



National Transportation Safety Board

Washington, DC 20594

Safety Recommendation

Date: May 1, 2014

In reply refer to: A-14-22 (Urgent) and -23

The Honorable Michael P. Huerta
Administrator
Federal Aviation Administration
Washington, DC 20590

The National Transportation Safety Board (NTSB) urges the Federal Aviation Administration (FAA) to take action on the safety recommendations, one of which is urgent, issued in this letter. These recommendations address the compliance and safety programs in place at and FAA oversight of operators owned by HoTH, Inc., including Hageland Aviation Services, Inc.; Frontier Flying Service; and Era Aviation,¹ which may do business as Ravn Alaska, Ravn Connect, and Corvus Airlines. The recommendations are derived from the NTSB's investigations, some of which are ongoing, involving the operators. As a result of these investigations, the NTSB has issued two safety recommendations to the FAA, one of which is urgent. Information supporting these recommendations is discussed below.

Background

Since 2012, the NTSB has investigated six accidents and one incident related to operators owned by HoTH, Inc. On September 5, 2012, about 1100 Alaska daylight time (AKDT), Era Aviation (dba Era Alaska) flight 874, a Bombardier DHC-8-103, N886EA, experienced an uncommanded left roll consistent with a stall and uncontrolled descent during climb about 12,000 ft mean sea level (msl) near Soldotna, Alaska.² The flight crew regained control of the airplane about 7,000 ft msl, and the flight returned to Ted Stevens Anchorage International Airport (ANC), Anchorage, Alaska. The 12 passengers and 3 crew members were not injured, and the airplane was not damaged. The airplane was being operated under the provisions of 14 *Code of Federal Regulations* (CFR) Part 121 as a regularly scheduled passenger flight between ANC and Homer Airport (HOM), Homer, Alaska. Day instrument meteorological conditions (IMC) prevailed at the time of the incident. This incident is currently under investigation.

¹ The FAA airline certificates are as follows: Hageland Aviation Services, Inc., is EPUA174D; Frontier Flying Service is FFSA003A; and Era Aviation is ERAA075A.

² Preliminary information about this incident, NTSB case number DCA12IA141, can be found online at www.nts.gov/aviationquery/index.aspx.

On December 3, 2012, about 1050 Alaska standard time (AKST), Hageland Aviation Services, Inc., (dba Era Alaska) flight 140, a Cessna 208B, N169LJ, made a forced landing shortly after takeoff from Mekoryuk Airport, Mekoryuk, Alaska.³ The two pilots and six passengers were not injured, and one passenger sustained minor injuries. The airplane sustained substantial damage. The airplane was being operated under the provisions of 14 CFR Part 135 as a visual flight rules (VFR) scheduled commuter flight. Visual meteorological conditions (VMC) prevailed, and company flight-following procedures were in effect. The flight originated at the Mekoryuk Airport about 1045 and was destined for Bethel, Alaska. The NTSB determined that the probable cause of this accident was the total loss of engine power as a result of a fractured first-stage compressor blade due to fatigue cracking. The source of the fatigue crack could not be determined due to secondary damage sustained to the fracture surface.

On May 4, 2013, about 1340 AKDT, a Cessna 207, N9400M, collided with terrain during the second attempt to land at Newtok Airport, Newtok, Alaska.⁴ The pilot and three passengers sustained minor injuries, and the airplane sustained substantial damage. The airplane was being operated by Hageland Aviation Services, Inc., (dba Era Alaska) under the provisions of 14 CFR Part 135 as a VFR scheduled commuter flight. The airplane impacted terrain during poor weather conditions about 1 mile short of the runway. The NTSB determined that the probable causes of this accident were the pilot's continued flight into adverse weather and his failure to maintain clearance from terrain while on approach in flat light conditions. Contributing to the accident was the pilot's delayed decision to initiate a go-around.

On October 23, 2013, about 1530 AKDT, Era Aviation (dba Era Alaska) flight 878, a Beechcraft 1900C, N575U, experienced a nose and main landing gear collapse while landing on runway 22 at HOM.⁵ The 2 flight crewmembers and 13 passengers were not injured, and the airplane sustained substantial damage. The airplane was being operated under the provisions of 14 CFR Part 121 as a scheduled domestic passenger flight from ANC. This accident is currently under investigation.

On November 22, 2013, about 1332 AKST, a Beechcraft 1900C, N575X, sustained substantial damage while landing at Badami Airport near Deadhorse, Alaska.⁶ The captain, first officer, and passenger were not injured. The airplane was being operated by Hageland Aviation Services, Inc., (dba Era Alaska) under the provisions of 14 CFR Part 135 as a VFR on-demand charter flight. IMC were reported at the time of the accident, and company flight-following procedures were in effect. The flight originated at Deadhorse, Alaska, about 1315. The captain reported that during landing, the main landing gear wheels impacted the elevated edge of the runway surface. The right main gear separated, and the airplane slid along the surface of the runway, sustaining substantial damage to the fuselage and right elevator. This accident is currently under investigation.

³ More information about this accident, NTSB case number ANC13LA012, can be found online at www.nts.gov/aviationquery/index.aspx.

⁴ More information about this accident, NTSB case number ANC13CA042, can be found online at www.nts.gov/aviationquery/index.aspx.

⁵ Preliminary information about this accident, NTSB case number DCA14FA002, can be found online at www.nts.gov/aviationquery/index.aspx.

⁶ Preliminary information about this accident, NTSB case number ANC14LA007, can be found online at www.nts.gov/aviationquery/index.aspx.

On November 29, 2013, about 1824 AKST, Hageland Aviation Services, Inc., (dba Era Alaska) flight 1453, a Cessna 208B Caravan, N12373, impacted terrain about 1 mile southeast of St. Mary's Airport (KSM), St. Mary's, Alaska.⁷ The commercial pilot and three passengers sustained fatal injuries, and six passengers sustained serious injuries. The airplane sustained substantial damage. The airplane was being operated under the provisions of 14 CFR Part 135 as a VFR scheduled commuter flight. Night IMC prevailed at KSM at the time of the accident, and company flight-following procedures were in effect. The airplane departed from Bethel Airport, Bethel, Alaska, about 1741 destined for Mountain Village, Alaska, and continuing to KSM. Before reaching Mountain Village, the flight diverted to KSM due to deteriorating weather. This accident is currently under investigation.

On April 8, 2014, about 1556 AKDT, a Cessna 208B Caravan, N126AR, impacted terrain about 22 miles southeast of Kwethluk, Alaska.⁸ The two flight crewmembers sustained fatal injuries, and the airplane was destroyed. The airplane was being operated by Hageland Aviation Services, Inc., (dba Ravn Connect) under the provisions of 14 CFR Part 91 as a VFR training flight. Day VMC prevailed, and company flight-following procedures were in effect. The local training flight departed from Bethel Airport about 1522. This accident is currently under investigation.

History of HoTH, Inc., and FAA Oversight

In 2008, HoTH, Inc., an Alaskan corporation, became the parent holding company of Frontier Flying Service; Hageland Aviation Services, Inc.; Era Aviation; and Arctic Circle Air. In January 2014, Era Alaska announced that its brand, which includes Era Aviation; Hageland Aviation Services, Inc.; and Frontier Flying Service, was rebranding as Ravn Alaska. Through this change, Era Aviation would become Corvus Airlines, operating under the provisions of 14 CFR Part 121; Hageland Aviation Services, Inc., and Frontier Flying Service would operate as Ravn Connect, operating under the provisions of 14 CFR Part 135.⁹ FAA oversight for each operator is conducted through the Anchorage Certificate Management Office (CMO) for the 14 CFR Part 121 operations and through the Anchorage Flight Standards District Office (FSDO) for the 14 CFR Part 135 operations.

Hageland Aviation Services, Inc.

Hageland Aviation Services, Inc., (now dba Ravn Connect) is the largest Part 135 operator in Alaska. It operates 58 airplanes and, according to April 2014 interviews with the FAA, the operator conducts an estimated 1,200 operations weekly. FAA oversight is conducted by a principal operations inspector (POI), a principal maintenance inspector, and a principal avionics inspector (PAI) based at the Anchorage FSDO. During its ongoing investigation of the

⁷ Preliminary information about this accident, NTSB case number ANC14MA008, can be found online at www.nts.gov/aviationquery/index.aspx.

⁸ Preliminary information about this accident, NTSB case number ANC14FA022, will be available online at www.nts.gov/aviationquery/index.aspx.

⁹ Although the names were changed in January 2014, the FAA airline certificates are still in the names of Era Aviation (dba Era Alaska and Ravn Alaska); Hageland Aviation Services, Inc., (dba Ravn Alaska and Ravn Connect); and Frontier Flying Service (dba Ravn Alaska and Frontier Alaska). The NTSB notes that Corvus Airlines is not yet listed on Era Aviation's certificate.

November 29, 2013, accident, the NTSB identified areas of concern with the operator's risk assessment program, the operator's operational control system, and the FAA's observations of operator noncompliance.

Regarding the first area of concern, investigators determined that the operator had a risk assessment plan¹⁰ in place but that it was improperly implemented and failed to achieve the necessary safety outcomes.¹¹ For example, investigators found that the operator was using a risk assessment program as part of its operational control procedures; however, the program was not integrated into the general operations manual (GOM), as was required by FAA Order 8900.1, or placed in the FAA-approved training program. Thus, flights were allowed to be released without correctly identifying the risks associated with those particular flights and mitigating those risks. Although the St. Mary's and Badami accidents are currently under investigation, preliminary findings indicate that the inadequate risk assessment program may have played a role in both accidents.

Second, investigators noted deficiencies in the operational control procedures for the operator. In 14 CFR 1.1, the FAA defines operational control as "the exercise of authority over initiating, conducting or terminating a flight." FAA Order 8900.1, Volume 3, Chapter 25 notes that 14 CFR 121.133 and 135.21 require that the GOM (or other appropriate document) contain information describing the certificate holder's operational control system.¹² Further, the training program must provide the certificate holder's personnel with the knowledge and skills required to ensure that the operational control system is effective. The investigation determined that company employees acting as flight coordinators were not properly trained for the job and that the overall experience of company flight coordinators was limited. The director of operations for Hageland Aviation Services, Inc., (now Ravn Connect), who was responsible for operational control, delegated operational control to flight coordinators who were not properly trained or qualified and did not meet the requirements of 14 CFR 119.69. As a result, the operator experienced a loss of operational control within the company, and flights were released without the proper oversight from the company personnel responsible for operational control. Although the St. Mary's and Badami accidents are currently under investigation, preliminary findings indicate that operational control issues may have played a role in both accidents.

Finally, surveillance records showed that FAA inspectors observed 11 incidences of noncompliance related to flight operations by the operator and opened investigations. From July 2009 until the November 29, 2013, accident, the 11 noncompliance investigations were closed; no certificate action was taken. Surveillance records also showed that the FAA observed the operator's failure to follow its operational control procedures and process in the months

¹⁰ The FAA defines risk assessment as the "process of combining the impacts of risk elements discovered in risk analysis and comparing them against some acceptability criteria. Risk assessment can include the consolidation of risks into risk sets that can be jointly mitigated, combined, and then used in decision making." See *System Safety Process* (www.faa.gov/gslac/alc/libview_normal.aspx?id=6877).

¹¹ Although there was not a requirement for the operator to have a risk assessment program, the operations specifications for the operator noted that operational control procedures were contained in the general operations manual (GOM). The risk assessment program was a part of the operational control processes and therefore should have been included in the GOM.

¹² In 2008, the FAA released Information for Operators (InFO) 08005, "Part 135 Operational Control Questions & Answers (Q&As)," which discusses operational control as it relates to Part 135 operations.

before the St. Mary's accident. Additionally, FSDO management personnel requested staffing increases to manage the operator's certificate over the 2 years leading up to the accident; however, no additional staffing was assigned, even though several accidents occurred during this time period. FSDO management personnel also indicated that the operator had numerous inspector changes over a short period of time.

The NTSB has previously addressed the issue of the need for adequate staffing when changes to operations occur. The NTSB issued Safety Recommendation A-10-26 to the FAA on February 23, 2010, as a result of its investigation of the February 12, 2009, accident involving a Colgan Air, Inc., Bombardier DHC-8-400 operating as Continental Connection flight 3407 that stalled and crashed while on final approach to Buffalo-Niagara International Airport, Buffalo, New York:¹³

Develop more stringent standards for surveillance of 14 *Code of Federal Regulations* (CFR) Part 121, 135, and 91 K operators that are experiencing rapid growth, increased complexity of operations, accidents and/or incidents, or other changes that warrant increased oversight, including the following: (1) verify that inspector staffing is adequate to accomplish the enhanced surveillance that is promulgated by the new standards, (2) increase staffing for those certificates with insufficient staffing levels, and (3) augment the inspector staff with available and airplane-type-qualified inspectors from all Federal Aviation Administration regions and 14 CFR Part 142 training centers to provide quality assurance over the operators' aircrew program designee workforce.

In response, the FAA indicated that it issued Notice N8900.236 to prevent similar situations from occurring. However, this notice is specific to Part 121 operations and does not address Part 135 operations. The NTSB notes that more stringent standards for surveillance of Part 135 operators as recommended may have resulted in increased inspector staffing when accidents continued to occur at Hageland Aviation Services, Inc.

The operator implemented a number of changes following the November 29, 2013, accident, including establishing an operational control center, updating its operational control center procedures and staffing, modifying its risk management plan, and restricting special VFR and night VFR operations. However, due to the number of systemic deficiencies identified during the investigation and the length of time over which they were occurring, the NTSB believes that a more comprehensive review of the operator as well as the FAA's surveillance program is warranted.

Era Aviation

Era Aviation (now dba Corvus Airlines) is one of three Part 121 operators in Alaska. Era Aviation currently operates throughout Alaska with a fleet of 12 airplanes. Oversight consists of a certificate management team based out of the FAA's Denali CMO in Anchorage. During its ongoing investigation of the September 5, 2012, incident, the NTSB identified areas of concern

¹³ See National Transportation Safety Board, *Loss of Control on Approach, Colgan Air, Inc., Operating as Continental Connection Flight 3407, Bombardier DHC-8-400, N200WQ, Clarence Center, New York, February 12, 2009*, AAR-10/01 (Washington, DC: National Transportation Safety Board, 2010).

related to FAA oversight and operator compliance, including the installation of the incorrect cockpit voice recorder (CVR) in the incident airplane, the POI's lack of awareness of guidance pertaining to Era Aviation's operations and stall recovery, and the operator's lack of compliance with Airworthiness Directive (AD) 96-09-25.

Regarding the first area of concern, investigators found that the incorrect model of CVR was installed in the incident airplane. On March 7, 2008, the FAA published its final rule, "Revisions to Cockpit Voice Recorder and Digital Flight Data Recorder Regulations," mandating that aircraft manufactured before April 7, 2010, and operated under Part 121 be retrofitted with CVRs that retain the last 2 hours of aircraft operation. The CVRs installed on the entire fleet, including the incident airplane, did not meet the minimum 2-hour recording requirement (it met the former 30-minute requirement), and although the PAI responsible for oversight stated that he was aware of the change in requirements, he was unaware that the CVRs on Era Aviation airplanes had not been retrofitted by the effective date of the rule. Once identified, Era replaced all recorders before further flight.

The second area of concern was the POI's lack of awareness of guidance¹⁴ pertaining to stall recovery procedures and Era Aviation's operations. Era Aviation had not updated its guidance with the pertinent information, and the FAA's certificate management team was unaware of the guidance and the required updates that needed to be made to Era Aviation's FAA-approved flight crew training program. As a result, the flight crew involved in the September 5, 2012, incident had not been trained on improved stall and upset recovery techniques or made aware of guidance and procedures specific to operation of the incident airplane in conditions present on the day of the incident.

Finally, the operator had not complied with AD 96-09-25. The AD, effective June 11, 1996, is applicable to all de Havilland Model DHC-7 and DHC-8 series airplanes and requires revising the aircraft flight manual (AFM) to provide the flight crew with recognition cues for, and procedures for exiting from, severe icing conditions and to limit or prohibit the use of various flight control devices. Although Era Aviation had verified compliance with AD 96-09-25 through notation in its maintenance records, an FAA postincident inspection found that neither a copy of the AD nor the information included in the AD was found in the AFM's Limitations or Procedures sections as required in the AD.

The NTSB is concerned about the deficiencies noted during recent investigations of HoTH, Inc., operators and also with the FAA's surveillance and oversight programs that failed to detect and correct these numerous and long-standing issues of noncompliance with FAA regulations and policies. Due to the number of operations conducted by the operators owned by

¹⁴ This guidance included the following:

- Advisory Circular 120-109, "Stall and Stick Pusher Training";
- Safety Alert for Operators 10012, "Possible Misinterpretation of Practical Test Standards (PTS) Regarding 'Minimal Loss of Altitude'";
- InFO 10010, "Enhanced Upset Recovery Training";
- FAA-S-8081-5F, Pilot Test Standards (revised April 4, 2012);
- Bombardier revision 192 to the Dash 8 model 103 aircraft flight manual related to high angle-of-attack recovery procedures; and
- Bombardier revision (2004) of flight-in-icing conditions guidance to include all icing conditions.

HoTH, Inc., throughout Alaska; the six recent accidents and one incident involving operators owned by HoTH, Inc.; and the extensive nature of the compliance and oversight inadequacies identified during the investigations, the NTSB concludes that an independent review of the operators owned and controlled by HoTH, Inc., and the FAA's oversight activities related to these operators is needed to ensure the safety of these commercial operations. Hageland Aviation Services, Inc., is one of the largest Part 135 operators in the United States operating in Alaska, and Era Aviation is a codeshare partner with Alaska Airlines and conducts Part 121 operations throughout Alaska. The September 5, 2012, Era Aviation incident came close to resulting in a fatal Part 121 accident. The six accidents and one incident occurred in a 19-month period, with four of these accidents (the two most recent involving fatalities) within the last 6 months. This indicates that the FAA needs to take immediate action to prevent the recurrence of similar accidents. The investigations we have conducted have identified numerous concerns, and without immediate assessment and evaluation, additional accidents and loss of life may occur. Therefore, the National Transportation Safety Board makes the following recommendations to the Federal Aviation Administration:

Conduct a comprehensive audit of the regulatory compliance and operational safety programs in place at operators owned by HoTH, Inc., to include an assessment of their flight operations, training, maintenance and inspection, and safety management programs, and ensure that permanent corrective action is implemented for all adverse findings. This audit should be conducted by a team of inspectors from outside Alaska. (A-14-22) (Urgent)

Conduct a comprehensive audit of the Federal Aviation Administration (FAA) oversight of 14 *Code of Federal Regulations* Part 135 and Part 121 certificates held by operators owned by HoTH, Inc., and ensure that permanent corrective action is implemented for all adverse findings. This audit should be conducted by a team of inspectors from outside Alaska and should include a review of inspector qualifications, turnover, working relationships between the FAA and operators owned by HoTH, Inc., and workload to determine whether staffing is sufficient. (A-14-23)

Acting Chairman HART and Members SUMWALT, ROSEKIND, and WEENER concurred in these recommendations.

The NTSB is vitally interested in these recommendations because they are designed to prevent accidents and save lives. We would appreciate receiving a response from you within 30 days regarding A-14-22 (Urgent) and 90 days regarding A-14-23 detailing the actions you have taken or intend to take to implement them. When replying, please refer to the safety recommendations by number. We encourage you to submit your response electronically to correspondence@ntsb.gov.

[Original Signed]

By: Christopher A. Hart,
Acting Chairman