

Weather Study – Attachment 3

Record of Conversation with the Kansas City CWSU meteorologist on duty at the time of the accident.

METEOROLOGY

CEN19FA029

*Submitted by: Mike Richards
NTSB, AS-30*



RECORD OF CONVERSATION

Date:	December 18, 2018
Time:	about 1600-1635 central standard time
Location:	Telephone
Person Contacted:	Mr. Ryan Kardell, National Weather Service Ms. Jennifer Zeltwanger, National Weather Service
Persons Present:	Mr. Mike Richards, National Transportation Safety Board
Subject:	Accident Investigation CEN19FA029

On December 18, 2018, at approximately 1600 central standard time (CST), Mr. Mike Richards of the National Transportation Safety Board had a telephone conversation with Mr. Ryan Kardell of the National Weather Service (NWS). During the conversation Mr. Kardell reported the following:

He has been a General Forecaster at the NWS Center Weather Service Unit (CWSU) at the Federal Aviation Administration's (FAA) Kansas City Air Route Traffic Control Center (ARTCC; ZKC) for about four and one-half years. As a General Forecaster at the ZKC CWSU, his duties include performing general "met watch" for ZKC airspace, coordination with the local Traffic Management Unit, activities related to advisement of pilot report (PIREP) solicitation requirements for controllers, coordination with the NWS Aviation Weather Center (AWC) on product issuance (as needed), briefings for FAA personnel, IT development work (as needed) and the issuance of Center Weather Advisories (as needed). The ZKC CWSU does not currently issue Meteorological Impact Statements. On the day of the accident (17 November 2018) he worked at the ZKC CWSU from 1330-2130 CST.

The ZKC CWSU had provided PIREP solicitation requirement guidance to controllers at ZKC for several years through the local Weather and Radar Processor (WARP) displays. Red and green notifications had to be done manually, were updated roughly once per hour, and were labor intensive. Currently, the ZKC CWSU uses "VBA scripts" with an Excel spreadsheet to automatically retrieve surface weather observations from under ZKC airspace every 20 minutes, decode ceiling and visibility reports, and create red/green graphics that indicate whether PIREP solicitation is required [according to FAA order] for certain airports according to the "five-and-five rule" (visibility at or below 5 SM and ceilings at or below 5000 ft). Red and green graphics that indicate icing and turbulence requirements [according to FAA order] (moderate or greater

turbulence and light or greater icing) is toggled manually within the Excel spreadsheet when the CWSU forecast graphics are updated. There are six individual graphics made every 20 minutes, one for each ZKC Area and displayed via the web on monitors within each Area. The color red indicates that PIREP solicitation is required and the color green indicates that PIREP solicitation is not required. Each Area's graphic has unique airports. If an error exists in a retrieved surface weather observation, or if an observation is missing, ZKC CWSU personnel can manually toggle the colors (i.e., red/green) for the graphics. This entire process is "semi-automated." He is not aware of any other CWSU that provides this semi-automated utility for controllers. The ZKC CWSU has not received much direct feedback on the program. Front-line managers understand the program's functionality and rely on it for situational awareness.

The main way the ZKC CWSU becomes aware of PIREPs is through a "situational awareness display" located at the CWSU. Through this display they are able to visualize PIREPs on a map created by the CWSU at the Seattle ARTCC. Urgent PIREPs will also come in via NWSChat, and there is an audible chime when urgent PIREPs are entered through "ERAM." Usually when an urgent PIREP is received by a controller at ZKC, the ZKC OPS Manager is notified via telephone and the OPS Manager will then usually give the CWSU a "heads up."

PIREPs for turbulence or icing of a "moderate/severe" intensity are considered to reflect a hazard intensity in between "moderate" and "severe," however the PIREP's remarks are considered. The usage of severity categories like "light/moderate" and "moderate/severe" broaden the resolution of PIREPs. When a "moderate/severe" PIREP is received, it starts a process of looking at the whole meteorological picture, which includes considering existing advisories, where the PIREP's intensity falls on the severity spectrum, and an analysis of the meteorological regime and available forecast guidance. On the day of the accident, there were a lot of PIREPs out and most were for "light/moderate" or "moderate" rime icing within a large area of stratus a few hundred miles behind a cold front that had moved south of the area. Analysis of the vertical profile indicated that the entire column was below freezing with little to no cloud ice available above the stratus. This indicated an environment of stratus comprised of small cloud droplets and was consistent with the tendency toward rime icing reports. Radar indicated no precipitation and there were no reports of precipitation hitting the ground, indicating that moisture was not optimal for enhanced icing conditions. Considering the entire situation and taking everything into account, including the Forecast Icing Product information which indicated light to moderate intensity, the environment was consistent with light to moderate icing. The existing AIRMET for moderate icing was the appropriate product to address the icing situation. The CWA-issuance section in the NWS directives is used as guidance for product issuance and/or communication with the AWC in response to PIREPs.

Conversation ended at approximately 1635 CST.

Mike Richards
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National Transportation Safety Board