



# Aviation Investigation Final Report

|                                |   |                         |            |
|--------------------------------|---|-------------------------|------------|
| <b>Location:</b>               | Zaleski, Ohio   | <b>Accident Number:</b> | CEN19FA072 |
| <b>Date &amp; Time:</b>        | January 29, 2019, 06:50 Local   | <b>Registration:</b>    | N191SF     |
| <b>Aircraft:</b>               | Bell 407  | <b>Aircraft Damage:</b> | Destroyed  |
| <b>Defining Event:</b>         | Unknown or undetermined   | <b>Injuries:</b>        | 3 Fatal    |
| <b>Flight Conducted Under:</b> | Part 135: Air taxi & commuter - Non-scheduled - Air Medical (Medical emergency) |                         |            |

## Analysis

NTSB investigators traveled in support of this investigation and used data obtained from various sources to prepare this aircraft accident report.

The NTSB's full report is available at <http://www.ntsb.gov/investigations/AccidentReports/Pages/AccidentReports.aspx>. The Aircraft Accident Report number is NTSB/AAR-20/01.

On January 29, 2019, about 0650 eastern standard time, a single-engine, turbine-powered Bell 407 helicopter, N191SF, being operated as a helicopter air ambulance (HAA) flight, collided with forested terrain about 4 miles northeast of Zaleski, Ohio. The certificated commercial pilot, flight nurse, and flight paramedic died, and the helicopter was destroyed. The helicopter was registered to and operated by Viking Aviation, LLC, doing business as Survival Flight Inc., under Title 14 Code of Federal Regulations Part 135. Company flight-following procedures were in effect for the visual flight rules (VFR) flight, which departed Mount Carmel Hospital, Grove City, Ohio, about 0628 and was destined for Holzer Meigs Emergency Department, Pomeroy, Ohio, about 69 nautical miles southeast, to pick up a patient. Night visual meteorological conditions existed at the departure location, but available weather information indicated that snow showers and areas of instrument meteorological conditions (IMC) existed along the route of flight.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The NTSB determines that the probable cause of this accident was Survival Flight's inadequate management of safety, which normalized pilots' and operations control specialists' noncompliance with

risk analysis procedures and resulted in the initiation of the flight without a comprehensive preflight weather evaluation, leading to the pilot's inadvertent encounter with instrument meteorological conditions, failure to maintain altitude, and subsequent collision with terrain. Contributing to the accident was the Federal Aviation Administration's inadequate oversight of the operator's risk management program and failure to require Title 14 *Code of Federal Regulations* Part 135 operators to establish safety management system programs.

## Findings

|                              |  |
|------------------------------|--|
| <b>Personnel issues</b>      | Weather planning - Pilot                 |
| <b>Environmental issues</b>  | Below VFR minima - Effect on operation   |
| <b>Personnel issues</b>      | Use of equip/system - Pilot              |
| <b>Aircraft</b>              | Altitude - Not attained/maintained       |
| <b>Environmental issues</b>  | (general) - Not specified                |
| <b>Organizational issues</b> | Safety - Operator                        |
| <b>Organizational issues</b> | Standard operating practices - Operator  |
| <b>Organizational issues</b> | Adequacy of policy/proc - Operator       |
| <b>Organizational issues</b> | Oversight of operation - FAA/Regulator   |
| <b>Organizational issues</b> | Operational procedures - FAA/Regulator   |
| <b>Organizational issues</b> | Adequacy of safety program - Operator    |
| <b>Organizational issues</b> | Adherence to safety program - Operator   |
| <b>Environmental issues</b>  | Snow - Not specified                     |
| <b>Environmental issues</b>  | (general) - Availability of related info |

## Factual Information

### History of Flight

|                |  |
|----------------|--|
| <b>Enroute</b> | VFR encounter with IMC                   |
| <b>Enroute</b> | Unknown or undetermined (Defining event) |

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### Pilot Information

|                                  |  |  |                   |
|----------------------------------|--|--|-------------------|
| <b>Certificate:</b>              | Commercial; Flight instructor  | <b>Age:</b>                              | 34, Female        |
| <b>Airplane Rating(s):</b>       | Single-engine land   | <b>Seat Occupied:</b>                    | Right             |
| <b>Other Aircraft Rating(s):</b> | Helicopter   | <b>Restraint Used:</b>                   | Unknown           |
| <b>Instrument Rating(s):</b>     | Airplane; Helicopter   | <b>Second Pilot Present:</b>             | No                |
| <b>Instructor Rating(s):</b>     | Helicopter; Instrument helicopter  | <b>Toxicology Performed:</b>             | Yes               |
| <b>Medical Certification:</b>    | Class 2 Without waivers/limitations  | <b>Last FAA Medical Exam:</b>            | November 18, 2018 |
| <b>Occupational Pilot:</b>       | Yes  | <b>Last Flight Review or Equivalent:</b> | April 27, 2018    |
| <b>Flight Time:</b>              | (Estimated) 1855 hours (Total, all aircraft), 83 hours (Total, this make and model), 1787 hours (Pilot In Command, all aircraft) |  |                   |

## Aircraft and Owner/Operator Information

|                                      |   |                                       |                          |
|--------------------------------------|---|---------------------------------------|--------------------------|
| <b>Aircraft Make:</b>                | Bell  | <b>Registration:</b>                  | N191SF                   |
| <b>Model/Series:</b>                 | 407 No Series   | <b>Aircraft Category:</b>             | Helicopter               |
| <b>Year of Manufacture:</b>          | 1996  | <b>Amateur Built:</b>                 |                          |
| <b>Airworthiness Certificate:</b>    | Normal  | <b>Serial Number:</b>                 | 53006                    |
| <b>Landing Gear Type:</b>            | N/A; Skid   | <b>Seats:</b>                         | 4                        |
| <b>Date/Type of Last Inspection:</b> |   | <b>Certified Max Gross Wt.:</b>       | 5501 lbs                 |
| <b>Time Since Last Inspection:</b>   |   | <b>Engines:</b>                       | 1 Turbo shaft            |
| <b>Airframe Total Time:</b>          |   | <b>Engine Manufacturer:</b>           | Rolls-Royc               |
| <b>ELT:</b>                          | C126 installed, activated, did not aid in locating accident | <b>Engine Model/Series:</b>           | 250-C47B                 |
| <b>Registered Owner:</b>             | N191SF LLC  | <b>Rated Power:</b>                   |                          |
| <b>Operator:</b>                     | VIKING AVIATION INC   | <b>Operating Certificate(s) Held:</b> | On-demand air taxi (135) |
| <b>Operator Does Business As:</b>    | Survival Flight Inc   | <b>Operator Designator Code:</b>      | KVHG                     |

## Meteorological Information and Flight Plan

|   |                                  |   |                   |
|---|----------------------------------|---|-------------------|
| <b>Conditions at Accident Site:</b>     | Unknown                          | <b>Condition of Light:</b>                  | Night             |
| <b>Observation Facility, Elevation:</b> | KUNI,765 ft msl                  | <b>Distance from Accident Site:</b>         | 7 Nautical Miles  |
| <b>Observation Time:</b>                | 11:55 Local                      | <b>Direction from Accident Site:</b>        | 151°              |
| <b>Lowest Cloud Condition:</b>          |                                  | <b>Visibility</b>                           | 10 miles          |
| <b>Lowest Ceiling:</b>                  | Overcast / 2700 ft AGL           | <b>Visibility (RVR):</b>                    |                   |
| <b>Wind Speed/Gusts:</b>                | 7 knots / None                   | <b>Turbulence Type Forecast/Actual:</b>     | Unknown / Unknown |
| <b>Wind Direction:</b>                  | 280°                             | <b>Turbulence Severity Forecast/Actual:</b> | Unknown / Unknown |
| <b>Altimeter Setting:</b>               | 29.92 inches Hg                  | <b>Temperature/Dew Point:</b>               | -6°C / -10°C      |
| <b>Precipitation and Obscuration:</b>   | No Obscuration; No Precipitation |   |                   |
| <b>Departure Point:</b>                 | Grove City, OH                   | <b>Type of Flight Plan Filed:</b>           | Company VFR       |
| <b>Destination:</b>                     | Pomeroy, OH                      | <b>Type of Clearance:</b>                   | Unknown           |
| <b>Departure Time:</b>                  | 06:28 Local                      | <b>Type of Airspace:</b>                    | Class G           |

## Wreckage and Impact Information

|                            |         |                             |                      |
|----------------------------|---------|-----------------------------|----------------------|
| <b>Crew Injuries:</b>      | 3 Fatal | <b>Aircraft Damage:</b>     | Destroyed            |
| <b>Passenger Injuries:</b> |         | <b>Aircraft Fire:</b>       | None                 |
| <b>Ground Injuries:</b>    | N/A     | <b>Aircraft Explosion:</b>  | None                 |
| <b>Total Injuries:</b>     | 3 Fatal | <b>Latitude, Longitude:</b> | 39.323333,-82.309448 |

## Administrative Information

|  |   |
|--|---|
| <b>Investigator In Charge (IIC):</b>     | Williams, David   |
| <b>Additional Participating Persons:</b> | David Gerlach; FAA; Washington, DC<br>Todd Gentry; FAA; Washington, DC<br>Jack Johnson; Rolls Royce Engines; Indianapolis, IN<br>Gary Mercer; Viking Aviation LLC; Little Rock, AR<br>Dane Immel; Woodward; Santa Clarita, CA |
| <b>Original Publish Date:</b>            | June 10, 2020   |
| <b>Last Revision Date:</b>               |   |
| <b>Investigation Class:</b>              | <a href="#">Class 1</a>   |
| <b>Note:</b>                             | The NTSB traveled to the scene of this accident.  |
| <b>Investigation Docket:</b>             | <a href="https://data.nts.gov/Docket?ProjectID=98902">https://data.nts.gov/Docket?ProjectID=98902</a>   |

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).