



National Transportation Safety Board Aviation Accident Final Report

Location:	Saint Marys, AK	Accident Number:	ANC14MA008
Date & Time:	11/29/2013, 1824 AKS	Registration:	N12373
Aircraft:	CESSNA 208B	Aircraft Damage:	Substantial
Defining Event:	Controlled flight into terr/obj (CFIT)	Injuries:	4 Fatal, 6 Serious
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Scheduled		

Analysis

The scheduled commuter flight departed 40 minutes late for a two-stop flight. During the first leg of the night visual flight rules (VFR) flight, weather at the first destination airport deteriorated, so the pilot diverted to the second destination airport. The pilot requested and received a special VFR clearance from an air route traffic controller into the diversion airport area. Review of automatic dependent surveillance-broadcast data transmitted by the airplane showed that, after the clearance was issued, the airplane's track changed and proceeded in a direct line to the diversion airport.

Postaccident examination of the pilot's radio showed that his audio panel was selected to the air route traffic control (ARTCC) frequency rather than the destination airport frequency; therefore, although the pilot attempted to activate the pilot-controlled lighting at the destination airport, as heard on the ARTCC frequency, it did not activate. Further, witnesses on the ground at St. Mary's reported that the airport lighting system was not activated when they saw the accident airplane fly over, and then proceed away from the airport. Witnesses in the area described the weather at the airport as deteriorating with fog and ice. About 1 mile from the runway, the airplane began to descend, followed by a descending right turn and controlled flight into terrain. The pilot appeared to be in control of the airplane up to the point of the right descending turn. Given the lack of runway lighting, the restricted visibility due to fog, and the witness statements, the pilot likely lost situational awareness of the airplane's geographic position, which led to his subsequent controlled flight into terrain.

After the airplane proceeded away from the airport, the witnesses attempted to contact the pilot by radio. When the pilot did not respond, they accessed the company's flight tracking software and noted that the airplane's last reported position was in the area of the airplane's observed flightpath. They proceeded to search the area where they believed the airplane was located and found the airplane about 1 hour later.

Postaccident examination of the airframe and engine revealed no mechanical malfunctions or anomalies that would have precluded normal operation. About 3/4 inch of ice was noted on the nonprotected surfaces of the empennage. However, ice formation on the airplane's inflatable

leading edge de-ice boots was consistent with normal operation of the de-ice system, and structural icing likely was not a factor in the accident.

According to the company's General Operations Manual (GOM), operational control was held by the flight coordinator for the accident flight, and the flight coordinator and pilot-in-command (PIC) were jointly responsible for preflight planning, flight delay, and release of the flight, which included the risk assessment process. The flight coordinator assigned the flight a risk level of 2 (on a scale of 1 to 4) due to instrument meteorological and night conditions and contaminated runways at both of the destination airports. The first flight coordinator assigned another flight coordinator to create the manifest, which listed eight passengers and a risk assessment level of 2. According to company risk assessment and operational control procedures, a risk level of 2 required a discussion between the PIC and flight coordinator about the risks involved. However, the flight coordinators did not discuss with the pilot the risks and weather conditions associated with the flight. Neither of the flight coordinators working the flight had received company training on the risk assessment program. At the time of the accident, no signoff was required for flight coordinators or pilots on the risk assessment form, and the form was not integrated into the company manuals.

A review of Federal Aviation Administration (FAA) surveillance activities revealed that aviation safety inspectors had performed numerous operational control inspections and repeatedly noted deficiencies within the company's training, risk management, and operational control procedures. Enforcement Information System records indicated that FAA inspectors observed multiple incidences of the operator's noncompliance related to flight operations and that they opened investigations; however, the investigations were closed after only administrative action had been taken. Therefore, although FAA inspectors were providing surveillance and noting discrepancies within the company's procedures and processes, the FAA did not hold the operator sufficiently accountable for correcting the types of operational deficiencies evident in this accident, such as the operator's failure to comply with its operations specifications, operations training manual, and GOM and applicable federal regulations.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's decision to initiate a visual flight rules approach into an area of instrument meteorological conditions at night and the flight coordinators' release of the flight without discussing the risks with the pilot, which resulted in the pilot experiencing a loss of situational awareness and subsequent controlled flight into terrain. Contributing to the accident were the operator's inadequate procedures for operational control and flight release and its inadequate training and oversight of operational control personnel. Also contributing to the accident was the Federal Aviation Administration's failure to hold the operator accountable for correcting known operational deficiencies and ensuring compliance with its operational control procedures.

Findings

Personnel issues	Decision making/judgment - Pilot (Cause) Situational awareness - Pilot (Cause) Decision making/judgment - Flight service personnel (Cause)
Environmental issues	Below VFR minima - Effect on operation (Cause)
Organizational issues	Adequacy of policy/proc - Operator (Factor) Training - Operator (Factor) Oversight of operation - FAA/Regulator (Factor)

Factual Information

HISTORY OF FLIGHT

On November 29, 2013, at 1824 Alaska standard time, a Cessna 208B Grand Caravan airplane, N12373, sustained substantial damage after impacting terrain about 1 mile southeast of St. Mary's Airport, St. Mary's, Alaska. The airplane was being operated as flight 1453 by Hageland Aviation Services, Inc., dba Era Alaska, Anchorage, Alaska, as a visual flight rules (VFR) scheduled commuter flight under the provisions of 14 Code of Federal Regulations (CFR) Part 135. Of the 10 people on board, the commercial pilot and three passengers sustained fatal injuries, and six passengers sustained serious injuries. Night, instrument meteorological conditions (IMC) prevailed at St. Mary's Airport at the time of the accident, and company flight-following procedures were in effect. Flight 1453 departed from Bethel Airport, Bethel, Alaska, at 1741 destined for Mountain Village, Alaska. Before reaching Mountain Village, the flight diverted to St. Mary's due to deteriorating weather conditions.

The pilot's flight and duty records indicated that, on the day of the accident, the pilot arrived at the company office in St. Mary's about 0800. The accident flight was the pilot's fifth flight of the day. Flight 1453 was to depart Bethel Airport with eight adult passengers and one infant passenger (who was not listed on the flight manifest), make a stop in Mountain Village, and then proceed to St. Mary's.

Hageland Aviation Services had recently incorporated a risk assessment program into its operational control procedures, which required each flight be assigned a risk level on a scale of 1 to 4, with the intention of mitigating the hazards for high-risk flights. Although not required by the Federal Aviation Administration (FAA), the risk assessment was being used as part of the company's operational control procedures; however, it had not been incorporated into the company General Operations Manual (GOM).

Before departure, the flight coordinator checked the weather and assigned the flight a risk assessment level of 2 due to IMC and night conditions and contaminated runways at both of the destination airports. He assigned another flight coordinator to create the manifest, which listed eight passengers and a risk assessment level of 2.

A risk assessment level 2 required a conversation between the flight coordinator and the pilot about possible hazards associated with the flight. However, the flight coordinators did not discuss with the pilot the risk assessment level assigned to the flight, current weather conditions or hazards, or ways to mitigate the hazards as required by the risk assessment program. Neither of the flight coordinators working the flight had received company training on the risk assessment program.

The flight was scheduled to depart at 1700, but it was late arriving into Bethel and did not depart until 1741. The pilot reported his departure from Bethel Airport to the company flight coordinator via radio at 1741, reporting 10 souls on board and 4 hours of fuel.

According to a passenger, they had been flying for about 30 minutes when the airplane entered thick fog. He reported that the airplane was picking up ice and had accumulated about 1/2 to 3/4 inch of ice on the lift strut.

According to an Air Route Traffic Control Center (ARTCC) recording, about 18 miles from Mountain Village, the pilot made an announcement to the passengers that, due to deteriorating

weather conditions, the flight was diverting to St. Mary's, which is about 13 miles east of Mountain Village.

At 1819:20, the pilot contacted the Anchorage ARTCC and requested a special VFR clearance to St. Mary's Airport.

At 1819:43, an Anchorage ARTCC controller cleared the flight into the St. Mary's surface area, told the pilot to maintain special VFR conditions, and provided the St. Mary's altimeter setting of 30.35 inches of Mercury (inHg). This was the last communication with the airplane.

About 1822, sounds similar to that of a microphone being keyed to activate pilot-controlled approach lighting were heard on the ARTCC frequency. Postaccident examination of the pilot's radio showed that his audio panel was still selected to the ARTCC frequency rather than the destination airport frequency; therefore, the pilot-controlled lighting would not have activated. Witnesses on the ground at St. Mary's reported that the pilot-controlled airport lighting system was not activated when they saw the accident airplane fly over the airport. A passenger reported that no lights were visible but that she saw the ground about 30 ft below the airplane and was able to make out dark patches of trees.

Witnesses on the ground at St. Mary's Airport reported seeing the airplane fly over the airport at a relatively low altitude, about 300 to 400 ft, traveling southeast. They watched the airplane travel away from the airport until its rotating beacon disappeared. One witness stated that he saw the landing lights of the airplane illuminate something white before he lost sight of the beacon, and he assumed that the airplane had entered the clouds. Due to concern about the direction and altitude the airplane was flying, the witnesses attempted to contact the pilot on the radio, but the pilot did not respond. They then heard another pilot report on the radio that there was an emergency locator transmitter broadcasting in the vicinity of St. Mary's. After checking for the airplane's last reported position on the company's flight-following software, a search was initiated.

About 1 hour after the search was initiated, the airplane was located, and rescue personnel confirmed that the pilot and two passengers died at the scene. One passenger died after being transported to the local clinic. The six surviving passengers were evacuated to Anchorage for treatment.

The airplane impacted the top of a ridge about 1 mile southeast of St. Mary's Airport at an elevation of about 425 ft mean seal level (msl) in a nose-high, upright attitude. The airplane came to rest upright about 200 ft from the initial impact point at an elevation of about 530 ft.

PERSONNEL INFORMATION

The pilot, age 68, held a commercial pilot certificate with an airplane single-engine land, single-engine sea, multiengine land, and instrument ratings. Pilot training records indicated that he had accumulated over 25,000 hours of flight time with over 1,800 hours in Cessna 208 airplanes. His most recent FAA second-class airman medical certificate was issued on August 21, 2013, with the limitation that the pilot must wear corrective lenses for distance and must possess corrective lenses for near vision. The pilot's personal logbooks were not located.

A review of Hageland Aviation Services personnel records indicated that the pilot was hired, completed his initial company training (which included pilot ground and flight training), and was assigned to fly Cessna 207A airplanes on December 18, 2012.

On February 11, 2013, the pilot completed initial Cessna 208B ground training. On June 14,

2013, he completed recurrent ground training. On June 19, 2013, he completed flight training and a check ride and was assigned to fly Cessna 208B airplanes out of the St. Mary's base.

Flight and duty records revealed that, in September 2013, the pilot was on duty for 15 days, flew 60.5 hours, and had 15 days off. In October 2013, the pilot was on duty for 16 days, flew 73.8 hours, and had 15 days off. In November 2013, the pilot was on duty November 1 to 16, flew 63.7 hours, was off duty November 17 to 28, and returned to work on November 29 (the day of the accident).

On the day of the accident, the pilot was on a 14-hour assigned duty day, starting at 0800 and ending at 2200. He flew four trips totaling about 4.4 hours before the accident flight.

AIRCRAFT INFORMATION

The accident airplane was a turboprop Cessna 208B Grand Caravan, registration number N12373, manufactured in 1998. At the time of the accident, the airplane had accumulated 12,653 total flight hours and was maintained under an approved aircraft inspection program. The most recent inspection of the airframe and engine was completed on November 12, 2013.

The airplane was equipped with a Pratt & Whitney PT6A-114A turbine engine that was rated at 675-shaft horsepower. The engine was overhauled 4,655 hours before the accident.

The airplane was equipped for instrument flight and flight into icing conditions and was certificated for single-pilot operation. The airplane was equipped with a Honeywell KGP-560 Terrain Awareness and Warning System (TAWS), and a Midcontinent Avionics MD41 Terrain Awareness Annunciator Control Unit. The fully integrated control unit provided annunciation and mode selection for both TAWS and the general aviation-enhanced ground proximity warning system (GA-EGPWS).

METEOROLOGICAL INFORMATION

At the time of the accident, an airmen's meteorological information (AIRMET) valid for the accident site forecast mountain obscuration conditions due to clouds and precipitation. Another AIRMET for turbulence was valid for flight level (FL) 270 to FL 370. The area forecast issued at 1806 predicted few clouds at 500 ft above ground level (agl), scattered clouds at 2,000 ft, and a broken ceiling at 4,000 ft with tops to 12,000 ft. The ceiling was forecast to be occasionally at 2,000 ft with isolated light snow showers and visibility below 3 miles. No turbulence or icing conditions were forecast for the accident site at the accident time. The area forecast issued at 1210 predicted similar conditions to the 1806 area forecast; however, the 1210 area forecast predicted isolated moderate icing between 3,000 and 9,000 ft along the coast and inland through 1600.

The nearest official weather reporting station was St. Mary's Airport. About 8 minutes before the accident, at 1816, a meteorological aerodrome report (METAR) was reporting, in part, the following: wind from 230 degrees (true) at 6 knots, visibility 3 statute miles, sky condition overcast at 300 ft agl, temperature 18 degrees F, dew point -32 degrees F, and altimeter setting 30.35 inHg.

The 1836 METAR was reporting, in part, the following: wind from 240 degrees (true) at 5 knots, visibility 2.5 statute miles, sky condition overcast at 300 ft agl, temperature 18 degrees F, dew point -32 degrees F, and altimeter setting 30.35 inHg.

None of the persons interviewed from the Bethel base had any knowledge of the accident pilot

reviewing weather information before takeoff. The last known weather information received by the pilot was the weather at the top of the hour before takeoff for his destination (METARs around and before 1700).

AIDS TO NAVIGATION

There were no reported malfunctions or anomalies with aids to navigation at the time of the accident.

AIRPORT INFORMATION

St. Mary's Airport is a public airport in Class E airspace, located 4 miles west of St. Mary's, Alaska, at a surveyed elevation of 312 ft msl. The airport had two open runways (17/35 and 6/24) at the time of the accident. Runway 17/35 was 6,008 ft long and 150 ft wide, and runway 6/24 was 1,520 ft long and 60 ft wide.

Runway 17 was equipped with pilot-controlled high-intensity runway edge lights, a visual approach slope indicator (VASI), and a 1,400-ft medium-intensity approach lighting system with runway alignment indicator lights, but they were not illuminated at the time of the accident. It was serviced by a LOC/DME and an RNAV (GPS) instrument approach. Runway 35 was equipped with high-intensity runway edge lights and a VASI and was serviced by an RNAV (GPS) instrument approach.

FLIGHT RECORDERS

The accident airplane was not equipped, nor was it required to be equipped with, a cockpit voice recorder or a flight data recorder.

Automatic Dependent Surveillance-Broadcast (ADS-B) Tracking and Recording

The airplane was equipped with ADS-B technology. In typical applications, an airplane equipped with ADS-B uses an ordinary GPS receiver to derive its precise position from the Global Navigation Satellite System constellation and then combines that position with any number of aircraft parameters, such as speed, heading, altitude and flight number. This information is then simultaneously broadcast to other aircraft equipped with ADS-B and to ADS-B ground or satellite communications transceivers, which then relay the aircraft's position and additional information to ARTCCs in real time.

A review of the ADS-B data received by the Anchorage ARTCC showed the following:

At 1820:31, the airplane passed 1 nautical mile (nm) west of the ONEPY intersection at 800 ft msl inbound to St. Mary's Airport on a heading of 357 degrees magnetic.

At 1823:01, the airplane started a descent from 900 ft msl (800 ft agl) while about 3/4 nm from the runway 35 threshold and 1/4 nm left of the runway 35 extended centerline.

At 1823:09, the airplane started a right turn that continued until radar contact was lost about 36 seconds later. The average turn rate was 7 degrees per second with an average ground speed in the turn of 119 knots and an average descent rate of 835 ft per minute. During the turn, at 1823:18, the airplane passed through the runway 35 extended centerline, about 1/10 nm from the runway threshold, passing through a heading of about 051 degrees magnetic.

The last radar return occurred at 1823:45, which showed the airplane at 450 ft msl (75 ft agl). The airplane heading showed that the airplane was flying toward rising terrain and that the last radar return was less than 1/10 nm from terrain that was 450 ft msl.

WRECKAGE AND IMPACT INFORMATION

The National Transportation Safety Board investigator-in-charge and an inspector from the FAA Anchorage Flight Standards District Office (FSDO) traveled to the accident scene but continuous poor weather conditions prevented site access until December 1, 2013.

The wreckage path, which extended about 200 ft along a heading of 122 degrees magnetic, began at an area of broken small trees and disturbed ground. The initial impact site consisted of three separate ground disturbances. The first two disturbed areas were noted to be the contact points of the airplane's main landing gear, followed by a large impact crater where the nose and fuselage of the airplane impacted the up-sloping terrain. The majority of the airplane belly cargo pod and its contents remained in the initial impact crater with fragments of the belly pod structure and belly pod contents scattered forward from the initial impact point and along the wreckage path.

The main wreckage was located in an open area of snow-covered tundra, at an elevation of about 425 ft msl. The top of the ridge where the airplane impacted was at an elevation of about 530 ft msl. The main wreckage consisted of the right and left wings, empennage, main fuselage, cabin, and engine. About 3/4 inch of ice was noted on the nonprotected surfaces of the empennage. Ice formation on the airplane's inflatable leading edge de-ice boots was consistent with normal operation of the de-ice system.

The cockpit survivable space was severely compromised. The pilot's seat was crushed under the center wing structure and inboard of the left wing. The copilot seat was lying on its left side and was mostly buried by snow that entered the cockpit during the impact.

Examination of the airframe revealed extensive component and structural damage to the area of the fuselage near the carry-through structure for the wing spars. Both forward wing spar fittings were separated at the fuselage attachments, and each aft spar attachment showed twist deformation.

Elevator and rudder control cable continuity was established from the flight control surfaces to the cockpit area just before the control yoke. Aileron and flap continuity was not established on-scene due to the disposition of the wreckage.

No preaccident anomalies were noted with the airframe or engine that would have precluded normal operation.

MEDICAL AND PATHOLOGICAL INFORMATION

A postmortem examination of the pilot was conducted under the authority of the Alaska State Medical Examiner, Anchorage, Alaska, on December 2, 2013. The cause of death for the pilot was attributed to multiple blunt force injuries.

The FAA Civil Aerospace Medical Institute performed toxicological testing for the pilot on December 17, 2013, which was negative for carbon monoxide and ethanol. The toxicological tests revealed 44.8 ug/ml of salicylate in the pilot's urine. Salicylate is an over-the-counter analgesic with an acceptable profile used in the treatment of mild pain.

SEARCH AND RESCUE

After the witnesses on the ground at St. Mary's saw the airplane fly overhead, they attempted to contact the pilot by radio. When the pilot did not respond, they accessed the company's flight tracking software and discovered that the airplane's last reported position was in the area of

the airplane's observed flightpath. They proceeded to search the area where they believed the airplane was located and found the airplane after about 1 hour of searching. Additional search and rescue personnel were then directed to the accident site to aid in the rescue operation.

SURVIVAL ASPECTS

The fuselage sustained extensive impact damage and the forward section of fuselage (forward of the aft wing carry-through spar) was severely fragmented. The forward fuselage section was rotated about 90 degrees on the longitudinal axis and was laying on the right side. The top cabin roof section had separated at the aft wing carry-through spar and shifted forward and down leaving an exposed area of the floor and cabin. The floor of the airframe was buckled upward. The survivable cabin space in the area directly below and forward of the wing was severely compromised. The aft section of the fuselage was more intact. There were multiple areas of tearing of the skin around the window frames. The cargo door frame was buckled forward and torn just above the upper door's attachment bracket. The lower section of doorframe was mostly undamaged, and the door moved freely. The rear of the cargo door frame had another forward buckle near both corners of the aft window. The door was opened, likely by the first responders.

One of the four fatalities was an infant who was being carried as a "lap child" by his mother in a forward-facing backpack carrier.

TESTS AND RESEARCH

On March 18, 2014, the Honeywell Bendix/King KGP-560 GA-EGPWS processor was examined at the Honeywell facility located in Redmond, Washington. The Honeywell GA-EGPWS is a TAWS, which provided terrain alerting and display functions with additional features meeting the requirements of Technical Standard Order C151b Class B TAWS. The GA-EGPWS uses aircraft inputs including geographic position, attitude, altitude, airspeed, and glideslope deviation. These are used with internal terrain, obstacles, and airport runway databases to predict a potential conflict between the aircraft's flightpath and terrain or an obstacle. A terrain or obstacle conflict results in the GA-EGPWS providing a visual and audio caution or warning alert.

The GA-EGPWS "Look-Ahead" alerting and warning and runway field clearance floor (RFCF) functions are gradually "de-sensitized" as an aircraft nears a known runway. Aircraft operating near known runways may experience very short or no advance warnings with respect to terrain or obstacles in this area. The altitude and distance between the accident airplane and the runway at the time of impact would have remained above the floor of protection for the "Look Ahead" and RFCF function, and no alerts would have been triggered.

The KGP 560/860 database is contained in a removable card installed in the top of each unit. It is up to KGP 560/860 customers to determine if a specific database is applicable to their operation. Honeywell estimates that KGP 560/860 customers will update their database about once per year, although there is no regulatory requirement to update the database. The database in the airplane was dated December 2006. Information regarding new releases and the content details of the database may be obtained via the internet at the following websites: www.bendixking.com and www.egpws.com.

GA-EGPWS Inhibit Mode

The KGP 560/860 GA-EGPWS requires the installation of a terrain inhibit switch as part of the

system installation. When engaged by the pilot, this switch will inhibit all visual and aural alerts and warnings associated with the GA-EGPWS. Also, an external annunciator lamp is illuminated, and a message will be displayed indicating "Warnings Inhibited." The terrain display, if installed, remains operational. The purpose of the terrain inhibit switch is to allow aircraft to operate without nuisance or unwanted warnings at airports that are not in the KGP 560/860 database. Examples might be private airports or those with runways shorter than 2,000 ft. Additionally, there may be some "VFR only" airports where unique terrain features are near the runway, and the terrain inhibit switch may be used when operating in good VFR conditions. According to the operating manual, the terrain inhibit switch should NOT be engaged for normal operations.

Examination of the airplane's cockpit instruments revealed that the terrain inhibit switch was in the "inhibit" mode at the time of the accident. Data recovered from the GA-EGPWS showed the following operational times:

Total time of operation for GA-EGPWS: 12,206:31 hours.

Total GA-EGPWS flight time: 10,485:11 hours.

Total time GA-EGPWS operated in "inhibit" mode: 9,277:34 hours.

ORGANIZATIONAL AND MANAGEMENT INFORMATION

Hageland Aviation Services is a 14 CFR Part 135 air carrier that holds on-demand and commuter operations specifications and is authorized to conduct business exclusively under the business names "Hageland Aviation Services, Inc." or "Era Alaska." The company headquarters are located at the Ted Stevens Anchorage International Airport, Anchorage, Alaska. The president, director of operations, and chief pilot in place at the time of the accident all resided in Anchorage. The director of maintenance resided in Palmer, Alaska.

At the time of the accident, Hageland operated 56 airplanes and employed about 130 pilots. The company had 12 bases located throughout Alaska at Anchorage, Palmer, Aniak, Barrow, Bethel, Deadhorse, Fairbanks, Galena, Kotzebue, Nome, St. Mary's, and Unalakleet.

According to the company's GOM, the flight coordinator had operational control for the accident flight, and the flight coordinator and pilot-in-command (PIC) were jointly responsible for preflight planning, flight delay, and release of the flight, which included the risk assessment process. Authority for operational control is specified in federal regulations, the company's operations specifications, and the procedures outlined in the GOM. In all, about 80 flight coordinators and 96 company pilots were allowed to release flights and exercise operational control on behalf of the company.

A review of the company's FAA-approved operations training manual revealed that flight coordinator training was required for personnel authorized to exercise operational control. Initial flight coordinator training consisted of 8 hours of classroom time, and recurrent training consisted of between 3 and 4 hours, depending on the student's experience. Both of the flight coordinators working at the time of the accident had completed the initial flight coordinator training.

In addition, the company used a basic risk assessment form containing a four-tiered numbered system to determine the level of operational control needed for a specific flight, with 1 being the lowest risk and 4 being the highest risk. A risk level of 1 required no risk mitigation, a level 2 required a discussion between the PIC and flight coordinator about the risks involved, a level

3 required a phone call to management for evaluation and approval, and a level 4 required canceling the flight. At the time of the accident, no signoff was required for flight coordinators or PICs on the risk assessment form, and the form was not integrated into the company manuals. According to the company, the risk assessment was part of its operational control and flight release system and was presented to and accepted by the FAA but was not incorporated into the GOM, training program, or other company manuals.

An FAA principal operations inspector in the Anchorage FSDO was assigned to oversee the company. He had been employed with the FAA for about 7 years at the time of the accident and had been temporarily assigned to the Hageland certificate from October 2012 to April 2013 and permanently assigned to the certificate in September 2013, about 3 months before the accident.

A query of the FAA Program Tracking and Reporting System found that from July 16, 2013, to October 22, 2013, FAA aviation safety inspectors conducted five operational control inspections of Hageland. The inspections noted deficiencies in the company's training, risk management, and operational control procedures.

ADDITIONAL INFORMATION

In the months following the accident, both the FAA and the operator initiated numerous safety improvements, including but not limited to, increased FAA surveillance, changes to company training programs, changes to company management, addition of established routes and increased limits for special VFR operations, and the establishment of a company operations control center to handle release and dispatch of flights.

History of Flight

Approach	Controlled flight into terr/obj (CFIT) (Defining event)
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Pilot Information

Certificate:	Commercial	Age:	68, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land; Single-engine Sea	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 2 With Waivers/Limitations	Last FAA Medical Exam:	08/21/2013
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	06/19/2013
Flight Time:	25000 hours (Total, all aircraft), 1800 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N12373
Model/Series:	208B	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	208B0697
Landing Gear Type:	Tricycle	Seats:	
Date/Type of Last Inspection:	11/12/2013, AAIP	Certified Max Gross Wt.:	7449 lbs
Time Since Last Inspection:	57 Hours	Engines:	1 Turbo Prop
Airframe Total Time:	12653 Hours at time of accident	Engine Manufacturer:	P&W
ELT:	C126 installed, activated, did not aid in locating accident	Engine Model/Series:	PT6A SER
Registered Owner:	ICECAP LLC TRUSTEE	Rated Power:	675 hp
Operator:	Hageland Aviation	Operating Certificate(s) Held:	Commuter Air Carrier (135)
Operator Does Business As:	ERA Alaska	Operator Designator Code:	EPUA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Night
Observation Facility, Elevation:	PASM, 312 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	1816 AKS	Direction from Accident Site:	308°
Lowest Cloud Condition:		Visibility	3 Miles
Lowest Ceiling:	Overcast / 300 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	230°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.35 inches Hg	Temperature/Dew Point:	-8° C / -32° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	BETHEL, AK (BET)	Type of Flight Plan Filed:	Company VFR
Destination:	Saint Marys, AK (KSM)	Type of Clearance:	Special VFR
Departure Time:	1741 AKS	Type of Airspace:	

Airport Information

Airport:	ST MARY'S (KSM)	Runway Surface Type:	N/A
Airport Elevation:	312 ft	Runway Surface Condition:	Unknown
Runway Used:	N/A	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Unknown

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Substantial
Passenger Injuries:	3 Fatal, 6 Serious	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 Fatal, 6 Serious	Latitude, Longitude:	62.050833, -163.269167 (est)

Administrative Information

Investigator In Charge (IIC):	Christopher R Shaver	Report Date:	02/26/2016
Additional Participating Persons:	Anthony Bockelman; FAA Anchorage FSDO; Anchorage, AK Jan Smith; Cessna Aircraft Company; Wichita, KS Ryan Stanley; Hageland Aviation; Anchorage, AK		
Publish Date:	02/26/2016		
Note:	The NTSB traveled to the scene of this accident.		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=88489		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).