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NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

OPERATIONAL FACTORS GROUP CHAIRMAN'S FACTUAL REPORT
ATTACHMENT 27: AA LANDING WINDSHEAR GUIDANCE

American Airlines flight 1420
Little Rock, Arkansas
June 1, 1999

DCA99MA060

Attachment 27

to Operational Factors Group Chairman's Factual Report

DCA99MA060

AA Landing Windshear Guidance

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Landing

When positive indications of severe windshear exist, avoid the areas by:

- Diverting around the areas.
- On approach, initiate a go-around and / or hold until conditions improve.

When conditions are such that moderate windshear may be encountered, even though not reported, the following precautions are recommended:

- Select the minimum landing flap position consistent with the field length, (e.g., Flaps 28 instead of Flaps 40, if runway length and conditions permit).
- Add an appropriate airspeed correction (correction applied in the same manner as gusts) up to a maximum of 20 knots.
- Select longest runway available that avoids areas of suspected windshear.
- Use the autopilot and autothrottle for the approach to provide more monitoring and recognition time.
- To avoid large thrust and / or trim changes in response to sudden airspeed increases (headwind shear), manually restrain the Throttles from being driven back to idle. Be prepared to execute the escape maneuver if the airspeed increase is followed by a sudden decrease, and flight path control becomes marginal.

Microburst Identification

Dry Microbursts

- PIREPS

CAUTION

Actual windshear may be up to twice as severe as PIREP.

- LLWAS - Detects microbursts within two and one-half miles of the airport.
- VIRGA - Weak precipitation areas that do not reach the surface.
- TURBULENCE - Moderate or greater turbulence may be associated with the outflow from a microburst.
- VISUAL CUES - Blowing dust, rings of dust, dust devils, or other tornado-like features, and other evidence of strong local outflow near the surface.
- AIRBORNE WEATHER RADAR - Indications of weak (green) cells with bases from 5000 to 15,000 feet AGL which indicate weak precipitation, usually virga. In addition, areas of red (doppler turbulence) surrounding weak precipitation may indicate microburst windshear conditions in their formative stages aloft.
- WINDSHEAR FORECAST - Potential for convection; mid-level moisture, very dry surface condition; 30° - 50° temperature / dew point spread.

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