them. Mr. Damron turned the airplane on course. The flight crew wanted a diversion around weather that was located to the west.

His handling of the second airplane's departure overlapped his handling of the first. He thought it entered the picture a couple minutes after first airplane, but was not certain. The first airplane was cleared and lifting off when second one was requesting takeoff clearance. Mr. Damron stated that they had taxied out at approximately the same time, and he "pretty much had them in trail."

The third departure airplane (the accident airplane) taxied a minute or two behind the others. Mr. Damron got the airplane's release from flow after it started its taxi. This occurred about the time he gave clearance to the second airplane to take off.

Mr. Damron was asked to describe his workload during 10-minute period preceding the accident. He said it was "Standard for that time." Asked whether he would describe his workload at that time as light, moderate, or heavy, Mr. Damron said "It was busy during that 10-min period." He added that there had been no traffic for some time prior to the three departures, and it was a few more minutes after the accident before there was any additional traffic.

Mr. Damron was asked how things worked at the clearance delivery workstation, and whether he had to print out the strip for each airplane. He stated that the strips were automatically printed, but he had to walk over and retrieve them from the CD position. Asked whether he had to walk over and get them one at a time, Mr. Damron said the first two printed out together, then the third one printed about 5 minutes later. Asked whether he had the strips for the departure aircraft before they taxied, Mr. Damron said yes.

Mr. Damron was asked to mark the location he last saw each of the three airplanes before they took off on an airport diagram[16]. He stated that he last saw each of them at about the same location as they began a turn toward the runways.

Mr. Damron asked whether the timing of his takeoff clearance, and his last visual contact with each airplane was consistent with his normal practice when clearing an airplane for takeoff on

16 See attachment 9, LEX Airport Construction diagram

Runway 22. He stated, "When they are cleared depends on when they call to request it." Asked whether the three airplanes were all on their way to the runways when he cleared them for takeoff, Mr. Damron said yes, they were at the point he marked on the airport diagram.

His normal routine before clearing an airplane for takeoff was to scan the DBRITE, see if there was any traffic, then scan the runway see if it was clear. Asked whether he performed each of these scans for the accident airplane, Mr. Damron said yes. Asked whether it was normal for him to watch an airplane actually taxi onto the runway, Mr. Damron said "If there is someone on final and I need them to hurry up I do." Mr. Damron stated that if there was no one on final, "Sometimes I do, sometimes not. Might be doing radar, might have other duties." Asked whether he saw any of the three departure airplanes taxi onto the runway, Mr. Damron said, "Can't say I did, no."

Mr. Damron was asked how Flight 5191 was first instructed to use runway 22. Mr. Damron said, "He got the information from the ATIS that that was the runway in use, then requested taxi, and I issued it."

Mr. Damron was asked to clarify a statement during an earlier interview that he "saw 5191 make turn and 'assumed toward [runway] 22.'" Mr. Damron said, "At the X, he was making a jog toward what I presumed to be [runway] 22."

Asked whether the procedure he used to scan and clear Flight 5191 for takeoff was the same routine he would use in the daytime when clearing an airplane for takeoff, Mr. Damron said yes. Asked whether the procedure he used was typical for other controllers at LEX, Mr. Damron said, "I would think so, yes."

Mr. Damron was asked what he would normally do during a day shift if a pilot called in with the wrong call sign and used the wrong tower name. Mr. Damron said, "If I had the correct one, I would ask if he was calling for that. If he got his number backwards, I would try to correct him." Asked whether it would be typical to correct a pilot who called in with the wrong call sign or tower name, Mr. Damron said yes, however, he did not recall this accident flight crew doing that.

Asked whether his handling of the traffic had been "pretty routine" prior to the accident, Mr. Damron said, "Yes it was."

Mr. Damron was asked if he had encountered any distractions before the accident, and he said no.

Asked whether there were any sources that could have alerted him to the fact that Flight 5191 was taxiing onto wrong runway, Mr. Damron said, "Not that I'm aware of." Asked whether it would have been possible for him to detect it visually out the tower window, Mr. Damron said, "It might have been, yeah."

Mr. Damron was asked whether the tower had any ASDE or other surface movement display, and he said no, but the tower did have a Runway Memory Aid Display (RMAD) light that

flashed on and off that could be used if a controller directed an airplane to position and hold.

Mr. Damron stated that airplane handoffs to ZID were not automatic; they were accomplished manually using the Automated Radar Terminal System (ARTS) terminal. The handoffs for the first two airplanes went smoothly.

Morale at the tower was "Not as good as it has been in the past with everything going on in the contract and stuff, but people know their job and they do it."

With respect to staffing, Mr. Damron said, "It's been better in the past. It's pretty low now." Asked how it had changed, Mr. Damron said, "Retirements, people transferring out and not getting anybody in." Asked whether staffing had changed for the mid-shifts, Mr. Damron said yes. The tower had started running the mid-shift about 7 years earlier. They had had one controller on duty since the beginning of 2006. They put two controllers on for 3 or 4 months, and then it went down to one controller again in late spring, just before summer.

Mr. Damron was asked how working the tower alone made the job different on the mid-shift. He stated, "It makes a difference when all the guys call in the morning, you're not doing all of it yourself. It's nice knowing you have somebody there if something was to happen." Asked whether working alone had any impact on his scanning of the runways, Mr. Damron said, "I really don't know."

Asked whether the recent scheduling had been routine, without unexpected call-ins or overtime periods, Mr. Damron said it had been routine.

Mr. Damron was asked if he had received any commendations for his work performance, and he replied that he had received some time-off awards. Asked whether he had experienced any emergencies at the tower, he said, "Just routine stuff. Alert 1, alert 2, an oil leak, something like that." He stated that he not been subject to any disciplinary actions and he had not been involved in any previous accidents, or runway incursions, or other incidents.

Mr. Damron was asked if he could think of any ways to prevent the recurrence of this type of accident, he stated, "I have no idea. I don't know. It baffles me."

Asked whether anything could be changed on tower side that could have made it easier for him to detect the fact that Comair 191 had lined up on the wrong runway, Mr. Damron said, "At this time, I really don't know."

Mr. Damron was asked if he had experienced any operational errors in the last 2 years, and he said he had not.

Mr. Damron stated that after he cleared Comair 5191 for takeoff, he looked at the D-BRITE but he could not recall looking at COM191 again, "I was watching him [EGF882] and seeing where his track was going and seeing where the weather was."

Asked whether it was distracting having to look at the D-BRITE, Mr. Damron stated, "It might

have been at that point. I don't know. Maybe."

Mr. Damron was asked whether he issued that airplane the weather, and he stated, "Not before he got airborne, no." Asked whether he knew how to issue the weather, Mr. Damron said, "We just tell them where it's at, but we can't tell them intensity. Ask them if they've got radar, ask them if they want to go through it or go around it." He added, "We'll tell them weather at 10 o'clock, five miles in diameter, and ask if they want to go through it or around it." Mr. Damron was asked why he did not issue the weather to that flight, and he stated, "I assumed he knew about it, I know most of these guys have weather radar."

Mr. Damron was asked how tasks were allocated when the mid-shift was staffed with two controllers. He stated that sometimes one controller would work up in the tower while the other worked approach radar in a downstairs facility. Other times, approach radar was worked from the D-BRITE in the tower. It depended whether the person working approach was comfortable doing it using the D-BRITE. Asked what they would do if they knew a 0530 push was coming, Mr. Damron said, "The guy I normally worked the mids with would normally work in the tower with me." That was something the two controllers would work out together.

Mr. Damron was asked whether, when both controllers were in the tower, they would usually split up the approach and local functions, or trade off doing both with one on break. He stated that they would keep the functions split, except when one controller needed a break, or a lunch break. Asked whether the functions would be split by 0530, Mr. Damron said "yes".

Mr. Damron was asked whether he saw anything significant as Comair 5191 was making the turn towards the runways, like a strobe light. Mr. Damron said, "Nothing out of the ordinary" and he couldn't recall the lights of the plane.

Mr. Damron was asked whether he started working on his traffic count right after looking at the radar and taking care of the Eagle flight, and he said yes. Asked whether he noticed any movement of Flight 5191 behind the D-BRITE while he was looking at it, Mr. Damron said, "No I didn't."

Mr. Damron was asked how he could feel fine and alert after having only 2 hours of fitful sleep in the last 24 hours. He answered, "I was tired, but I felt fine, I was alert."

Asked how well he was able to tolerate the mid-shift compared to other controllers, Mr. Damron said, "As well, I guess."

Asked whether he felt at all tired or fatigued around 0300-0400 on the morning of the accident, Mr. Damron said, "At that point, seems it catches up with you, and you feel a little sleep/drowsy. That's when you get up and do something, move around a little bit." Asked when would likely begin to feel tired after working a mid-shift, Mr. Damron said, "Normally once I sit down and try to read, and I'm not moving." Asked when he normally went to sleep after a mid-shift, Mr. Damron said, "Normally as soon as I get home – 8 or so."

Mr. Damron was asked if he experienced any problems looking at D-BRITE, and then looking

out window, as far as night vision goes. He said, "I haven't, no."

Asked whether, when he came in for the shift that night, he had verified the settings of the runway lights being on step 3 and the taxiway lights on step 2, Mr. Damron said he would just check the panel, and make sure the beacon was on and lights were set.

Mr. Damron was asked if he ever looked at the lights, and he said no. Asked whether he would adjust them that night, Mr. Damron said, "I did for an airplane that came out at one or two in the morning." Mr. Damron thought the lights looked fine. No pilots had complained.

The airport normally did an airfield check at 0500. Mr. Damron did not release electrical control when that was accomplished.

Mr. Damron's height was 6'2".

Mr. Damron walked upstairs in the tower with investigators to show where he was standing and how he was oriented in the minutes before the accident.

On September 28, 2006, Mr. Damron stated that he "did not receive or make any telephone calls 30 minutes before to 30 minutes after the time of the accident on August 27, 2006 from a cellular telephone."[17]

Mr. Duff Ortman **LEX Facility Manager**

On August 30, 2006, the ATC Group interviewed Mr. Duff Ortman, LEX ATM. His representative was Mr. David Wiegand, FAA Legal. In response to questions, Mr. Ortman provided the following information:

He had been at LEX since 1992; he spent 10 years as an operation supervisor and 4 as the ATM. Supervisors reported directly to him and controllers first reported to supervisors then to him. He was also responsible for the safety of aircraft within 35 miles of Lexington, KY that includes 7 airports. He reports to Darryl Collins, Hub Manager located in Cincinnati (CVG), OH. Mr. Ortman determined the staffing policy but not the authorized number of controllers at LEX.

When shown a copy of the memo dated November 16, 2005, he said he wrote the memo as a result of information provided to him during a telecon Eastern Terminal Service Unit (ETSU) scheduled every Thursday available to all ATMs. John McCartney, Acting ETSU Director, "gave guidance" to facility managers who have facilities that have radar and tower responsibilities should staff 2 controllers on the midnight shift in order to split the radar function from the tower function. This guidance was never provided in writing. The direction to have 2 controllers on a mid-shift was "do it". The directive was precipitated by an incident at Raleigh-Durham Airport (RDU) but he didn't recall the specifics.[18]

17 See attachment 10.

18 See attachment 4, RDU Operational Error (OE), the tower controller was working both radar/tower functions when the operational error occurred.

He drafted the memo for his controller that was not reviewed by Daryl Collins, John McCartney, or Bruce Johnson. It was internal document.

This memo was placed in a facility read and initial binder for all personnel to review. Normally the memo would not leave the facility; it was an internal FAA document. When asked why the memo or staffing policy wasn't mentioned to the Air Traffic Control Group earlier in the investigation, he stated that "we did discuss staffing" but he had no recollection of the memo. It was not a document that would be retained under normal circumstances.

He stated that November was a busy time operationally. He stated that it was not practical to move staffing resources from the day/swing shifts when the service demand was greatest to a mid shift when the need was minimal. He stated that a staff study was pending to close on midnight shifts. Because of the staffing issue at LEX, he was not able to comply with the guidance issued in the telecon. In January, after the holiday season and people returned from vacations, the staffing resources could be realigned and he could place another person on a midnight shift without impacting the other shifts. Mr. Ortman stated that this could not be done every day but he could most days from January to March. In April, traffic increased and an individual retired. He took the second controller off the midnight shift and put him on days/swings where service demand required. He had discussions with the hub manager regarding this decision.[19]

The hub manager, Daryl Collins, worked with him to draft the request to increase staffing from 19 to 21 controllers, which was the current authorization. At the time of the accident, the facility still didn't have 21 controllers. The day after the accident, there were 15 controllers available. Mr. Collins didn't offer an objection to his decreasing staffing on the midnight shift. There were on-going discussions about staffing and budgetary issues.

LEX had been a 24-hour facility since 1992 when a Delta B737 landed at Frankfurt, KY on a 5,000-foot runway believing it was at LEX landing on a 7,000 foot runway. Because of that incident, LEX became a 24-hour facility.

When asked the reason for 1 person on the Saturday night midnight shift (the night of the accident), he said he was managing the limited staffing. He had minimal demand for user services on that shift. The user demand was more important on other shifts and to staff the midnight shift would have required him to call in overtime. In order to meet the requirement to have 2 on the mid, he would have to call in overtime daily. The support specialist facilitated the operation.[20] He explained he scheduled 2 person mid-shifts more often but had to change it "presumably because I lost someone for medical or something." Typically the changes were made 7 days in advance because contractually he could do that without going through a lot of hoops.

Mr. Ortman didn't know how many other level 7 facilities there were in the ETSU. In the hub,

19 See attachment 7. January 12 Budget email to Mr. Daryl Collins.

20 The ATC Group reviewed the position logs for the January-March 2006 time frame. The documents indicated the facility staffed 2 controllers on the midnight shifts 40 of 70 days.

Tri-Cities Regional Airport (TRI), Bristol/Johnson/Kingsport, TN and Lovell Field Airport (CHA), Chattanooga, TN were ATC Level 7's but were part time facilities. ZID worked with him. The reclassification process is a regulatory process that's very lengthy. In an emergency, they could take the airspace today but they believed the ZID controllers would need additional training if it were done on a long-term basis. If ZID took the airspace and were responsible for providing the radar services during the midnight shift, LEX would be in compliance with having one person providing the tower function.

During the midnight shift, the LEX 7210.3F permits the controller-in-charge (CIC) to determine the location of the 2 controllers during the midnight shift. The only provision is that the 2 functions (radar/tower) be split.[21] The schedule will annotate who is the CIC. There is no direction whether the CIC is in tower or radar room.

LEX was 1 of 40 or 41 towers in the country that were recommended to be closed or hours reduced. In 2004, Mr. Ortman prepared a staff study[22] and sent it to ETSU asking to close the facility on midnight shift. ETSU said they supported the motion and forwarded it to FAA HQ. At the time of the accident, his request was at the Secretary of Transportation level waiting for decision. The airspace reclassification study was done during the winter 2005. He said this was an independent effort to reclassify the airspace because the first request to close the tower was languishing. His first effort was to close the facility and his second effort was to give away the airspace. Since the day of the accident, Mr. Ortman had not received any word on either of the studies.

There were typically 4 controllers on a day shift, 1 additional controller in the middle (1000-1800) and 5 controllers on the afternoon. Because there was limited traffic on Sunday mornings, the staffing "is a little different than weekdays". Controllers do not accumulate a lot of leave because they were able to use their leave at the beginning or end of shifts. He tried to permit 1 person per day of prime time leave and only one person last year had "use or lose" annual leave. He was able to schedule the leave for the individual so there was no requirement to carry it over.

Since the accident, Mr. Ortman has been given a "blank check" in order to staff the midnight shifts. He used to have a budget of $17,000 to pay for overtime for the year, permitting approximately 34 days of coverage.

He advertised for controllers in the summer but did not fill it because he found more creative methods of getting controllers. For example, a controller from an adjacent facility was coming to the facility on a temporary detail to assist with radar data and coordinator duties that would free another fully certified controller to work other positions. Additionally, 2 Veteran's Realignment Act (VRA) controllers were coming to LEX to work. Mr. Collins suggested those options and Mr. Ortman thought it was a great innovative solution to quickly solve a problem. If they did a controller bid, the process takes much longer. He explained that although he may select a candidate they may not be released from their current facility for 12-18 months. "It's all based on staffing issues at the relieving facility."

21 See section 10.

22 See attachment 6, LEX ATCT Staff Study – Reduction in Operating Hours.

Darryl Collins **Hub Manager**

On August 30, 2006, the ATC Group interviewed Mr. Darryl Collins, Hub Manager. His representative was Mr. David Wiegand, FAA Legal. In response to questions, Mr. Collins provided the following information:

Mr. Collins was the District Manager of the CVG Hub. He was responsible for the oversight of 8 other FAA other facilities and 4 contract towers, providing budget and support. All the facilities were located in KY and TN except MEM Tower that belongs to a sub-hub. He helps by providing anything to get their jobs done. He reports to John McCartney, Acting ETSU Director.

He was familiar with Mr. Ortman's memo. He explained that "someone sent the memo to the press and Kathleen Bergen, FAA public affairs for ETSU in Atlanta, called Mr. Collins and asked about it. Sunday afternoon (the day of the accident) she faxed the memo to the LEX ATCT. He stated that Mr. Ortman doesn't always save all documents he places in the read and initial binder. The Safety Board was not provided with the document because "no one believed it had any bearing on the accident. The paramount issue was the controller's performance not how many people were on duty until it came out in the press." He didn't believe having 2 people on the midnight shift would have precluded the accident because controller's attention may be somewhere else. For example, Taxi Into Position and Hold (TIPH) and someone would roll. There is no mandate to have 2 in the tower cab on the mid shift. There could be one upstairs and one downstairs.

He was familiar with the content of the memo because other managers put out similar information. Mr. Bruce Johnson said to staff 2 people on the mid shift and ensure the tower and TRACON functions were done by 2 separate controllers. He explained that the functions could be combined for short time periods (bathroom break) but the expectation was the functions were split. Occasionally Mr. Ortman will show him a document for review but couldn't give a specific example. He had not seen the memo before Sunday when it was faxed to the facility. The memo was consistent with the direction they were given.

When asked if another memo superseded this memo, he said that no "progress report" was issued but the information was disseminated verbally. He was familiar with the idea of ZID taking the airspace and the issue of midnight staffing. He said they were working with ZID to close LEX on midnight shifts because ZID had resources and if ZID had the airspace, it eliminated their need for 2 on a midnight shift. Centers were able to assume the traffic load but the reclassification of airspace is the holdup. He was aware of all the work trying to get ZID to take airspace or get it reclassified. There was talk that documents were sitting in "in-baskets" and getting no progress. He explained there was a similar situation in other facilities such as McGhee Tyson Airport (TYS), Knoxville, TN, an ATC level 8 that has no traffic at night.

Mr. Collins stated that he believed they got the direction in October or November 2005 but he couldn't recall specifically. He received the guidance verbally from Mr. Bruce Johnson repeatedly in telecons and in person at hub manager meetings etc. Mr. Johnson said, "This is a

policy." There was no written formal directive. Mr. Collins stated that hub managers asked for something in writing repeatedly because they are a "show me in black and white agency" but never received it. He further explained, "that doesn't mean we didn't take action, but we never received it in writing". He didn't know why.

When asked about the history of the guidance, Mr. Collins explained that it had "something to do with an incident in RDU last year with one controller on duty. He couldn't recall specifics. There was nothing from Air Traffic Organization – Terminal (ATO-T) or anything provided in writing, just verbal "thou shalts." As of August 27, facilities are still required to have 2 controllers on the midnight shift. Mr. Collins assumed the directive was nationwide although he was really only familiar with activities in the east.

There were 2 ATC Level 7 facilities (CHA and TRI) in his hub but both close at 2300.

There were no other facilities in this hub that had 1 person working the midnight shifts when working tower/radar functions. He knew LEX was not operating constantly with 2 people on mids but he assumed it was rarely operating that way, he wasn't aware it was always that way. Other facilities may be doing it periodically but not on a routine basis.

He would be surprised that LEX only staffed 2 persons on mid shifts 40 of 70 days between January and March 2006. (When stated that was a fact, he was surprised.)

Suggested fixes: More bodies would help LEX. "We were able in the last couple of months to get him [Mr. Ortman] more people." In the last 48-72 hours (when he lost the controller the day of the accident and another on medical leave) Mr. Ortman was getting 2 VRA's and asked to move them in the first quarter instead of the 3rd quarter. HQ responded they were getting FAA Academy slots for the VRA's and working to get another controller (ARTCC training failure) because LEX needed help immediately. A controller from Louisville (SDF), KY with prior experience at LEX will be assigned to LEX for 3 weeks to a month and will receive mileage from SDF. He will be able to work data so someone else can work a control position. His priority was to get Mr. Ortman immediate relief "right now". Another solution would be to eliminate the need to have 2 people on the mid, close the facility at night, "let ZID take the airspace would help. The request is sitting in someone's in basket and they've been ready to close it for 2 years now."

Mr. Collins stated that it would not be a good idea to require 2 people in the tower cab because the TRACON display has better resolution. He further explained that frequently controllers would come to the tower cab toward the end of the shift when traffic load is reduced.

Mr. Bruce Johnson **FAA, Vice President, Terminal Services**

On September 7, 2006, the ATC Group interviewed Mr. Johnson. His representative was Mr. David Wiegand, FAA Legal. In response to questions, Mr. Johnson provided the following information:

He reports to Mr. Russ Chew, President/CEO, Air Traffic Organization, who reports directly to

the FAA Administrator. Mr. Johnson is responsible for all ATCT/TRACONS, surveillance, automation, STARS, ASDE-X, and second level common ARTS. There are five Directors of Operation (DO) at Headquarters and 3 Field DOs across the country who report to him. The field DOs were: Mr. John McCartney, Eastern Region; Ms. Nancy Kort, Central Region; and Mr. John Clancy, Western Region. Mr. Johnson was ultimately responsible for the staffing policy; however, he works in conjunction with the DOs and Finance Teams. Mr. Leo Prusak, LaGuardia Air Traffic Manager, was in charge of finances for the Eastern Region. Mr. Dan Kinder and Jodi McCarthy were responsible for determining staffing numbers as well as the employee request for reassignment program.

In November 2005, Mr. Johnson provided guidance to all facility managers of combined tower/radar facilities to ensure that the functions of the two facilities must be kept separate. This guidance was made verbally to all the DOs who relayed the message to hub managers who relayed it to the individual facilities. There were 3 regions (Western, Central, and Eastern) that had 12-14 hubs in each region and 10-13 facilities within each hub. Prior to the accident, there was no intent to put the guidance in writing but post accident, it was determined that the guidance would be although Mr. Johnson was unsure of the proper format. He didn't know if they would change FAA Order 7210.3, Facility Administration and Operations" or if it would be some type of memo. He said making a change like that is a slow process due to all the necessary reviews. Mr. Johnson referred to the information as verbal guidance not a policy. He expected compliance from the managers because in his mind the message was very clear, but managers thought they had more flexibility than those at headquarters believed. Mr. Johnson stated that's where the clarification needed to be.

When asked the difference between oral and written policy he explained that the genesis of the policy was an operational error that occurred in Raleigh-Durham, North Carolina on August 17, 2005 when one person was working the tower and radar combined. There was some weather in the area and traffic was lower than usual earlier in the shift and there were some late departures. Because the facility didn't hold over a controller, one controller was working tower and radar combined. The controller got busy on ground control and there was a close operational error on radar. That incident was the first Mr. Johnson knew controllers were working both functions together. He wanted to make the clarification orally and brief everyone individually. There was a function description in FAA Order 7210.3 but it was not written as clearly as he would like. Mr. Johnson stated that positions could be combined within the same facility but the functions could not be combined.

When asked if there were any other oral policies, he explained that he provided "verbal guidance" on how facilities should operate, the media made them "policies". Another guidance he provided was information about vertical separation. He provides guidance any time he sees a topic that should be reinforced.

When asked how he ensured facilities complied with the guidance, he said that hub meetings were scheduled once per quarter and he takes the opportunity to reiterate information at that time. He then asks, "How are things working?" "How's it going?" In those discussions he would learn that a facility had 2 scheduled on the mid but someone called in sick and couldn't find a replacement. The facility would then coordinate with the ARTCC to regulate traffic.

Mr. Johnson stated that individual facilities talk to appropriate ARTCCs to determine whether the ARTCC can take the approach control's airspace. Fargo, ND just closed on midnight shifts and Duluth, MN was scheduled to close at the end of September 2006 because there was not traffic. He became aware that the LEX ATM was conversing with ZID to take the LEX airspace after the accident. He wasn't sure of the specifics but knew of the issue of going from a Class C to Class D. There was a list of 26 facilities that don't meet the requirement of 4 airplanes per hour to stay open on the midnight shifts. The FAA closed Fargo and Duluth but was told by Congress to keep the others open for security reasons. Each facility request was reviewed individually. They hadn't closed any facilities since September 11, 2001. Now that air traffic had stabilized, more requests were being reviewed. Typically, the FAA closed 4-6 facilities per year on midnight shifts.

He didn't know of any hub manager asked for the guidance to be put in written format.

When asked what would happen if the lone controller had to go home sick, Mr. Johnson said they would need to close the tower. The controller would record an ATIS advising the tower was closed and advise the ARTCC.

He would not permit Hartsfield - Jackson Atlanta International Airport (ATL) or Chicago O'Hare International Airport (ORD) facilities to work with one controller, they always have a minimum of 2 controllers. Both facilities have a Standard Operating Procedures (SOP) but he didn't know if the staffing requirement was in writing. He didn't know the specific "cut off" that permitted the facility to staff 1 controller on a midnight shift.

No one had precluded both controllers from being in the tower cab as long as they were performing separate functions.

After the accident, Mr. Johnson learned that LEX was operating with one controller. Before April 2006 there were 2 controllers scheduled but then one controller retired and another controller was out due to medical reasons. There were 6 facilities across the country that were not complying with the requirement to have 2 on the midnight shift performing separate functions. Only one of those facilities, LEX, was not complying because of staffing. The others were not complying because the facility managers believed they had the flexibility to have one on a midnight shift. Mr. Johnson stated that combined facilities are typically ATC Level 7.

Terminal received good support from En route facilities regarding taking airspace. Anytime there was an airspace change, the facility was required to do a safety study to ensure it's appropriate for the "giver and receiver".

This year the FAA had operations money so providing overtime funds was not an issue. If any facility was encountering overtime issues, they should advise headquarters. All finance questions go to the finance department and funds are readjusted internally before going to Mr. Kinder.

Mr. Johnson stated the correct staffing at LEX was 19. He explained the facility was at 19 until

one controller was medically disqualified then one controller arrived August 3, 2006. Then they were scheduled to receive 2 more controllers in March 2007. One controller, who was previously certified on clearance delivery and flight data at LEX, will be assigned temporary duty to LEX to provide relief. This will allow fully certified controllers the ability to work control positions until others get certified.

He explained there were over 530 terminal facilities: 231 contract towers, 138 combined tower/radar facilities of which 73 were operational 24-hours per day.

Mr. Johnson was concerned that LEX operated with 1 controller 40 of 70 days because the guidance was very clear but the LEX ATM believed he had the flexibility to operate with one.

When asked if there was any guidance on the staffing policy during midnight shifts he said there was nothing from headquarters. Post-accident he discussed the policy with all facility ATMs and hub managers and putting that policy in writing is currently in the works. Once the operational people have finished providing data to various agencies/organizations for the accident, they will determine the verbiage, medium, and most appropriate method of relaying the message. He doesn't want to take away the ATM's flexibility and be so stringent that it becomes a huge issue for managers. He wants the managers to be accountable. He expects the written document will be completed within the year but because there are so many levels of review it's difficult to give a specific date.

Mr. Johnson said he was not aware that any facility was not complying because of staffing. He was under the impression they were working with 2 controllers. When asked about Risk Analysis for 1 or 2 person midnight shifts he indicated that he was concerned that the functions weren't separate, not whether or not there was one person working. When he learned they were not working the functions separate, he went out with verbal guidance and he didn't audit the number of facilities that weren't complying.

After the interview, NTSB staff (ATC Group Chairman, Assistant, and Dr. Evan Byrne, Human Factors) contacted Mr. Johnson to discuss fatigue issues. In response to questions, Mr. Johnson stated the following:

The FAA had not put out any guidance for controllers regarding fatigue. He was aware of Civil Aerospace Medical Institute (CAMI) reports and facilities that were operating the 2-2-1 schedules (2 evenings, 2 days, and 1 midnight shift) and it was the most common shift rotation used. He personally liked the schedule when he worked it because it provided the controller with an equivalent of one extra day off. Some worked 3 evening shifts followed by 2 day shifts but there was no difference in time off.

When asked how controllers adapt to the 2-2-1 schedule, he explained each controller had their own technique. Some go to bed immediately, some eat, sleep, and go to work. It's a personal issue. Some don't require any sleep but it depends on their metabolism.

He hadn't seen any pamphlets or guidance for controllers to improve their awareness of fatigue issues. However, he explained, because he hadn't seen them doesn't mean there aren't any

available. He stated that the controller needs to do what's appropriate for them prior to working the midnight shift to ensure they aren't fatigued during their shift. When asked how a controller would know something wasn't working, Mr. Johnson explained that if the controller were tired during the shift, he'd need to evaluate what he did prior to the shift and make corrections.

When asked if anyone had ever called in sick due to fatigue, Mr. Johnson said that he wasn't aware of anyone. In order to call in sick, one must be incapacitated and typically fatigue doesn't count. As a supervisor he'd never had anyone call in sick for fatigue.

8. FAA Order 7210.3, Facility Operations and Administration

FAA Order 7210.3 Facility Operations and Administration, Chapter 2, Administration of Facilities, Section 6, Watch Supervisor – Terminal/En Route states in part:

2-6-7. BASIC WATCH SCHEDULE

a. Facility watch schedules shall take into account normal traffic flow, thereby permitting the posting of a continuing schedule for an indefinite period of time. Facility management is responsible for ensuring watch schedules are in accordance with collective bargaining agreements.

b. Air traffic control specialists whose primary duties are those directly related to the control and separation of aircraft must meet the following criteria:

1. Do not work more than 10 operational hours in a shift.

2. Hours worked before a shift, whether operational or not, will count as operational hours.

3. All work beyond 10 hours must be nonoperational. For holdover overtime situations, including when an employee has worked a credit hour at the start of a shift or is working an alternative work schedule, which does not allow him/her to work 2 hours operationally at the end of the shift, the collective bargaining agreement applies and the employee shall be guaranteed 2 hours of work.

4. Have at least an 8-hour break from the time work ends to the start of any subsequent shift.

5. Have an off-duty period of at least 12 hours following a midnight shift. (A midnight shift is defined as a shift in which the majority of hours are worked between 10 p.m. and 8 a.m.)

6. Do not work more than six shifts without taking a regular day off.

7. Authorized leave, compensatory time used, and credit hours used are considered hours of work.

8. These criteria apply to shift adjustments, including the exchange of shifts and/or days off and the change of shifts and/or days off.

9. FAA Order 7110.65, "Air Traffic Control"

Paragraph 2-9-2, "Operating Procedures" states in part:

> Maintain an ATIS message that reflects the most current arrival and departure information.

a. Make a new recording when any of the following occur:

1. Upon receipt of any new official weather regardless of whether there is or is not a change in values.

2. When runway braking action reports are received that indicate runway braking is worse than that which is included in the current ATIS broadcast.

3. When there is a change in any other pertinent data, such as runway change, instrument approach in use, new or canceled NOTAMs/PIREPs/HIWAS update, etc.

b. When a pilot acknowledges that he/she has received the ATIS broadcast, controllers may omit those items contained in the broadcasts if they are current. Rapidly changing conditions will be issued by ATC, and the ATIS will contain the following:

b. The ATIS recording shall be reviewed for completeness, accuracy, speech rate, and proper enunciation before being transmitted.

c. Arrival and departure messages, when broadcast separately, need only contain information appropriate for that operation.

Paragraph 2-9-3, "Content" states in part:

Include the following in ATIS broadcast as appropriate:

a. Airport/facility name, phonetic letter code, time of weather sequence (UTC). Weather information consisting of wind direction and velocity, visibility, obstructions to vision, present weather, sky condition, temperature, dew point, altimeter, a density altitude advisory when appropriate and other pertinent remarks included in the official weather observation. Wind direction, velocity, and altimeter shall be reported from certified direct reading instruments. Temperature and dew point should be reported from certified direct reading sensors when available. Always include weather observation remarks of lightning, cumulonimbus, and towering cumulus clouds….

f. Taxiway closures which affect the entrance or exit of active runways, other closures which impact airport operations, other NOTAMs and PIREPs pertinent to operations in the terminal area. Inform pilots of where hazardous weather is occurring and how the information may be obtained. Include available information of known bird activity.

10. LEX 7210.3F, "Facility Administrative Handbook"

Paragraph 245 d, "Uniform Staffing Requirements" states in part:

The staffing numbers outlined in figure 245-1 are for the purpose of establishing guidelines for approval/disapproval of spot leave requests only. They are not

directive and may be increased or decreased based on operational needs.

FIGURE 245-1

SHIFT	FPL	DEV/LC	DEV/GC
2300/0000	1		
0630	2		
0700	1		1
0815	1	1	
1000		1	
1200			
1400	2		1
1500	1		
1515			
1600	1		
1700	1		

NOTE: Six (6) minutes FLSA is available for the individual assigned to the Sunday morning mid-shift. In other instances, when there is no overlap, 6 minutes FLSA is authorized to the individual in charge of the 4 shift.

Paragraph 246, "Consolidating Positions" states" "Operations Supervisors are responsible for assigning personnel to positions as required. Position consolidation or de-combining is a supervisory function. Figure 246-1 provides an orderly and standard method of combining-de-combining positions of operations."

FIGURE 246-1

POSITION STAFFING
(Combined with)

TIME	LC	GC	CD	RE	RW	RF	RD
0000-0600		LC	GC	LC	RE	RE	RE
0700			GC		RE	RE	
0815			GC			RE	
0900						RE	
1000							
1130						RE	
1330							
1630						RE	
1830			GC			RE	
2100			GC		RE	RE	
2130		LC	GC		RE	RE	RE
2300		LC	GC		RE	RE	RE
2400		LC	GC		RE	RE	RE

11. Coordination Procedures

The ZID and LEX ATCT Letter of Agreement dated August 27, 2006, states in part:

b. Departures
   (1) All tower departures may be cleared without coordination if Tower has a computer flight plan.
   (2) Tower shall coordinate with the center before releasing departures, when outer fix clearance limits are in use.
   (3) Departure aircraft shall be assigned 10,000 feet or requested altitude, whichever is lower. The pilot shall be advised to expect requested altitude, if 11,000 feet or above, ten minutes after departure.

12. Staffing Guidance

On September 7, 2006, Safety Board staff requested the FAA provide: a number of all air traffic control facilities; a list of facilities, and their ATC level, that were not complying with the guidance of staffing two controllers on the midnight shift; a list of facilities, and their ATC level, that were given additional staffing in order to comply with the guidance of two controllers on the midnight shift; a list of facilities, and their ATC level, that were given additional budget money to pay overtime to have two controllers on the midnight shifts. On October 2, 2006, Mr. Bruce Johnson provided this information:

a. Facility Information

   The FAA operates 4 combined TRACON facilities (typically four or more approach control operations at one location) where the radar services are not co-located with tower facilities.

   The Federal Contract Towers are where the air traffic control services have been contracted to private companies.

   The FAA operates 262 terminal tower facilities. Of these 138 are combination tower/radar approach control facilities (similar to LEX), 122 are tower facilities with radar capability (but not approach control responsibility) and 2 are towers without any radar capability. With respect to staffing, it is important to know that 139 are closed on the midnight shift and 50 operate during the midnight shift with one controller (since they are providing only tower-related functions). Equally important, 145 airports have commercial service at night when the tower is closed and 109 air carrier airports have no control tower at all. Commercial flights operate safely at these locations on a daily basis.

Facility Types	Number of facilities
Tower/radar ("up/down")	138
Federal contract tower	231
Terminal radar only	22
Tower only	262

b. Staffing

The verbal guidance that was issued in early September of 2005 was directed to the specific circumstances of an "up/down" facility, where regular control tower operations and terminal radar operations (TRACON) are provided from the same facility during the midnight shift. Even though many of these facilities have very little traffic during the midnight shift, the guidance was that when both the radar position (TRACON) and the Airport Surface (Tower) positions were open, each function should be normally staffed separately. However, controllers were given the discretion to combine the radar and tower functions when necessary to accommodate breaks and meals and other circumstances. These breaks are intended to be of a short duration, so that the two functions are combined for only a short duration and normally only during periods of low traffic.

The following facilities were not routinely staffed with two controllers on the midnight shift. The facilities were combining the radar and tower functions for most of the shift prior to August 27, 2006. All facilities are now in compliance with FAA guidance.

Name of Facility	ATC Level	Average Operations/Day FY 05	Average Operations/Day FY 06
Lexington, KY (LEX)	ATC 7	662	639
Duluth, MN (DLH)	ATC 6	285	273
Fargo, ND (FAR)	ATC 6	402	362

The following facilities were staffed with two controllers on the midnight shift, but combined the functions during most of the shift prior to August 27, 2006. All facilities are now in compliance with FAA guidance.

Name of Facility	ATC Level
Tulsa, OK (TUL)	ATC 9
Kansas City, MO MCI	ATC 9
Springfield, MO (SGF)	ATC 7
Little Rock, AR (LIT)	ATC 9

c. Budget

There was no specific budget allocation for midnight shift staffing, nor was any

facility given a "blank check." All ATMs are encouraged to effectively utilize resources; however, the use of overtime was available to remedy any unanticipated issues in staffing including on the midnight shift – for example, to cover unanticipated sick leave. Across the system, the FAA in 2006 expects overtime costs to be about 2 percent of total controller labor costs, as compared to1.8 percent in 2005.

d. Additional Staffing

While we are not aware of additional staffing that was allocated to any facility based solely on the mid shift coverage guidance, for the 138 combination tower/radar approach control facilities, 144 new controllers have been assigned to those facilities in FY 2006. We expect to hire 1,100 new controllers for FY 2006. Terminal managers were able to accommodate the midnight shift requirements by efficiently managing the schedule and using overtime that was already allocated to them. In addition, there was sufficient flexibility in the budget so that additional overtime could have been allocated if needed and requested.

13. Emergency Notification

The LEX ATCT and Lexington-Fayette Urban County Airport Board Letter of Agreement effective April 1, 2004, states in part:

3. Procedures: Lexington ATCT personnel shall initiate an alert notification when an actual or potential emergency occurs or is reported by any of the following:
    a. Pilot
    b. FAA Air Traffic Control Specialist on duty
    c. Airport Executive Director or his representative

Notification and response actions shall be in accordance with one of the following, as appropriate:

a. Alert I: This indicates an aircraft approaching the airport with potential for a minor emergency. Examples include but are not limited to feathered propeller, overheated engine, oil leak, etc….
b. Alert II: This indicates an aircraft approaching the airport with potential for a major emergency. Examples include but are not limited to engine on fire, faulty landing gear, low hydraulic pressure, etc….
c. Alert III: This indicates that an aircraft is involved in an accident on or near the airport.
    (1) Notification to Public Safety shall be via emergency call procedures.
    (2) All Units will proceed to the scene of the accident.

4. Emergency Call Procedures

When emergency call procedures are used, the following shall apply:

Lexington Tower shall:

(1) Activate the emergency circuit by removing the emergency phony from its cradle
(2) Transmit to the Command Center the following information:
    a. Type of alert (Alert I, Alert II, Alert III)
    b. Location (runway being used, etc.)
    c. Nation of emergency (in case of accident, this is not needed)
    d. Type of aircraft….

Hilton Hall
ATC Group Chairman