A worker removes material from a damaged garage at the site of the plane crash at 6038 Long St. in Clarence Center on Thursday.

Derek Gee/Buffalo News
THE TRAGEDY OF FLIGHT 3407

Icing viewed as a key factor in Flight 3407 crash

‘Eerie’ parallel to ’94, when a crash killed 68

By Jerry Zremski
NEWS WASHINGTON BUREAU CHIEF

WASHINGTON — Pilots, aviation accident attorneys and the survivors of a previous plane crash worry that the late crew of Continental Flight 3407 is being unfairly blamed for a crash that cost 50 lives when icy weather might be the real culprit.

“Icing absolutely is playing some kind of role in this thing,” said Kirk Koenig, president of Expert Aviation Consulting of Indianapolis and a commercial pilot for 25 years. “It’s very convenient and easy to go blame the pilot.”

Meanwhile, pilot and aviation accident attorney Justin T. Green of the Kreindler & Kreindler law firm said: “Once again, we have a twin-engine propeller aircraft going down in what appears to be icing.”

Jennifer Stansberry Miller, part of a group connected to victims of a similar crash in Indiana 15 years ago, said: “In our accident, they tried to blame the pilot, as well”—only to discover, at the end of the investigation, that icing played a key role.

The National Transportation Safety Board on Thursday offered no new clues into the crash of the turboprop plane in Clarence Center on Feb. 12, but the agency previously said ice had formed on the wings.

That fact has led many in the aviation community to doubt the recent speculation that pilot error could have been at fault — and to point to the parallels between the Clarence crash and that Indiana tragedy from 1994.

On Oct. 31 of that year, an American Eagle flight left Indianapolis for Chicago, only to plunge to the ground in Roselawn, Ind., killing all 68 people aboard.

“The real question is: Is this really a repeat of Roselawn?” said James P. Kreindler of Kreindler & Kreindler.

That’s what relatives of the Roselawn victims are wondering, too.

“We had the plane on autopilot, we had icing,” said Miller, who lost her brother, Brad Stansberry, in the crash. “We rolled, we nose-dived, we pitched. We did all of that. The similarities between these two accidents is just eerie.”

After a long investigation, the federal safety board concluded that the plane — an ATR 72 turboprop similar to the one that crashed in Clarence — lost control because of ice accumulation behind the pneumatic de-icing boots that were supposed to knock the ice off the plane’s wings.

Could that have happened to the Bombardier Dash 8 Q400 that crashed in Clarence?

Authorities and other aviation experts said that it’s too soon to tell, but some wonder whether the
particularly dangerous kind of icing that doomed that plane in Indiana did the same thing over Clarence.

Called “supercooled large droplet icing” in aviation terminology, it’s essentially freezing rain that sticks to the airplane. Aviation experts said it’s far more dangerous than the more common thin glaze that can adhere to a plane when it flies through thick, cold clouds.

“Supercooled large droplets can result in very rapid ice accumulation,” said William R. Voss, president of the Flight Safety Foundation.

While pneumatic de-icing boots can knock off ice from upward of 40 percent of a wing’s surface, supercooled large droplet ice can form on the back of the wing where it can’t be removed, said Tom Ratvasky, an icing research engineer at NASA’s Glenn Research Center in Cleveland.

Donald Pugh, a longtime freight and corporate pilot from Elmsdale, Pa., learned that the hard way back in 1988, when ice formed on the wings of the plane he was flying to Buffalo. He had to accelerate to maintain control.

“Suddenly you’re flying with a whole new airfoil,” said Pugh, who, when he landed, found a ridge of ice, 2 inches wide and three-quarters of an inch thick, on the wings of his plane.

Pugh said the Buffalo area is particularly prone to icing incidents, and NASA proves his point.

A NASA map shows a 500-mile-wide circle, with Buffalo at its center like a bull’s eye, that’s prone to icing conditions 50 percent of the time or more during winter — the most in the country, along with the Pacific Northwest.

Aviation experts said such icing is less likely to be a problem for jets, which are equipped with anti-icing equipment such as heated wings to keep ice from forming.

But the smaller turboprops such as the Dash 8 are equipped with pneumatic de-icing boots that, some experts said, just can’t knock off enough ice if freezing rain is pelting a plane at a fast clip.

“The use of de-icing boots is outrageous in these conditions,” said Arthur A. Wolk, a pilot and aviation attorney from Philadelphia. “The FAA had no business certifying the plane to fly in these conditions.”

Laura Brown, a spokeswoman for the Federal Aviation Administration, disagreed. “The plane had a sophisticated ice-detection and -protection system,” Brown said. “It can be flown in light to moderate icing,” which is the condition pilots experienced near Buffalo on the night of the crash.

Roger Cohen, president of the Regional Airline Alliance, also defended Colgan Air’s use of the Dash 8 in icy conditions.

“The aircraft are all certified to operate in every environment,” said Cohen, whose organization counts Colgan as a member. “They would not be operating or certificated if they weren’t being operated safely.”

Yet the National Transportation Safety Board has been pressing the FAA for years to bolster its icing regulations, including the certification process for turboprops that would fly in icy climates.

The FAA says that its rulemaking process takes a long time and that possible regulations are moving forward. But Terri Henry Severin, who lost her sister and nephew in Roselawn, said industry cost concerns have probably delayed any new regulations.
“I think the obvious issue is money versus safety and security,” said Severin, who has compiled a list of a dozen icing incidents and accidents worldwide in the last 15 years involving turboprops with pneumatic de-icing systems.

Indeed, heated-wing anti-icing systems are more expensive than the pneumatic boot system on turboprops, said Michael B. Bragg, an engineering professor who heads the University of Illinois Aircraft Icing Research Group.

“It takes a lot more power. It reduces fuel efficiency,” Bragg said.

The pneumatic de-icing boot system has been around since the 1930s and efficiently removes ice from most planes, Bragg said.

But based on what he has learned so far about the Clarence crash, he said, “it certainly sounds like a possibility that it’s icing.”

jzremski@buffnews.com

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