



National Transportation Safety Board Aviation Incident Factual Report

Location:	JUNEAU, AK	Incident Number:	ANC001A010
Date & Time:	11/02/1999, 0640 AST	Registration:	N792AS
Aircraft:	Boeing 737-400	Aircraft Damage:	None
Defining Event:		Injuries:	58 None
Flight Conducted Under:	Part 121: Air Carrier - Scheduled		

HISTORY OF FLIGHT

On November 2, 1999, about 0640 Alaska standard time, a Boeing 737-400 airplane, N792AS, nearly collided with a snow plow during landing on runway 08 at the Juneau International Airport, Juneau, Alaska. The airplane was being operated by Alaska Airlines, Seattle, Washington, as Flight 73, an instrument flight rules (IFR) scheduled passenger flight under Title 14, CFR Part 121, when the incident occurred. The captain, the first officer, three cabin crew members, and the 53 passengers, were not injured. Neither the airplane or the snow plow were damaged. Visual meteorological conditions prevailed. An IFR flight plan was filed. The flight originated at the Rocky Gutierrez Airport, Sitka, Alaska, about 0600.

After departing Sitka, Flight 73 proceeded toward Juneau. The Juneau Air Traffic Control Tower (ATCT) was closed, and was not scheduled to open until 0700. A Federal Aviation Administration (FAA) Automated Flight Service Station (AFSS) was in operation at the time of the incident. Juneau AFSS personnel cannot see the runway. The driver of Plow 11, a Juneau Airport field maintenance dump truck equipped with a snow removal blade, was training a new driver on the airport. The plow was moving eastbound along the right edge of runway 08, about 3,000 feet from the approach end of the runway. According to the driver of Plow 11, the right edge of the plow blade was about 5 feet inside the runway edge stripe.

At 0629:10, a Beech 1900 cargo airplane, call sign ACE Air 41, contacted the Juneau AFSS on the common traffic advisory frequency (CTAF) of 118.7 MHz, at BARLO intersection (the final approach fix on the instrument approach to runway 08, 9.2 nautical miles west of the Juneau airport), stating: "Ace Air 41, BARLO, inbound for (runway) eight." The AFSS specialist at the in-flight one position acknowledged the radio contact, and then asked the driver of Plow 11, who was also monitoring the CTAF, if he heard the radio call from ACE Air 41 reporting BARLO. The driver acknowledged the call by stating: "Ground, that's affirmative, maintenance, at this time men and equipment are clear of the runway, I'd like to get back out after he's down and clear." The in-flight one AFSS specialist then advised Plow 11, "Airfield maintenance, roger, after ACE Air, about 10 minutes behind him is the other Alaska jet." The driver of Plow 11 acknowledged the information.

At 0632:28, Alaska Flight 73 contacted the Juneau AFSS stating: "Juneau radio, Alaska 73 is with you, just leaving SISTERS (VOR) for the LDA 2 (localizer type directional aid) to runway 08." The AFSS specialist at the in-flight one position acknowledged the radio call. The SISTERS VOR is 16 miles from BARLO intersection, and 25.2 miles from runway 08.

At 0633:35, Ace Air 41 reported, "Juneau, Ace Air 41 down and clear, if you'd close us out please." The AFSS specialist at the in-flight two position acknowledged the radio call.

At 0634:51, the driver of Plow 11 called the AFSS and stated: "Juneau radio, airfield maintenance, if you have no reported traffic, like to have men and equipment on the runway." The AFSS specialist at the in-flight two position said "stand by" and at 0635:23 stated: "and Juneau airfield maintenance, no known traffic at this time, the jet's due in, in about 10 minutes at 45 (minutes past the hour)." The driver of Plow 11 acknowledged the radio call.

At 0642:25, Alaska Flight 73 called the Juneau AFSS and stated: "ah we just landed and there was a truck on the runway, we ah just barely missed it... ah it, we had to swerve very far to the left of the runway to miss the truck." The AFSS specialist at the in-flight one position acknowledged the radio call, and replied, "Alaska 73 roger, sorry, I missed your last report, I didn't hear a BARLO area report, I thought it was ASORT, was the last one." ASORT intersection is 21 miles from the SISTERS VOR. It is usually a reporting point for airplanes arriving from the north, not from Sitka.

Alaska Flight 73 then stated: "We don't think that's correct, but in any event, I think we called the report, but we just, the truck was on the runway."

The driver of Plow 11 then stated: "radio, maintenance was just outside the lights, I never got a call, it's the grace of God that we're all right."

Following the incident, ground maintenance personnel from the Juneau Airport measured and diagrammed the scuff marks on the runway produced by Flight 73 swerving to avoid the snow plow. Their measurements revealed that as the Alaska Airlines jet passed the plow truck, the airplane's right main landing gear was about 18 feet to the left of the runway center stripe. The outboard end of the right wing was about 16 feet to the right the center stripe. The left side of the plow truck's blade was about 27 feet to the left of the right runway edge stripe. The distance from the right wing tip, to the plow truck, was about 32 feet.

Plow 11 was facing east, away from the approaching jet. The truck is equipped with strobe lights on the back of the truck, and a rotating beacon on the top of the cab. According to an FAA inspector with the Juneau Flight Standards District Office, the strobe and beacon lights were functional and operating at the time of the incident.

The incident occurred during the period of dawn.

METEOROLOGICAL INFORMATION

On November 2, 1999, at 0653, an Aviation Routine Weather Report (METAR) for the Juneau Airport was reporting in part: Wind, calm; visibility, 10 statute miles; clouds and sky condition, 1,600 feet scattered, 2,800 feet scattered, 3,800 feet overcast; temperature, 35 degrees F; dew point, 33 degrees F; altimeter, 29.69 inHg; remarks, variable broken ceiling, lower to the east, higher to the west.

COMMUNICATIONS

Ground and airborne communications at the Juneau airport are all conducted on the Juneau CTAF when the ATCT is closed. The driver of Plow 11, and the crew of Flight 73, were utilizing the CTAF.

When the Juneau ATCT is closed, there are no mandatory reporting points for arriving aircraft to the Juneau airport.

When Flight 73 made their initial radio call at the SISTERS VOR, no men or equipment were on the Juneau runway. No advisory of men and equipment on the runway was provided to Flight 73 by the Juneau AFSS. After reporting SISTERS VOR, Flight 73 made no other radio calls.

A transcript of communications with the Juneau AFSS is included in this report.

AERODROME AND GROUND FACILITIES

The Juneau International airport is owned and operated by the City and Borough of Juneau. The airport has a hard-surface runway on a 080 to 260 degree magnetic orientation. Runway 08 is 8,456 feet long by 150 feet wide, and is equipped with sequenced lead-in lights to runway 08, high intensity runway lights, runway end identifier lights, medium intensity approach lighting, and a visual approach slope indicator.

ADDITIONAL INFORMATION

AFSS specialists provide assistance in emergency situations, in-flight services, and preflight services to airman. In-flight services are provided to aircraft in flight, or operating on an airport surface, and may include NAVAID monitoring, local airport advisories (LAA), delivery of air traffic control clearances, advisory services to pilots, notice to airman (NOTAM), search and rescue services, weather information, flight planning, and other services.

Under two letters of agreement between the Juneau Airport, and the Juneau AFSS, airport conditions which could affect the safe operation of the airport are provided to the AFSS by Juneau airport personnel via fax, radio, telephone, or in person. Airport personnel will keep the AFSS informed of personnel authorized to issue NOTAM information. Airport personnel will advise the AFSS before moving onto an airport movement area, and when vehicles are clear of movement areas. They will ensure the work force supervisor has two-way radio

communication with the AFSS on the CTAF, and will ensure the vehicular traffic does not conflict with aircraft arrivals, departures, or ground movements within the airport movement area.

When the Juneau ATCT is closed, the AFSS will monitor the CTAF. Advise work personnel of known aircraft arrivals, departures, or ground movements, and will advise work personnel of any nonreported vehicles on the airport movement area.

Advisories to pilots about airfield conditions may be provided by AFSS personnel by radio, or NOTAM. A radio report of men and equipment on the airport, provided by Juneau airport maintenance personnel to the AFSS, constitutes a local NOTAM.

According to the FAA's Flight Services Handbook (FAA order 7110.10), a local airport advisory (LAA) is a terminal service provided by designated facilities located at airports without an operating control tower. The elements and phraseology of an LAA, are stated in Paragraph 4-4-2, include: "7. Traffic - Factual information about observed or reported traffic which may constitute a collision hazard. This may include positions of aircraft in flight or aircraft and vehicles operating on the airport; 9. NOTAM - NOTAM's concerning local NAVAID's and field conditions pertinent to flight." Paragraph 4-4-4, Authorized LAA Frequency states, in part: "Provide LAA on 123.6 or 123.65 at non-tower locations and on the tower local control frequency at an airport with a part-time FAA tower when that facility is not operating. ...Encourage the pilot to guard the LAA frequency or tower control frequency while approximately within a 10-mile radius of the airport." The FAA Handbook does not require the LAA to be issued at the 10 mile point, nor is it an advisory that is only given upon request of the pilot.

Section 4 -1-9, "Traffic Advisory Practices at Airports Without Operating Control Towers" of the Aeronautical Information Manual (AIM), contains recommended communication practices. For in-bound aircraft, when a traffic control tower is not in operation, and a flight service station is open, the AIM recommends communication on the CTAF. For inbound aircraft, communications should be provided when the airplane is 10 miles out, entering downwind, base, and final, and when leaving the runway.

The same recommended practices are contained in Section 3.100 of Alaska Airlines flight operations manual.

Pilot Information

Certificate:	Airline Transport; Commercial; Flight Engineer	Age:	49, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	09/21/1999
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	14793 hours (Total, all aircraft), 857 hours (Total, this make and model), 5700 hours (Pilot In Command, all aircraft), 46 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Boeing	Registration:	N792AS
Model/Series:	737-400 737-400	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	28887
Landing Gear Type:	Retractable - Tricycle	Seats:	140
Date/Type of Last Inspection:	10/29/1999, AAIP	Certified Max Gross Wt.:	143500 lbs
Time Since Last Inspection:	96 Hours	Engines:	2 Turbo Fan
Airframe Total Time:	8788 Hours	Engine Manufacturer:	Cfm
ELT:		Engine Model/Series:	CFM-56-3C-1
Registered Owner:	FIRST SECURITY BANK	Rated Power:	22000 lbs
Operator:	ALASKA AIRLINES	Operating Certificate(s) Held:	Flag carrier (121); Supplemental
Operator Does Business As:		Operator Designator Code:	ASAA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Dawn
Observation Facility, Elevation:	PAJ, 19 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0653 AST	Direction from Accident Site:	0°
Lowest Cloud Condition:	Scattered / 1600 ft agl	Visibility	10 Miles
Lowest Ceiling:	Overcast / 3800 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	Calm /	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	2° C / 1° C
Precipitation and Obscuration:			
Departure Point:	SITKA, AK (PASI)	Type of Flight Plan Filed:	IFR
Destination:	(PAJN)	Type of Clearance:	IFR
Departure Time:	0600 AST	Type of Airspace:	Class E

Airport Information

Airport:	JUNEAU INTERNATIONAL (PAJN)	Runway Surface Type:	Asphalt
Airport Elevation:	19 ft	Runway Surface Condition:	Dry
Runway Used:	8	IFR Approach:	LDA
Runway Length/Width:	4900 ft / 150 ft	VFR Approach/Landing:	Full Stop

Wreckage and Impact Information

Crew Injuries:	5 None	Aircraft Damage:	None
Passenger Injuries:	53 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	58 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	SCOTT ERICKSON
Additional Participating Persons:	JIM HETTWER (FAA); JUNEAU, AK TERRY CLARK; SEATTLE, WA STEVE HUTCHISON; AUBURN, WA ALLAN HEESE, JUNEAU AIRPORT; JUNEAU, AK
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .