Near-collision on landing involving a Boeing 737 and a Regional Jet at Fort Lauderdale on November 9, 2005.

Micro-summary: **Near-ground collision between a landing 737 and a regional jet holding on the runway.**

Event Date: **2005-11-09 at 1826 EST**

Investigative Body: **National Transportation Safety Board (NTSB), USA**

Investigative Body's Web Site: **http://www.ntsb.gov/**

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2. Readers are advised that each report is a glimpse of events at specific points in time. While broad themes permeate the causal events leading up to crashes, and we can learn from those, the specific regulatory and technological environments can and do change. ***Your company's flight operations manual is the final authority as to the safe operation of your aircraft!***

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National Transportation Safety Board

FACTUAL REPORT AVIATION

NTSB ID: OPS06IA001	Aircraft Registration Number: UNKNO WN
Occurrence Date: 11/09/2005	Most Critical Injury: None
Occurrence Type: Incident	Investigated By: NTSB

Location/Time

Nearest City/Place	State	Zip Code	Local Time	Time Zone	
Fort Lauderdale	FL	33315	1826	EST	

Airport Proximity: On Airport	Distance From Landing Facility:	Direction From Airport:

Aircraft Information Summary

Aircraft Manufacturer	Model/Series	Type of Aircraft
Boeing	737-400	Airplane

Sightseeing Flight: No Air Medical Transport Flight: No

Narrative

Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:

HISTORY OF FLIGHT

On November 9, 2005, at 2346 Coordinated Universal Time (UTC), the pilot of Comair flight 5026 (COM26), a Canadair Regional Jet operating as a 14 Code of Federal Regulations (CFR) part 121 scheduled air carrier flight from Fort Lauderdale-Hollywood International airport (FLL), Fort Lauderdale, Florida, to Tallahassee, Florida, reported a near-collision with US Airways flight 1251 (USA1251), a Boeing 737-400 operating under 14 CFR 121 as a scheduled air carrier flight from Pittsburgh, Pennsylvania, to FLL. At the time of the incident, COM26 was holding in takeoff position on runway 9L, and USA1251 was on approach to runway 9L. Neither aircraft was damaged, and there were no reported injuries. Weather conditions at FLL at 2253 UTC were reported as wind 060 at 12 knots, visibility 10 miles, with scattered clouds at 3,500 feet.

USA1251 contacted FLL tower at 2342, and was cleared to land on runway 9L. The local controller advised that there would be several departures before USA1251's arrival, and the pilot acknowledged. At 2342:48, the controller cleared Southwest flight 221 for takeoff and instructed Comair 716 (COM716) to taxi into position and hold, advising the pilot that there was arrival traffic on 9 mile final. At 2343:52, the controller cleared COM716 for takeoff and instructed COM26 to taxi into position and hold on runway 9L, advising the pilot of COM26 that there was arrival traffic on 4 mile final. At 2344:46, COM716 was instructed to contact departure control. At 2344:52, the controller advised an arriving Gulfstream 4 that they were number 2 for the runway, following a 737 on 2 mile final. At 2345:15, the controller began a series of exchanges with a helicopter that was 38 miles from FLL and trying to contact Miami approach control. At 2345:48, USA1251 asked if they were cleared to land, and the controller responded, "USA1251 cleared to land runway 9L." Immediately, an unidentified voice on the frequency stated, "Traffic on 9 left." The controller transmitted, "USAir go around, USAir go around, USAir 1251 go around." USA1251 did go around, and, according to recorded radar data, passed about 100 feet above COM26. USA1251 was issued a 060 heading and given back to Miami approach for resequencing. The flight returned and landed uneventfully at 0003 UTC.

The Local Control North (LCN) controller notified the tower supervisor of the incident as soon as it occurred, and she initiated a quality assurance review (QAR) that was logged in the Daily Record of Facility Operation. According to the QAR summary, the supervisor interviewed both the local and ground controllers and reviewed the tape, concluding that there was no loss of separation between USA1251 and COM26 because USA1251 was instructed to go around when approximately one mile from the runway. The pilot of COM26 filed a near midair collision report with FLL tower on the day after the incident.

At the time of the incident, the LCN controller was responsible for both the LCN and Local Control South (LCS) positions, and was therefore required to monitor operations on all runways. The tower is located between runways 9L and 9R, so the LCN controller was therefore required to divide his

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attention in opposite directions while handling aircraft on both of those runways. Runway 9L is normally used for jet traffic, and runway 9R is normally used for general aviation traffic. While USA1251 was on approach there were multiple departures and arrivals operating on runway 9L, and a Seneca waiting to depart on runway 9R.

The controller said that operations were normal in the cab during the shift. His first contact with USA1251 was when the pilot checked on frequency about ten miles from the airport. He advised the pilot that there would be several departures prior to his arrival. There was a Southwest Airlines flight and two Comair regional jets waiting to depart from 9L, COM716 and COM26, and Seneca 92C waiting to depart from runway 9R. He cleared the Southwest flight for takeoff, cleared COM716 into position and hold on 9L, and Seneca 92C into position and hold on 9R. As soon as there was enough spacing behind the Southwest departure, the local controller cleared COM716 for takeoff and instructed COM26 to taxi into position and hold. His plan was to launch COM716, then COM26, then the Seneca from runway 9R. After he cleared COM26 into position, a helicopter called, attempting to contact Miami Approach. The local controller stated that he spent some time working with the helicopter pilot, trying to establish his altitude and position in order to give the pilot the correct frequency. At that point, the controller said he mistakenly believed that he had already cleared COM26 for takeoff.

When USA1251 questioned his landing clearance, the controller stated that he scanned the runway and radar display and didn't see anything, so he repeated the landing clearance. He realized that he had lost track of COM26, so he scanned the radar display looking for a "tag up" on COM26 or for a primary return and didn't see either one. He looked at the runway again and saw COM26 still holding in position. He immediately issued go-around instructions, repeating the clearance three times. He said that he did not hear the unidentified "traffic on the runway" transmission at the time, but instead initiated the go-around on his own. He heard the transmission while reviewing the tape in preparation for his interview. By this time the controller had also cleared the Seneca to depart from runway 9R, so he needed to establish separation between USA1251 and Seneca 92C, clear COM26 for takeoff, and separate COM26 from the Seneca as well. He did so through application of both vertical and lateral separation, and then transferred the departures to the radar controller at Miami terminal radar approach control (TRACON).

Asked about taxi into position and hold (TIPH) management, the controller stated that his personal practice used to be to slide the departure strip to the left when clearing an aircraft into position on the runway, and then cock the stripholder to the left when clearing the aircraft for takeoff. Starting in September, the tower adopted a standard procedure requiring that the strip be cocked to the left when an aircraft is cleared into position and hold, and that the paper strip be slid left out of the holder when the takeoff clearance is issued. He had been trying to adapt to the new procedure and believes he was using it at the time of the incident, but it is not second nature to him yet. He is not sure how the new procedure was developed except that it was the result of collaboration between management and the controllers union.

The local controller stated that he should have possibly asked for help in locating COM26 a little sooner, as the extra set of eyes might have resulted in locating the plane faster and prevented the incident.

He also stated that the local assist position is opened as staffing permits. It's not usually necessary to use a local assist in the summer, but the tower gets a lot busier from November through April or May and that's when the position is most needed. Asked about whether a local assist controller would have helped in this scenario, he said that another set of eyes can always help. LCN and LCS are open or closed as traffic dictates, sometimes to relieve frequency congestion caused by traffic on runway 9R, and might or might not be combined in the early evening. Working LCN and LCS combined requires that the LCN controller turn around and stand up (at least partially) in order to scan runway 9R and monitor traffic on the south side of the airport. The local controllers are also responsible for using the tower radar displays, and in this situation

Narrative (Continued)

the controller stated that he was distracted by locating and communicating with the helicopter. He stated that his workload was moderate at the time of the incident.

Following the go-around, the controller believed that he might have had an operational error. He notified the supervisor, who was sitting on the west side of the tower cab doing some administrative work. She came to the LCN position and began helping with resolving the situation and coordinating with the TRACON about the various departing aircraft. After that, she got him relieved from the position and they went to the supervisor's office to investigate what happened.

The controller stated that he thought USA1251 was issued the go-around at to 1 mile from the runway. The supervisor's report said 1 mile because that was their visual estimate at the time. He was not aware of any other contacts about the incident with either pilot that night.

The controller also mentioned that lights from heavy traffic along I-95 can sometimes interfere with seeing aircraft at the approach end of runway 9L at night.

PERSONNEL INFORMATION

The FLL local controller entered on duty with the FAA on December 19, 1983 at the Lafayette, Louisiana ATCT. He subsequently worked at the Lakefront, Fort Lauderdale Executive, Pompano, Miami, Hollywood and Fort Lauderdale ATCTs. He has also worked at Miami Center and Montgomery radar approach control (RAPCON). His Control Tower Operator certificate was issued on June 20, 1985. He usually had Friday and Saturday off. On the night of the incident, his shift was 1500 to 2300. On Sunday he normally worked either 1600 to 2400 or 1500 to 2300. On Monday he normally worked 1400 to 2200. On Tuesday he normally worked 0800 to 1600 or 1100 to 1900. He normally worked 1400 to 2200 on Wednesday, but had swapped shifts.

The controller said that he had been having a difficult time in his personal life, but that he was "handling it." He had not been having sleeping problems prior to the incident, but had been having some since. He recently fell while coming down the tower stairs, injuring his knee and foot, and has been walking with a cane since then. He has not been taking any medication for pain. In May of this year his mother died, and in June his wife told him she was divorcing him. He inherited his mother's house, but he had been informed that the house does not meet code and there may be fines and penalties that need to be paid due to non-compliance. Both of his homes received hurricane damage.

COMMUNICATIONS

FLL tower frequencies were 119.3, 257.8, and 120.2

AERODROME INFORMATION

FLL had 3 runways: runways 9L/27R, 9R/27L, and 13/31. Runway 9L was 9000 feet long and 150 feet wide. The surface was asphalt/grooved, in good condition. The field elevation of the runway was 5.5 feet.

ADDITIONAL INFORMATION

Post-incident Procedural Changes

Because of recent FAA efforts to review and improve TIPH procedures nationally, FLL tower staff and management reviewed local procedures for these operations. On September 19, 2005, the facility manager established standard operating procedures for use of TIPH as follows:

Local Control North/South (LCN/LCS) shall use the following procedures when conducting Taxi Into

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Position and Hold operations:

1. Use a separate departure strip bay for each runway in use.
2. Place brightly colored strip(s) with letters TIPH in all departure bays.
3. When "Position and Hold" clearance is issued, departure strip holder shall be placed in an angulated position below the strip identifying TIPH.
4. After takeoff clearance is issued, the Local Controller will slide the paper strip to the side (memory jogger / visual aid for the supervisor/CIC [controller-in-charge].)

In addition, FLL controllers have been instructed that TIPH procedures are not authorized when LC and GC positions are combined. (These positions were not combined at the time of this incident.)

When interviewed, the LCN controller stated that he was using these procedures, although he did not recall whether he looked at the strip board at the time of the incident.

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Landing Facility/Approach Information

Airport Name	Airport ID:	Airport Elevation	Runway Used	Runway Length	Runway Width
Fort Lauderdale-Hollywood Itl	FLL	9 Ft. MSL	9L	9000	150

Runway Surface Type: Asphalt

Runway Surface Condition: Dry

Type Instrument Approach: ILS-complete

VFR Approach/Landing: Go Around

Aircraft Information

Aircraft Manufacturer	Model/Series	Serial Number
Boeing	737-400	

Airworthiness Certificate(s): Transport

Landing Gear Type: Retractable - Tricycle

Homebuilt Aircraft?	Number of Seats:	Certified Max Gross Wt.	Number of Engines:
No		LBS	

Engine Type:	Engine Manufacturer:	Model/Series:	Rated Power:

- Aircraft Inspection Information

Type of Last Inspection	Date of Last Inspection	Time Since Last Inspection	Airframe Total Time
		Hours	Hours

- Emergency Locator Transmitter (ELT) Information

ELT Installed?	ELT Operated?	ELT Aided in Locating Accident Site?

Owner/Operator Information

Registered Aircraft Owner	Street Address		
	City	State	Zip Code

Operator of Aircraft	Street Address		
US AIRWAYS INC	City	State	Zip Code

Operator Does Business As:

Operator Designator Code: USAA

- Type of U.S. Certificate(s) Held:

Air Carrier Operating Certificate(s): Flag Carrier/Domestic

Operating Certificate:

Operator Certificate:

Regulation Flight Conducted Under: Part 121: Air Carrier

Type of Flight Operation Conducted: Scheduled; Domestic; Passenger Only

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Occurrence Date: 11/09/2005

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First Pilot Information

Name	City	State	Date of Birth	Age

Sex:	Seat Occupied:	Principal Profession:	Certificate Number:

Certificate(s):

Airplane Rating(s):

Rotorcraft/Glider/LTA:

Instrument Rating(s):

Instructor Rating(s):

Type Rating/Endorsement for Accident/Incident Aircraft?	Current Biennial Flight Review?

Medical Cert.:	Medical Cert. Status:	Date of Last Medical Exam:

- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Mult-Engine	Night	Instrument Actual	Instrument Simulated	Rotorcraft	Glider	Lighter Than Air
Total Time										
Pilot In Command(PIC)										
Instructor										
Last 90 Days										
Last 30 Days										
Last 24 Hours										

Seatbelt Used?	Shoulder Harness Used?	Toxicology Performed?	Second Pilot? Yes

Flight Plan/Itinerary

Type of Flight Plan Filed: IFR

Departure Point	State	Airport Identifier	Departure Time	Time Zone
Pittsburgh	PA	PIT		

Destination	State	Airport Identifier	
Same as Accident/Incident Location		FLL	

Type of Clearance: IFR

Type of Airspace:

Weather Information

Source of Briefing: National Weather Service

Method of Briefing:

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Weather Information

WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
FLL	1753	EST	Ft. MSL	NM	Deg. Mag.

Sky/Lowest Cloud Condition: Scattered 3500 Ft. AGL

Condition of Light: Day

Lowest Ceiling: None Ft. AGL

Visibility: 10 SM

Altimeter: 30.07 "Hg

Temperature: 24 °C

Dew Point: 17 °C

Wind Direction: 60

Density Altitude: Ft.

Wind Speed: 12

Gusts:

Weather Condtions at Accident Site: Visual Conditions

Visibility (RVR): Ft.

Visibility (RVV) SM

Intensity of Precipitation:

Restrictions to Visibility: No Obscuration; No Precipitation

Type of Precipitation:

Accident Information

Aircraft Damage: None

Aircraft Fire: None

Aircraft Explosion None

Classification:

- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot				1	1
Second Pilot				1	1
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants					
Other Crew					
Passengers					
- TOTAL ABOARD -				2	2
Other Ground					
- GRAND TOTAL -				2	2

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FACTUAL REPORT
AVIATION

NTSB ID: OPS06IA001

Occurrence Date: 11/09/2005

Occurrence Type: Incident

Administrative Information

Investigator-In-Charge (IIC)

Scott Dunham

Additional Persons Participating in This Accident/Incident Investigation:

T R Proven
HQ AAI-100