

National Transportation Safety Board Aviation Accident Final Report

Location: Aleknagik, Alaska Accident Number: ANC13FA030

Date & Time: March 8, 2013, 08:15 Local Registration: N116AX

Aircraft: Beech 1900C Aircraft Damage: Destroyed

Defining Event: Controlled flight into terr/obj Injuries: 2 Fatal

(CFIT)

Flight Conducted
Under:

Part 135: Air taxi & commuter - Non-scheduled

Analysis

The airplane was operating in instrument meteorological conditions and, as it approached the destination airport, the pilot requested the RNAV/GPS runway 19 approach and asked for routing directly to ZEDAG, the initial approach fix (IAF). At the time of the pilot's request, the airplane was about 30 miles southeast of the IAF at an altitude of about 5,900 feet mean sea level (msl). The air traffic controller cleared the airplane to fly directly to the IAF followed by the ZEDAG transition and the RNAV/GPS runway 19 approach, stating, "maintain at or above 2,000" feet until established on a published segment of the approach. The flight crewmembers repeated the clearance back to the controller as "maintain 2,000" feet until established, and they began descending the airplane toward the IAF. About 6 minutes later, the pilot requested to enter the holding pattern while they checked on runway conditions on another radio frequency, and the controller cleared them to hold "as published." At the time of the pilot's request, the airplane was at an altitude of about 2,200 feet msl.

As depicted on the published instrument approach procedure, the terminal arrival area (TAA) minimum altitude when approaching the IAF from the southeast (the direction from which the accident flight approached) is 5,400 feet msl, and the published holding pattern at the IAF is 4,300 feet msl due to rising terrain in the area. Therefore, the flight crewmember's acceptance of what they believed to be a clearance to 2,000 feet, their descent to that altitude, and their initiation of a hold at that altitude indicates a lack of awareness of the information contained on the published procedure. Such a lack of awareness is inconsistent with pilot-in-command responsibilities and company procedures that require an instrument approach briefing during the descent and approach phases of flight. If the flight crewmembers had reviewed the published approach procedure and briefed it per the company's descent and approach checklist, they should have noticed that the minimum safe altitude in the TAA southeast of the IAF was 5,400 feet msl and that the minimum altitude for the hold was 4,300 feet msl. Examination of the wreckage and debris path evidence is consistent with the airplane having collided with rising terrain at 2,000 feet msl while flying in a wings-level attitude on the outbound leg of the holding pattern, which the flight crew should have flown at 4,300 feet msl.

However, the air traffic controller did not adhere to guidance contained in Federal Aviation Administration Order 7110.65, and his approach clearance to "maintain at or above 2,000 feet" msl until established on a published segment of the approach was ambiguous. The controller's approach clearance should have instructed the pilot to "proceed direct to ZEDAG, enter the TAA at or above 5,400 feet, cleared RNAV runway 19 approach." Instead, he instructed the pilot without specifying the segment of the approach that should be flown at 2,000 feet. Further, the controller did not notice the pilot's incorrect readback of the clearance in which he indicated that he intended to "maintain 2,000 feet" until established on the approach. Further, he did not appropriately monitor the flight's progress and intervene when the airplane descended to 2,000 feet msl. As a result, the airplane was permitted to descend below the minimum instrument altitudes applicable to the route of flight and enter the holding pattern well below the published minimum holding altitude.

Air traffic control (ATC) recorded automation data showed that the airplane's trajectory generated aural and visual minimum safe altitude warnings on the controller's radar display. However, the controller did not issue any terrain warnings or climb instructions to the flight crew. The controller said that he was not consciously aware of any such warnings from his display. These automated warnings should have been sufficient to prompt the controller to evaluate the airplane's position and altitude, provide a safety alert to the pilot in a timely manner, and instruct the pilot to climb to a safe altitude; it could not be determined why the controller was unaware of the warnings. The airplane was equipped with three pieces of navigation equipment that should have provided visual and aural terrain warnings to the flight crewmembers if they had not inhibited the function and if the units were operating properly. Damage precluded testing the equipment or determining the preaccident configuration of the units; however, the flight crew reported no equipment anomalies predeparture.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The flight crew's failure to maintain terrain clearance, which resulted in controlled flight into terrain in instrument meteorological conditions. Contributing to the accident were the flight crew's failure to correctly read back and interpret clearance altitudes issued by the air traffic controller, their failure to adhere to minimum altitudes depicted on the published instrument approach chart, and their failure to adhere to company checklists.

Also contributing to the accident were the air traffic controller's issuance of an ambiguous clearance to the flight crew, which resulted in the airplane's premature descent, his failure to address the pilot's incorrect read back of the assigned clearance altitudes, and his failure to monitor the flight and address the altitude violations and issue terrain-based safety alerts.

Page 2 of 13 ANC13FA030

Findings

Personnel issues	Decision making/judgment - Flight crew	
Personnel issues	Decision making/judgment - ATC personnel	
Environmental issues	Low ceiling - Contributed to outcome	

Page 3 of 13 ANC13FA030

Factual Information

HISTORY OF FLIGHT

On March 8, 2013, about 0815 Alaska standard time, a Beech 1900C airplane, N116AX, operating as Alaska Central Express flight 51, was destroyed when it collided with rising terrain about 10 miles east of Aleknagik, Alaska. The captain and first officer were fatally injured. Flight 51 was a cargo flight operating under the provisions of 14 Code of Federal Regulations (CFR) Part 135. Instrument meteorological conditions (IMC) prevailed along the route of flight, and the airplane was operating on an instrument flight rules (IFR) flight plan. The flight departed King Salmon Airport, King Salmon, Alaska, about 0750, and was en route to Dillingham Airport (DLG), Dillingham, Alaska.

A postaccident review of Federal Aviation Administration (FAA) radar data and radio communication recordings revealed that, about 0803, the pilot requested the RNAV/GPS runway 19 approach to DLG and asked for routing directly to ZEDAG, the initial approach fix (IAF). At the time of the pilot's request, the airplane was about 30 miles southeast of ZEDAG at an altitude of about 5,900 feet mean sea level (msl). The on-duty Anchorage Air Route Traffic Control Center (ARTCC) radar controller cleared the airplane to fly directly to ZEDAG followed by the ZEDAG transition and the RNAV/GPS runway 19 approach. The controller told the pilot to maintain an altitude "at or above 2,000 feet msl until established on a published segment of the approach." The pilot read back, "Maintain two thousand until a published segment of the approach." About 6 minutes later, as the airplane descended toward the IAF, the pilot requested to enter the holding pattern while checking on runway conditions on another radio frequency, and the controller granted the request. At the time of the pilot's request, the airplane was at an altitude of about 2,200 feet msl. The airplane subsequently disappeared from the controller's radar display, and all contact with the flight was lost.

At 0830, the on-duty ARTCC operations manager notified the Anchorage rescue coordination center (RCC) of the missing airplane, and, at 0835, the FAA issued an alert notice. About 0854, a 406-MHz beacon activation notification was received by the RCC, and search and rescue operations were initiated. Initial attempts to reach the accident site were hampered by poor weather conditions.

On March 9, about 0606, aerial searchers located the accident site about 6 miles north-northwest of ZEDAG in an area of steep, snow and ice-covered terrain known as "the Muklung Hills." About 0703, a ground search party reached the accident site, which was at an elevation of about 1,996 feet msl.

FLIGHT CREW INFORMATION

Captain

The captain, age 38, held an airline transport pilot certificate with an airplane multiengine land rating and commercial pilot privileges with an airplane single-engine land rating and a type rating in the Beech 1900. His most recent first-class FAA medical certificate was issued June 11, 2012, with no limitations.

Page 4 of 13 ANC13FA030

The captain was hired by Alaska Central Express on July 18, 2008, and, at that time, he had 260 hours of total flight experience. He completed his initial company training, including Beech 1900 second-in-command (SIC) ground training, on July 28, 2008, and was assigned to fly as SIC of Beech 1900 airplanes at the company's base in Anchorage. On September 7, 2011, he was upgraded to a Beech 1900 captain. The operator reported that the captain had accumulated 5,770 total flight hours, including 5,470 hours in the accident airplane make and model. His most recent airman competency/proficiency check, which was administered by a company check airman, was completed on October 20, 2012.

On March 5, the captain's duty day started at 0330 and ended at 1130, and he flew 4.4 hours. On March 6, his duty day started at 0330 and ended at 1300, and he flew 4.5 hours. On March 7, his duty day started at 0430 and ended at 1000, and he flew 3.3 hours. On March 8, the day of the accident, his duty day started at 0430, and he flew 1.6 hours before the accident.

First Officer

The first officer, age 21, held a commercial pilot certificate with airplane single-engine land, multiengine land, and instrument airplane ratings. His most recent FAA second-class medical certificate was issued August 9, 2012, with no limitations.

The first officer was hired by Alaska Central Express on November 12, 2012, and, at that time, he had 220 hours of total flight experience. He completed his initial company training, including Beech 1900 SIC ground and flight training, on November 30, 2012, and was assigned to fly as SIC of Beech 1900 airplanes at the company's base in Anchorage. The operator reported that the first officer had accumulated 470 total flight hours, including 250 hours in the accident airplane make and model. His most recent airman competency/proficiency check, which was administered by a company check airman, was completed on December 1, 2012.

On March 5, the first officer's duty day started at 1100 and ended at 2200, and he flew 7.4 hours. On March 6, his duty day started at 1200 and ended at 1930, and he flew 4.2 hours. On March 7, he was off duty. On March 8, the day of the accident, his duty day started at 0430, and he flew 1.6 hours before the accident.

AIRCRAFT INFORMATION

The airplane, manufactured in 1992, was a twin-engine Beech 1900C equipped with retractable landing gear, two Pratt and Whitney PT6A-65B engines, and controllable-pitch propellers. Alaska Central Express maintained the airplane in accordance with an approved continuing airworthiness program, and the most recent required inspection was completed on March 7, 2013, when the airplane had accumulated 29,824 total hours.

The airplane was equipped with a Bendix/King KMD 850 multifunction display capable of providing audible and visual terrain warnings. The airplane was also equipped with dual Garmin 430W units capable of providing visual terrain warnings. Both warnings could be inhibited by the flight crew.

The airplane was equipped for instrument flight into icing conditions and could be operated by a single pilot. The airplane was not equipped with, nor was it required to be equipped with, a cockpit voice recorder or a flight data recorder.

Page 5 of 13 ANC13FA030

WRECKAGE AND IMPACT INFORMATION

The airplane's wreckage was located in an area of steep, ice and snow-covered terrain on a southeast-facing slope. The terrain was rough and uneven, and high-wind conditions after the accident had created areas of drifted snow, moved lighter pieces of debris, and buried some debris. The initial impact point was at an elevation of about 1,996 feet, and the debris path extended about 900 feet uphill to an elevation of about 2,300 feet in a triangular/fan shape. About 700 feet from the initial point of impact, the major debris field was more than 400 feet wide, and single pieces of debris could be seen at greater distances in all directions. The debris path was on a magnetic heading of about 340 degrees. According to topographic maps, the peak elevation is 2,550 feet. The initial impact point was a rock outcrop protruding from the snow. Metal scrapings were found on the rock surface consistent with damage observed on the center of the airplane's fuselage. No indications of any wing impact were found near the initial impact point. The first structural piece was located about 400 feet from the initial impact point. Large sections of fuselage and expelled cargo were located about 525 feet from the initial impact point. The fuselage and cockpit were found separated into three large pieces.

Subsequent examination of the engines and propellers indicated that the propeller blades had all sheared off at the propeller hub, and the engines' exhausts exhibited signs of hot metal folding.

Damage to the Bendix/King KMD 850 and dual Garmin 430W units precluded testing, and the preaccident configuration of the units (including which functions were enabled or inhibited by the flight crew) could not be determined.

MEDICAL AND PATHOLOGICAL INFORMATION

Captain

A postmortem examination of the captain was performed under the authority of the Alaska State Medical Examiner in Anchorage on March 11, 2013. The cause of death was reported as multiple blunt force injuries sustained in an airplane crash, and the manner of death was an accident. However, the autopsy identified severe coronary artery disease with greater than 85% stenotic lesion in the distal left anterior descending artery. Nevertheless, there was no suggestion of medical impairment or incapacitation related to the probable cause of the accident.

A toxicological examination by the FAA's Civil Aeromedical Institute (CAMI), Oklahoma City, Oklahoma, on April 30, 2013, revealed dextrorphan and doxylamine in urine and 0.016 ug/ml doxylamine in blood.

According to CAMI doxylamine is a sedating antihistamine available over the counter and by prescriptions and used to treat cold and allergy symptoms. Its therapeutic window is 0.050 to 0.150 ug/ml and it carries the following warning: "May impair mental and/or physical ability required for the performance of potentially hazardous tasks (e.g., driving, operating heavy machinery)." The absence of dextromethorphan or its metabolite in the blood suggests the cough suppressant was no longer having any effect on the captain.

Given that the toxicology testing identified a level well below the therapeutic window, there is no evidence that it was impairing the captain at the time of the accident.

Page 6 of 13 ANC13FA030

First Officer

A postmortem examination of the first officer was performed under the authority of the Alaska State Medical Examiner in Anchorage on March 11, 2013. The cause of death was reported as multiple blunt force injuries sustained in an airplane crash. The manner of death was an accident.

A toxicological examination by CAMI on April 18, 2013, was negative for any alcohol or drugs.

METEOROLOGICAL INFORMATION

The DLG weather observation at 0745 reported cloud ceiling 1,500 feet overcast, wind from 100 degrees at 17 knots gusting to 30 knots, 7 miles visibility in light rain, temperature of 34 degrees F, dew point temperature of 32 degrees F, and an atmospheric pressure of 29.09 inches of mercury. IMC prevailed along the route of flight and in the holding pattern area for the DLG RNAV/GPS runway 19 approach.

AIR TRAFFIC CONTROL

DLG is southwest of the ZEDAG IAF, and the published DLG RNAV/GPS runway 19 instrument approach procedure indicates that the terminal arrival area (TAA) minimum altitude when approaching ZEDAG from the southeast (the direction from which the accident flight approached) is 5,400 feet msl within 30 nautical miles of ZEDAG.

One of three peaks in the Muklung Hills with an elevation of 2,550 feet is located about 6 miles north-northwest of ZEDAG. The published minimum safe altitude while flying in the holding pattern is 4,300 feet msl.

An annotated copy of the RNAV/GPS runway 19 instrument approach procedure and diagrams showing the airplane's route of flight are contained in the public docket for this report.

The following is an excerpt from the FAA Anchorage ARTCC transcript of the radio communications between the flight crew (call sign AER51) and the ARTCC specialist, beginning at 0803:33, when the flight crew requested an approach clearance to DLG and of a call between the ARTCC specialist and the DLG flight service station (FSS), which took place between 0804:19 and 0804:36:

0803:33 AER51: Anchorage Center Ace Air fifty one current weather down into Dillingham requesting RNAV one nine approach any chance we can get direct ZEDAG?

ARTCC: Ace Air fifty one cleared direct to the Dillingham Airport via direct ZEDAG ZEDAG transition. Maintain ah maintain at or above two thousand until established on a published segment of the approach. Cleared RNAV runway one niner approach to Dillingham Airport. Remain this frequency.

AER51: We'll stay with you. Cleared to ZEDAG transition for RNAV one nine approach into Dillingham. Maintain [ARTCC controller dialing the DLG FSS] two thousand until a published segment of the approach Ace Air fifty one.

Page 7 of 13 ANC13FA030

0804:18 ARTCC: Is Ace Air fifty one Beech nineteen hundred Dillingham one seven two zero RNAV one nine.

0809:31 AER51: Anchorage Center Ace Air fifty one [we're] approaching ZEDAG we'd like to hold waiting for more information if possible.

ARTCC: Ace Air fifty one say again?

AER51: Ace Air fifty one requesting hold at ZEDAG for runway conditions.

ARTCC: Ace Air fifty one hold north of ZEDAG as published expect further clearance one eight zero zero upon your request.

AER51: Hold north of ZEDAG expect further clearance one eight zero zero. We're still checking on runway conditions Ace Air fifty one thanks.

ARTCC: Ace Air fifty one roger.

0814:25 Dillingham FSS: Dillingham Radio reference Ace Air fifty one

ARTCC: Yeah

Dillingham FSS: Ah he said he was going to hold ah and wait for an update on the runway conditions. I'm trying to get a hold of him. I've got an update on the runway...been trying to get a hold of him.

ARTCC: Do you want me to relay to em?

Dillingham Airport FSS: Ah yeah we're just showing patchy thin water on the runway now.

ARTCC: Okay I'll let him know. Thanks.

Dillingham Airport FSS: Alright thank you.

0814:50 ARTCC: Ace Air fifty one you up?

The flight's last radio transmission was made at 0809:51. During postaccident interviews, the controller who handled the flight stated that he did not expect the airplane to descend below 5,400 feet and that he did not notice when it did so. He stated that he did not notice the airplane's actual altitude when the pilot requested holding at ZEDAG. He stated that, when he cleared the pilot to hold at ZEDAG "as published," he expected the pilot to climb the airplane to 4,300 feet msl as shown in the profile view of the approach procedure.

Air traffic control (ATC) recorded automation data showed that the airplane's trajectory generated aural and visual minimum safe altitude warnings (MSAW) on the controller's radar display, which included a 1-second aural alarm at 0809:16 and a flashing "MSAW" indication in the airplane's data block that continued from 0809:16 until the end of the flight. The controller said that he was not consciously aware of any such warnings from his display. The controller did not issue any terrain conflict alerts or climb

Page 8 of 13 ANC13FA030

instructions to the flight crew. A complete ATC transcript and the ATC Group Chairman Factual Report are contained in the public docket for this report.

OPERATOR INFORMATION

Alaska Central Express is a 14 CFR Part 135 air carrier and holds on-demand and commuter operations specifications. The company headquarters is located at the Ted Stevens Anchorage International Airport, Anchorage, Alaska, and serves various communities throughout the Aleutian Islands and western, southwestern, and southeast Alaska.

Company policy requires flight crews to use approved checklists during all phases of flight. The Alaska Central Express BE-1900/1900C Normal Checklist includes a descent and approach checklist that specifies that the flight crew complete a briefing for the approach to be conducted. A typical instrument approach briefing includes, in part, referencing the published approach information and verbally verifying the navigation frequencies to be used, the headings to be flown, and the minimum safe altitudes for the various segments of the approach. The normal checklist also includes a prestart checklist that specifies a circuit breakers check/test to ensure power to all instruments and avionics. The after-start checklist requires an electrical system check, the post-run-up checklist requires a check of all avionics, and the before-takeoff checklist requires that all avionics and flight instruments be checked and set. Before and during the flight, the flight crew maintained radio communications with ATC. The flight crew reported no anomalies with any navigation instruments, radios, engines, or flight controls. A copy of the Alaska Central Express BE-1900/1900C Normal Checklist and the Operations Group Chairman Factual report are contained in the public docket for this report.

ADDITIONAL INFORMATION

Federal Aviation Regulations and Related Guidance

Title 14 CFR 91.3(a) states, "The pilot-in-command of an aircraft is directly responsible for, and is the final authority as to, the operation of that aircraft." In addition, the FAA Aeronautical Information Manual (AIM) Section 4-4-1(b) states, "If ATC issues a clearance that would cause a pilot to deviate from a rule or regulation, or in the pilot's opinion, would place the aircraft in jeopardy, IT IS THE PILOT'S RESPONSIBILITY TO REQUEST AN AMENDED CLEARANCE. Similarly, if a pilot prefers to follow a different course of action...THE PILOT IS EXPECTED TO INFORM ATC ACCORDINGLY [capitalization emphasis in original document]."

Further, FAA AIM Section 4-4-3(e) states, "If the holding pattern is charted, and the controller doesn't issue complete holding instructions, the pilot is expected to hold as depicted on the appropriate chart. When the pattern is charted, the controller may omit all holding instructions except the charted holding direction and the statement AS PUBLISHED, e.g., 'HOLD EAST AS PUBLISHED'. Controllers must always issue complete holding instructions when pilots request them [capitalization emphasis in original document]." In addition, FAA AIM Section 4-4-7(b) states, "Pilots of airborne aircraft should read back those parts of ATC clearances and instructions containing altitude assignments, vectors, or runway assignments as a means of mutual verification. The read back of the 'numbers' serves as a double check between pilots and controllers and reduces the kinds of communications errors that occur when a number is either 'misheard' or is incorrect."

Page 9 of 13 ANC13FA030

FAA Order 7110.65, "Air Traffic Control," contains instructions to controllers on the handling of aircraft during approaches, compliance with minimum instrument altitudes, and issuance of safety alerts. Paragraph 5-9-4, "Arrival Instructions," states, in part, "Issue all of the following to an aircraft before it reaches the approach gate: a. Position relative to a fix on the final approach course.... b. Vector to intercept the final approach course if required. c. Approach clearance except when conducting a radar approach. Issue approach clearance only after the aircraft is: 1. Established on a segment of a published route or instrument approach procedure, or... 2. Assigned an altitude to maintain until the aircraft is established on a segment of a published route or instrument approach procedure." Phraseology examples are provided in paragraph 5-9-4 and all of the examples specify that the clearance should include the specific point or segment of the approach where the pilot is expected to join the approach course.

Previous Accident

The operator had a previous Beech 1900C accident (ANC10FA014) on January 21, 2010, near Sand Point, Alaska, which resulted in the death of the two flight crewmembers. According to Alaska Central Express management personnel, at the conclusion of the Sand Point accident investigation, the board of directors opted to voluntarily install cockpit image recording systems in all company-owned and operated aircraft; however, the airplane involved in the March 8, 2013, accident was not yet equipped with such a system.

History of Flight

Enroute-holding (IFR)	Controlled flight into terr/obj (CFIT) (Defining event)

Pilot Information

Certificate:	Airline transport	Age:	38	
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left	
Other Aircraft Rating(s):	None	Restraint Used:	3-point	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes	
Instructor Rating(s):	None	Toxicology Performed:	Yes	
Medical Certification:	Class 1 Without Last FAA Medical Exam: June 11, 2012 waivers/limitations			
Occupational Pilot:	Yes Last Flight Review or Equivalent: October 20, 2012			
Flight Time:	5770 hours (Total, all aircraft), 5470 hours (Total, this make and model), 1820 hours (Pilot In Command, all aircraft), 390 hours (Last 90 days, all aircraft), 116 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)			

Page 10 of 13 ANC13FA030

Co-pilot Information

Certificate:	Commercial	Age:	21
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	August 9, 2012
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	December 1, 2012
Flight Time:	470 hours (Total, all aircraft), 250 hours (Total, this make and model), 90 hours (Pilot In Command, all aircraft), 250 hours (Last 90 days, all aircraft), 80 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	Registration:	N116AX
Model/Series:	1900C	Aircraft Category:	Airplane
Year of Manufacture:	1992	Amateur Built:	
Airworthiness Certificate:	Normal; Utility	Serial Number:	UC17
Landing Gear Type:	Retractable - Tricycle	Seats:	19
Date/Type of Last Inspection:	March 7, 2013 Continuous airworthiness	Certified Max Gross Wt.:	17600 lbs
Time Since Last Inspection:	188 Hrs	Engines:	2 Turbo prop
Airframe Total Time:	29824 Hrs as of last inspection	Engine Manufacturer:	Pratt&Whitney
ELT:	C126 installed, activated, aided in locating accident	Engine Model/Series:	PT6A-65B
Registered Owner:		Rated Power:	1100 Horsepower
Operator:		Operating Certificate(s) Held:	On-demand air taxi (135)
Operator Does Business As:	Alaska Central Express	Operator Designator Code:	YADA

Page 11 of 13 ANC13FA030

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	Condition of Light:	Day
Observation Facility, Elevation:	PADL,85 ft msl	Distance from Accident Site:	20 Nautical Miles
Observation Time:	07:45 Local	Direction from Accident Site:	180°
Lowest Cloud Condition:		Visibility	7 miles
Lowest Ceiling:	Overcast / 1500 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	17 knots / 30 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	100°	Turbulence Severity Forecast/Actual:	1
Altimeter Setting:	29.09 inches Hg	Temperature/Dew Point:	1°C / 1°C
Precipitation and Obscuration:	Light - None - Rain		
Departure Point:	King Salmon, AK (PAKN)	Type of Flight Plan Filed:	IFR
Destination:	Dillingham, AK (PADL)	Type of Clearance:	IFR
Departure Time:	07:50 Local	Type of Airspace:	

Airport Information

Airport:	Dillingham Airport PADL	Runway Surface Type:	Asphalt
Airport Elevation:	82 ft msl	Runway Surface Condition:	Ice;Slush covered;Snow;Wet
Runway Used:	19	IFR Approach:	Global positioning system
Runway Length/Width:	6400 ft / 150 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	2 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Fatal	Latitude, Longitude:	59.317779,-158.351104

Page 12 of 13 ANC13FA030

Administrative Information

Investigator In Charge (IIC):	Lewis, Lawrence
Additional Participating Persons:	Scott Schweizer; FAA FSDO-03; Anchorage, AK Mike Murphy; Alaska Central Express; Anchorage, AK Todd Erickson; Alaska Central Express; Anchorage, AK
Original Publish Date:	August 11, 2014
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=86381

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.

Page 13 of 13 ANC13FA030