



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: September 25, 2006

In reply refer to: A-06-65

Honorable Marion C. Blakey
Administrator
Federal Aviation Administration
Washington, D.C. 20591

On February 7, 2006, the flight crew of a Douglas DC-8-71F, N748UP, operated by United Parcel Service (UPS) as flight 1307, conducted an emergency landing on runway 27R at Philadelphia International Airport (PHL), Philadelphia, Pennsylvania, after reporting a cargo smoke indication. Air traffic control (ATC) initially cleared the flight to land on runway 27R; however, in accordance with emergency procedures at PHL, ATC changed the clearance to runway 27L after the flight crew reported the emergency. Although the pilot acknowledged the change in landing clearance, he continued for runway 27R. The controller ultimately cleared the flight to land on runway 27R when it was apparent that the flight crew had not understood the change in landing clearance. A fire erupted on board after landing, causing substantial damage to the airplane and numerous cargo containers. The three flight crewmembers were able to evacuate the airplane using the L1 slide and received minor injuries. Night visual meteorological conditions prevailed and an instrument flight rules flight plan had been filed for the flight from Hartsfield-Jackson Atlanta International Airport, Atlanta, Georgia, to PHL. The scheduled cargo flight was conducted under 14 *Code of Federal Regulations* Part 121.

At 2355:02, the Philadelphia Air Traffic Control Tower (ATCT) approach controller cleared UPS flight 1307 for the visual approach to runway 27R and to contact the ATCT local controller. Eleven seconds later, the pilot made initial contact with the local controller and said, "Tower, good day, UPS 1307 heavy with you visual for runway two seven right." The local controller then cleared UPS flight 1307 to land on runway 27R. After acknowledging the landing clearance, the pilot reported the cargo smoke indicator was on and requested the crash, fire, and rescue equipment. The local controller requested the appropriate emergency information from the pilot, activated the crash phone, and also advised the approach controller of the emergency situation. The ATCT approach controller asked the local controller whether the flight was "gonna go to the left side," referring to runway 27L, which is one of the two runways at PHL designated

for use in emergency situations.¹ The local controller then transmitted to the pilot, “UPS 1307 heavy is cleared to land runway 27 left, wind 270 at 6.” The pilot read back the landing clearance verbatim.

At 2358:08, the local controller queried the pilot, “...just confirm ... you are lined up for the left side it appears you’re lined up for the right.” The pilot responded, “I’m sorry, I thought we were cleared for the right. Are we cleared to land on the right?” The local controller then advised that the flight was cleared to land on runway 27R. Although the pilot read back the clearance to land on runway 27L verbatim, the cockpit voice recording indicates that, at the time he did so, he was also in the midst of responding to emergency checklist items, and it appears that he did not recognize that the local controller had changed his landing runway from right to left. The cockpit voice recording also indicates that the pilot had donned his oxygen mask and began conducting an emergency checklist with other flight crewmembers between the time that the initial clearance to land on 27R was issued and the time that clearance changing the runway assignment was issued.

The pilot of UPS flight 1307 missed a fundamental change in the clearance during a high workload situation. According to the local controller, he believed that because the pilot acknowledged the transmission, he would comply and land on the alternate runway even though the only indication of the runway change provided to the pilot was the local controller’s use of the words “27 left” instead of “27 right” during the transmission of the second landing clearance. According to the pilot’s ATC communication, he thought he was still cleared to land on runway 27R. The Safety Board notes that it was fortunate in this confusion that another aircraft or vehicle was not on runway 27R because, if UPS flight 1307 had been prevented from landing, it is doubtful that the progression of the fire would have allowed the crew sufficient time to conduct a missed approach and circle around to land.

A review of Federal Aviation Administration (FAA) Order 7110.65, “Air Traffic Control,” indicates that there are no specific rules or guidance provided to controllers regarding how to clearly communicate a change in runway assignment after an arriving aircraft has been cleared to land. However, the Safety Board is aware that some ATC facilities routinely provide specific information to flight crews about runway changes that is useful and timely in similar circumstances. For example, in the case of UPS flight 1307, to minimize any misunderstanding the local controller could have asked the pilot, “can you accept runway 27 left?” If the pilot answered in the affirmative, then the controller could have said, “UPS 1307 *change* to runway 27 left, cleared to land.”

The Safety Board is concerned about the potential safety consequences should a pilot fail to notice a runway change incorporated in a new landing clearance and believes that controllers

¹ A letter of agreement between Philadelphia ATCT and the city of Philadelphia, Department of Commerce, Division of Aviation (the Airport) effective December 27, 1999, states in part, “Alert I/II aircraft shall be assigned runway 9R or 27L unless the pilot or the tower determines that another runway should be utilized. When another runway will be utilized, the tower shall notify the Fire/Rescue Officer in charge as soon as possible.” Alert I is described as “A reported emergency or problem involving an aircraft either on, or en route to/from the airport (hydraulic failure, bad gear indication, etc.)” Alert II is described as “An accident has occurred or an incident exists involving an aircraft either on, or en route to/from the airport where there is the potential for major damage. (On board fire, collision, etc.)”

should be provided more explicit guidance about how to clearly communicate a change of assigned runway.

Therefore, the National Transportation Safety Board recommends that the Federal Aviation Administration:

Amend FAA Order 7110.65, "Air Traffic Control," to require that, when amending a runway assignment, controllers provide a specific instruction to the pilot advising of the runway change. For example, "UPS 1307, change to runway 25L, cleared to land." (A-06-65)

Chairman ROSENKER, Vice Chairman SUMWALT, and Members HERSMAN and HIGGINS concurred with this recommendation.

[Original Signed]

By: Mark V. Rosenker
Chairman