NATIONAL TRANSPORTATION SAFETY BOARD
Office of Aviation Safety
Washington, DC 20594

June 14, 2010

ATC GROUP CHAIRMAN FACTUAL REPORT ADDENDUM #2
DCA09MA021

A. AIRCRAFT ACCIDENT

Location: Denver, Colorado

Date/Time: December 20, 2008, 1818 Mountain Standard Time (MST)

Date/Time: December 21, 2008, 0118 Coordinated Universal Time (UTC)[1]

Aircraft: Continental Airlines (COA) Flight 1404, a Boeing 737-500

B. AIR TRAFFIC CONTROL GROUP

None required for this report

C. SUMMARY

On December 20, 2008 at 1818 mountain standard time (MST), Continental flight 1404, a Boeing 737-500 (registration N18611), equipped with CFM56-3B1 engines, departed the left side of runway 34R during takeoff from Denver International Airport (DEN), Denver, Colorado. The scheduled, domestic passenger flight, operated under CFR Part 121, was enroute to George Bush Intercontinental Airport (IAH), Houston, Texas. One of the five crewmembers was seriously injured. There were 37 injuries among the passengers and crew and no fatalities. The airplane was substantially damaged and experienced a post crash fire. The weather observation in effect closest to the time of the accident was reported to be wind at 290 and 24 knots with gusts to 32 knots, visibility of 10 miles, a few clouds at 4000 feet and scattered clouds at 10,000 feet. The temperature was –4 degrees Celsius.

D. DETAILS OF THE INVESTIGATION

1. Additional Information to the Investigation

At 1817:27, the local controller (LC4) issued wind information to COA1404 as 270 degrees at 27 knots when he cleared the flight for takeoff from runway 34R. The source of the wind information was from low level wind shear (LLWAS) sensor number 3, located near the

[1]All times are expressed in mountain standard time (MST) unless otherwise noted.

departure end of runway 34R. This wind data was indicated as "34RD" (runway 34 right departure) on the tower RBDT.

According to recorded wind data information provided for Denver tower, the wind direction and velocity for sensor number 3 was from 270 degrees at 25 knots at 1817:23, from 268 degrees at 27 knots at 1817:32 and from 270 degrees at 28 knots at 1817:42.

The Denver Air Traffic Control Tower Standard Operating Procedures (SOP) Manual, DEN ATCT 7110.11B, Change 8 dated October 1, 2007, Chapter 2, Standard Operating Procedures, Paragraph 2-1-7, Operational Wind Sources, states:

> The LLWAS shall be used to derive wind information for:
>
> a. Arrivals. Issue the wind oriented to the landing threshold.
>
> *b.* Departures. Issue LLWAS centerfield wind to departures. Runway departure-end wind information may be issued in lieu of centerfield wind in accordance with FAAO 7110.65, par. 3-1-8.b.2(b), *Low Level Windshear Advisories.*

FAA Order 7110.65, Air Traffic Control, paragraph 3-1-8.b.2.(b), Low Level Windshear Advisories states:

> 3-1-8. LOW LEVEL WIND SHEAR/MICROBURST ADVISORIES
>
> b. At facilities without ATIS, ensure that wind shear/microburst information is broadcast to all arriving and departing aircraft for 20 minutes following the last report or indication of wind shear/microburst.
> 2. Wind shear detection systems, including TDWR, WSP, LLWAS NE++ and LLWAS-RS provide the capability of displaying microburst alerts, wind shear alerts, and wind information oriented to the threshold or departure end of a runway. When detected, the associated ribbon display allows the controller to read the displayed alert without any need for interpretation.
> (b) If requested by the pilot or deemed appropriate by the controller, issue the displayed wind information oriented to the threshold or departure end of the runway.
> PHRASEOLOGY
> (Runway) DEPARTURE/THRESHOLD WIND (direction) AT (velocity).

Denver ATCT facility management stated that runway departure-end wind information shall be issued to departing aircraft as displayed on the tower RBDT associated with the runway in use. The statements by Denver ATC management conflict with the ATC SOP. According to the Denver ATC SOP, the local controller should have issued COA1404 the wind information from RBDT airport wind (LLWAS sensor number 2), not from RBDT 34RD (runway 34R departure

wind, LLWAS sensor number 3). The airport wind[2], displayed as "AW" on the tower RBDT, measured at LLWAS sensor number 2, indicated the wind from 280 degrees at 34 knots with gusts to 40 knots at 1817:23, 1817:32, and 1817:42.

Accordingly, a discrepancy exists between common practice, as supported by ATC management, and published procedure as defined in the ATC SOP.

On April 1, 2010, the NTSB queried the FAA via an Accident/Incident Investigation Support Request on the Denver ATCT operating practice of issuing flight crews departure wind information instead of the published procedure of issuing airport wind information. As of May 25, 2010 the FAA had not provided a response to the NTSB.

Dan Bartlett
AS-30

[2] Airport wind (AW) and centerfield wind are interchanged throughout FAA documents. Accordingly, the term airport wind (AW) and centerfield wind are synonomous in this report.