



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, DC

Medical Factual Report

November 6, 2019

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Chief Medical Officer

A. ACCIDENT: CEN19FA018; Odanah, WI

On October 29, 2018, about 1345 central standard time, an Airbus (Eurocopter) AS350B3 helicopter, N910S, impacted terrain near Odanah, Wisconsin. The commercial rated pilot, the sole occupant, was fatally injured and the helicopter was destroyed. The helicopter was registered to and operated by Enbridge Energy Company, Inc, as a 14 Code of Federal Regulations Part 91 observation flight. The flight departed Gogebic-Iron County Airport (IWD), Ironwood, Michigan about 1300 for the pipeline patrol, en route to Superior, Wisconsin.

B. GROUP IDENTIFICATION

No group was formed for the medical evaluation in this accident.

C. DETAILS OF INVESTIGATION

1. Purpose

This investigation was performed to evaluate the pilot for medical conditions, the use of medications/illicit drugs, and the presence of toxins.

2. Methods

The FAA medical case review, autopsy report, toxicology findings, and the investigator's reports were reviewed. Relevant regulation and medical literature were reviewed as appropriate.

FAA Medical Case Review

According to the FAA medical case review, 64 year old male pilot was Canadian and had no FAA medical certificate. He had an FAA Private Pilot (Foreign Based) Certificate which noted, "All limitations and restrictions on the Canada pilot license apply. Issued on basis of and

valid only when accompanied by Canada pilot license number XXXXX.” This pilot was 68 inches tall and weighed 170 lbs. He held a current unrestricted Category 1 Canadian medical certificate dated 3/12/2018. No other specific information was available.

Autopsy

According to the autopsy performed by the Midwest Medical Examiner's Office, the cause of death was multiple blunt force injuries. The heart weighed 360 grams (average for a man of his size is about 345 grams with a range from 261- 455 grams¹). Serial cross-sectioning revealed up to 60% stenosis diffusely and focal approximately 80% stenosis in the proximal left anterior descending artery. On microscopic evaluation of the heart, the left ventricle showed widespread replacement fibrosis (indicating previous ischemia and scarring) and all sections showed perivascular fibrosis and myocyte hypertrophy. The liver appeared grossly normal but demonstrated evidence of congestive hepatopathy on microscopy.

Toxicology

Toxicology testing performed by the FAA's Forensic Science Laboratory did not identify any tested-for substances.²

D. SUMMARY OF MEDICAL FINDINGS

The 64 year old pilot held an unrestricted Category 1 Canadian medical certificate but no information is available about his past medical history.

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¹ Kitzman DW, Scholz DG, Hagen PT, Ilstrup DM, Edwards WD. Age-related changes in normal human hearts during the first 10 decades of life. Part II (Maturity): A quantitative anatomic study of 765 specimens from subjects 20 to 99 years old. Mayo Clinic Proc., 1988. 63(2): 137-46.

² The laboratory at FAA Forensic Sciences Laboratory has the capability to test for more than 1300 substances including toxins, common prescription and over-the-counter medications as well as illicit drugs. See: <http://jag.cami.jccbi.gov/toxicology/default.asp?offset=0>