FIGHTING LETHAL WINDS

New Orleans Installs Advanced System To Detect Wind Shear

NEW ORLEANS (AP) — Two years after a sudden wind shift blew a jetliner into the ground, killing 154 people, New Orleans has installed the nation's most advanced system to detect the invisible killer known as wind shear.

And scientists in Denver are experimenting to further improve wind shear detection. In the past 20 years, wind shear has caused 16 airliner accidents resulting in deaths or injuries, including a 1975 crash that killed 112 people in New York.

Wind shear is an abrupt reversal in wind direction. It is caused by microbursts, sudden outpourings of cool air from the bottoms of clouds that often occur during thunderstorms.

Pan Am Flight 759 plowed into a residential street in suburban Kenner within a few seconds of leaving a rain-swept runway at 4:10 p.m. on July 9, 1982. The crash killed all 146 people aboard and eight people on the ground, making it the second-deadliest air disaster in U.S. history.

The crash leveled homes, and black rubber body bags lined a street amidst pieces of Boeing 727. Among the victims were seven members of one family headed for a funeral in Las Vegas, Nev. Others were on their way to the casinos.

The Rubble Is Gone

A cluster of brick homes has replaced the rubble from which the bodies were pulled and put in refrigerator trucks serving as makeshift hearses. On Sunday about 100 people gathered at the site to commemorate the tragedy.

Billions of dollars in lawsuits have been filed; some are still being heard in federal district court.

The flight, in a few seconds, moved from strong headwinds to an equally strong tailwind, and the jet lost its lift. It never got higher than 150 feet. Engines roaring, it sagged until a wing clipped a tall tree.

Two years ago, New Orleans International Airport's wind shear detection system could not have “felt” a microburst in the center of the airfield, where it developed, said Dan Gardner, Federal Aviation Administration coordinator in New Orleans.

“What we have today is basically the same thing we had before, except it gathers more data from a larger area,” he said of the system that cost $600,000 and was unveiled at New Orleans International Airport last week.

Instead of six wind sensors, there are now 11. Instead of being three miles apart, they are within a mile of one another. They connect to a better computer that feeds information to air traffic controllers in the tower.

Alert System

The low level windshear alert system, known as the LLWAS and pronounced "L-Was," includes sensors on all sides of the airport. They feed the computer constant data about wind speed and direction.

The computer compares data from the outlying sensors to winds at the center of the field. Any significant deviation signals a wind shear, the alarm buzzes and the controller passes the word by radio.

“I am convinced that the great majority of pilots are not sufficiently aware of this hazard,” said John McCarthy, who is heading a wind shear experiment at Denver's Stapleton International Airport and is director of the National Center for Atmospheric Research in Boulder.

The Stapleton test involves a more sophisticated detector — Doppler radar, capable of reading echoes from dust particles or insects and thus revealing the speed and direction of the wind.

However, Doppler radar is still under development, and McCarthy estimated that installing it could cost $1 million to $2 million per airport.

“So the LLWAS will be around a long time and probably should be,” he said. “But we think it should be improved, and the FAA action at New Orleans is clearly going down the right path.”

New Sensors

Gardner said a study of the “enhanced” New Orleans LLWAS will determine if the FAA will make similar improvements to systems at 58 other airports. And it will go into planning installations to be made at 51 more airports.

With luck, none of them will face one problem that plagued New Orleans — hunters using outlying sensors as targets.

“We couldn’t keep it in operation,” Gardner said. The sensors “looked like a small airplane without wings. Folks thought it was an ideal target.”

The new sensors look more like a light bulb protected by a wire cage.

Gardner said old signs used to threaten prosecution. Those made no impression. The new sign gets more attention.

“Instead of threatening to put them in jail, we finally put up signs that say these facilities are used by airplanes landing and taking off and destruction could cause aircraft accident with loss of life,” he said. So far it has worked, he said.