



National Transportation Safety Board Aviation Accident Final Report

Location:	Unalaska, AK	Accident Number:	ANC01FA033
Date & Time:	01/23/2001, 2135 AST	Registration:	N19454
Aircraft:	Douglas DC-3	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	2 Fatal
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Analysis

A Douglas DC-3 airplane departed an island runway during dark night, VFR conditions without filing a flight plan. The airplane collided with a volcanic mountain at 1,500 feet msl on the runway heading, 4.5 miles from the airport. Earlier in the day, the airplane arrived from Anchorage, Alaska, without a flight plan, having flown along the Alaska Peninsula when VFR flight was not recommended. The crew of the airplane initially planned to remain overnight on the peninsula, but the captain received a request to transport cargo to Anchorage. The airplane was loaded with cargo and fuel, and departed. The crew did not file a flight plan. The end of the departure runway is positioned at the edge of an ocean bay. Beyond the end of the runway, open water and rising volcanic island terrain are present. In the area of intended flight, no illumination of the terrain, or any ground based lighting was present. An obstacle departure procedure for the departure runway recommends a right turn at 2 DME from the runway heading, and then a climb to 7,000 feet. Forty-five minutes after departure, a fire was spotted on the side of a volcano cone, and an ELT signal was detected in the area. No company flight following procedures were found for the accident flight, and the airplane was not reported overdue until the following day. The day after the accident, the airplane wreckage was located on steep, snow-covered terrain. Due to high winds and blowing snow, a rescue team could not get to the accident site until three days after the crash. The captain was the president, the director of operations, and the sole corporate entity of the company. No current maintenance records, flight logs, or pilot logs were located for the company. In the past, the captain's pilot certificate was suspended for 45 days following an accident in a DC-3 airplane when he ran out of gas. Also, the captain's medical certificate had previously been considered for denial after serving 49 months in federal prison for cocaine distribution, but after review, the FAA issued the captain a first class medical. FAA medical records for the captain do not contain any record of monitoring for substance abuse. The first officer's medical had also been considered for denial after an episode of a loss of consciousness. After a lengthy review and an appeal to the NTSB, the FAA issued the first officer a second-class medical. The first officer was part of the flight crew when the captain ran out of gas, and she had two previous aviation accidents. A toxicological examination of the captain, conducted by the FAA, found cocaine and metabolites of cocaine. A toxicological examination of the first officer found two different prescription antidepressant drugs. The FAA prohibits narcotic and mood-altering drug use by pilots.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The airplane flightcrew's failure to maintain adequate distance/altitude from mountainous terrain during a departure climb to cruise flight, and the captain's impairment from drugs. Factors in the accident were dark night conditions, and the first officer's impairment from drugs.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: CLIMB - TO CRUISE

Findings

1. TERRAIN CONDITION - MOUNTAINOUS/HILLY
2. (C) DISTANCE/ALTITUDE - NOT MAINTAINED - FLIGHTCREW
3. (C) IMPAIRMENT(DRUGS) - PILOT IN COMMAND
4. INSUFFICIENT STANDARDS/REQUIREMENTS,AIRMAN - FAA(ORGANIZATION)
5. TERRAIN CONDITION - SNOW COVERED
6. (F) IMPAIRMENT(DRUGS) - COPILOT/SECOND PILOT
7. (F) LIGHT CONDITION - DARK NIGHT
8. WEATHER CONDITION - CLOUDS

Factual Information

HISTORY OF FLIGHT

On January 23, 2001, about 2135 Alaska standard time, a Douglas DC-3 airplane, N19454, was destroyed by impact and postimpact fire after colliding with mountainous terrain, about 4.5 miles northwest of Unalaska, Alaska. The airplane was being operated as a visual flight rules (VFR), nonscheduled domestic cargo flight, under Title 14, CFR Part 135, when the accident occurred. The airplane was operated by Galaxy Air Cargo Inc., doing business as Majestic Air Cargo, Anchorage, Alaska. The captain and the first officer, both airline transport certificated pilots, received fatal injuries. Dark night, visual meteorological conditions prevailed. A flight plan was not filed. The flight originated at the Unalaska Airport, about 2130.

The Federal Aviation Administration (FAA) reported that the crew of the accident airplane telephoned the Kenai Automated Flight Service Station (AFSS) on January 23, at 0807, requesting a weather briefing from Anchorage to Dutch Harbor, Alaska (Unalaska), and indicated the flight anticipated departing Anchorage about 1200, under VFR or instrument flight rules (IFR). The flight service station specialist provided a briefing in which VFR was not recommended due to AIRMETS for IFR conditions, and mountain obscuration along the entire route, conditions that were prevalent on either the Pacific or Bering Sea sides of the Alaska peninsula. The briefing also included low level turbulence, occasional moderate rime icing, wind conditions up to 51 knots, with light rain and snow at Cold Bay, Alaska, and wind conditions up to 28 knots, with light rain and mist at Dutch Harbor.

At 0957, the crew telephoned the Kenai AFSS and requested a weather briefing from Anchorage, to Dutch Harbor, via Kenai, Alaska, King Salmon, Alaska, and Cold Bay, again indicated a probable 1200 departure. The specialist indicated the Anchorage weather conditions as wind, 200 degrees at 8 knots, visibility 1 3/4 mile in light snow and mist, few clouds at 500 feet, ceiling 900 feet overcast. The flight service station specialist provided weather conditions for Kenai, Iliamna, Alaska, King Salmon, Cold Bay, and Dutch Harbor, all of which had VFR conditions.

The accident airplane departed Anchorage on a VFR flight, but not on a flight plan. The crew of the airplane contacted the Kenai AFSS by radio at 1312, and requested weather information for Kenai, King Salmon, Cold Bay, and Dutch Harbor. The flight service station specialist provided weather data that included AIRMETS along the route of flight for mountain obscuration, turbulence, icing, and low level wind shear. The specialist indicated the weather conditions at Cold Bay were winds of 32 knots with gusts to 40 knots, visibility of 2 1/2 miles in light rain, snow and fog, ceiling 1,400 feet overcast. Dutch Harbor weather included winds to 21 knots in light showers.

The crew of the accident airplane contacted the Kenai AFSS by radio at 1407, 1527, and 1607, for updates on weather conditions at King Salmon, Cold Bay, and Dutch Harbor.

At 1745, the crew contacted the Cold Bay FSS for a weather update at Dutch Harbor. The FSS specialist indicated the wind was 200 degrees at 11 knots, visibility was 5 miles, scattered clouds at 100 feet, broken clouds at 1,200 feet, overcast at 1,600 feet, altimeter of 28.80 inHg. The remarks included light snow and mist, with visibility and ceilings lower from the northeast though southeast. The crew commented that the airplane was abeam Cold Bay at 10,500 feet, with good weather conditions, having passed a low pressure area near Port Heiden, Alaska, and

said their anticipated arrival at Unalaska was going to be near dark.

At 1750, the crew contacted the Cold Bay FSS and requested that the specialist telephone Peninsula Airways at the Unalaska Airport for fuel, with an anticipated arrival time of one hour and ten minutes.

Investigation by the Unalaska Department of Public Safety (DPS) determined that the accident airplane arrived at the airport on January 23, about 1915. The crew of the airplane initially planned to remain overnight, but the captain received a request to transport about 2,500 pounds of cargo from Unalaska to Anchorage. The airplane was loaded with cargo and fueled with 464 gallons of 100/130 octane fuel. The loading agent recalled hearing the airplane engines start about 2120. The airplane departed Unalaska without filing a flight plan.

The U.S. Coast Guard received an emergency locator transmitter (ELT) signal in the Unalaska area about 2300. A search helicopter was unable to reach the area of the signal due to low clouds.

On January 24, Unalaska personnel continued to search for the location of the ELT signal on the island of Unalaska. About 1300, the wreckage of an airplane was spotted on a 309 degree magnetic bearing from the airport, about 1,500 feet msl, on the side of a volcanic cinder cone at Eider Point. At 1418, a Coast Guard helicopter spotted the wreckage of a large silver-colored airplane resting on the side of snow-covered terrain, but was unable to land due to the steepness of the terrain. Also on January 24, a witness telephoned the Unalaska DPS to report having seen a fire on the side of the cinder cone, about 2145 on January 23. At the time the witness called, the airplane had not yet been reported overdue.

A crewman aboard a vessel anchored in Unalaska Bay, telephoned the Unalaska DPS on January 24, and reported he saw the accident airplane depart from the airport on the night of the 23, and fly over the bay. He said he thought the starboard engine was producing blue spark or flash. He said he did not see the entire departure, and was unaware the airplane had crashed until news of the accident became known.

On January 24, the National Transportation Safety Board (NTSB) investigator-in-charge (IIC) was notified by the FAA that the accident airplane was officially reported overdue at 1448 by a friend of the captain.

High winds and blowing snow prevented search and rescue personnel from reaching the accident site until January 26, 2001. By that time, the tail section of the airplane had separated from the crash scene, and slid downhill, coming to rest about 500 feet msl.

PERSONNEL INFORMATION

Captain

The captain was the president and the director of operations for the company. He held an airline transport pilot certificate with an airplane multiengine land rating, and a type rating for Douglas DC-3 airplanes. He also held commercial pilot privileges with single-engine land and sea ratings. The most recent first-class medical certificate was issued to the pilot on June 3, 2000, and contained the limitation that he wear corrective lenses.

No personal flight records were located for the pilot, and the aeronautical experience listed on page 3 of this report was obtained from a review of airmen FAA records on file in the Airman and Medical Records Center located in Oklahoma City. On the pilot's application for medical

certificate, dated June 3, 2000, the pilot indicated that his total aeronautical experience consisted of 15,000 hours, of which 300 were accrued in the previous 6 months.

Review of available company records indicated the captain attended DC-3 initial ground training, conducted by ERA Aviation Inc., Anchorage, April 17 to 18, 1997. He began company operations on July 1, 1997, and completed initial company new-hire training on July 21, 1997. A review of a pilot resume' from 1997 and 1998, indicated the captain had accrued about 15,000 hours of flight time, 5,000 of night, 2,000 of actual instrument, 50 of simulated instrument.

A review of the captain's medical records, on file with the FAA's airman branch, revealed the captain was convicted in December, 1985, for conspiracy and distribution of cocaine, and sentenced to 12 years in federal prison, with 6 years suspended. The pilot was released after serving 49 months. The FAA moved to revoke the captain's commercial pilot certificate on November 2, 1989, by sending him a notice of proposed certificate action. The pilot applied for a medical certificate on February 6, 1990, which the FAA evaluated on December 13, 1990. The FAA indicated the pilot needed to submit evidence of recovery from drug dependence, including sustained abstinence from drug dependence for not less than the preceding two years. The pilot submitted testimonial evidence and psychological evaluations to the FAA. On April 29, 1991, the FAA sent the pilot an amended Order of Suspension which ordered a six month suspension of any airman certificate, but the imposition of the suspension was waived, "given the pilot's substantial progress towards rehabilitation following your criminal convictions." On October 21, 1991, following a review of his postincarceration history, the FAA determined the pilot was eligible for a first class medical certificate that he had applied for on March 26, 1991. Since that time, FAA medical records do not contain any reports of monitoring for substance abuse.

A review of FAA records indicated the captain was involved in an aviation accident on May 24, 1998, during which a Galaxy Air Cargo DC-3 airplane ran out of gas while landing at Anchorage. A postaccident drug test of the captain was negative. The FAA suspended the captain's pilot certificate for 45 days.

The captain was involved in another aviation accident on July 31, 1998, when the tailwheel and fuselage of a Galaxy Air Cargo DC-3 airplane received damage while landing at Anchorage. No postaccident drug test was conducted.

As part of the Department of Transportation's Drug Abatement Program, the captain received a random drug test in June 2000. The results were negative.

First Officer

The first officer held an airline transport pilot certificate with a multiengine rating, and a DC-3 type rating. She held commercial pilot privileges with an airplane single-engine rating. In addition, she held a flight instructor certificate with airplane single-engine and instrument airplane ratings. Her most recent second-class medical certificate was issued on July 18, 2000, with the limitation that she must wear corrective lenses.

No personal flight records were located for the first officer and the aeronautical experience listed on page 3 of this report was obtained from a review of airmen FAA records on file in the Airman and Medical Records Center located in Oklahoma City. On the pilot's application for medical certificate, dated July 18, 2000, the pilot indicated that her total aeronautical experience consisted of 3,000 hours, of which 250 were accrued in the previous 6 months.

Review of available company records indicated the first officer attended DC-3 initial ground training, conducted by ERA Aviation Inc., Anchorage, April 17 to 18, 1997. She was hired by the company on July 1, 1997, and completed initial company new-hire training on July 21, 1997. A review of a pilot resume' from 1997 and 1998, indicated she had accrued about 2,590 hours of flight time, including 150 of night, 150 of actual instrument, 70 of simulated instrument, and 410 as an instructor.

A review of the first officer's medical records, on file with the FAA, revealed the first officer experienced a loss of consciousness on May 9, 1987, while hiking with a friend. She was treated at a local emergency room where medical personnel characterized the episode as a seizure. The emergency room medical record, completed on the day of treatment, included notations of statements from the first officer as having a history of seizure over the previous 10 years. The episode was reported to the FAA, and the Alaska Regional Flight Surgeon began a review of the first officer's medical history by requesting additional information from the first officer and her physicians. The first officer applied for a second-class medical certificate on May 18, 1988. The FAA moved to deny her medical certificate, and via letter, requested a surrender of her medical certificate on October 31, 1988. The FAA cited disqualifying neurological conditions contained in 14 CFR Part 67, as the basis for the denial. The first officer denied receiving the letter, and did not surrender her medical certificate. Following an application for a medical certificate on May 24, 1989, the FAA again issued a denial of her medical on October 31, 1989. The first officer appealed the denial of her medical certificate to a National Transportation Safety Board, Administrative Law Judge, and supplied the results of several neurological examinations and personal testimonial evidence denying any history of seizure.

On July 9, 1991, a NTSB Administrative Law Judge ruled that the FAA did not prove their case with a definitive diagnosis of seizure, and denied the FAA's case for a denial of the first officer's medical certificate. The FAA appealed the Administrative Law Judge decision to the full board of the NTSB. On January 22, 1992, the NTSB upheld the Administrative Law Judge's decision.

A review of FAA records indicated the first officer, along with the captain, was involved in an aviation accident on May 24, 1998, during which a DC-3 airplane ran out of gas while landing at Anchorage, and a second accident as first officer on July 31, 1998, when the tailwheel and fuselage of a DC-3 airplane received damage while landing at Anchorage. The first officer did not received postaccident drug testing following either accident.

In addition, the first officer, as pilot-in-command, was involved in an aviation accident due to fuel exhaustion on September 29, 1987, and an accident due to an in-flight collision with terrain on August 28, 1993.

Company Information

At the time of the accident, Galaxy Air Cargo Inc., doing business as Majestic Air Cargo, operated two Douglas DC-3 airplanes. The president, director of operations, and the captain of the accident airplane were the same person, the sole corporate entity for the company. The company maintained an office in Anchorage, but had no other corporate facilities. Current company flight logs, current maintenance logs, current time and duty logs, and the pilot's personal logs, were not located in the company's office.

The company's operations specifications, reissued by the FAA on September 14, 2000, indicated the director of operations was responsible for operational control of all flight

operations. The director of maintenance for the company is a full-time employee of another company, and had no direct, day-to-day involvement in the operation of the company.

The company operations manual stated, in part: "The Pilot-in-command will either file a FAA flight plan, or a company flight plan. If, on a company flight plan, an aircraft is overdue by one hour, notification will be made by Galaxy Air Cargo Inc. to the FSS. Radio communication will be via VHF radio and/or telephone. When on a company flight plan, FSS will be used as necessary to assist with telephone communications. In an area where radio communications cannot be maintained, the pilot-in-command will provide the following information on all flight plans: 1. Location, date and estimated time for reestablishing radio or telephone communications."

The company operations specifications stated, in part: "Galaxy Air Cargo Inc.'s flight crews will always file a flight plan with either the FAA, director of maintenance, or his representative. The person guarding the flight plan accepts responsibility for guarding the flight plan until notified the flight is terminated, whether by the pilot/copilot, or an air traffic facility. In the event that a flight becomes overdue by one hour, and all efforts to locate have been unsuccessful, the person guarding the flight plan for the company will notify the nearest air traffic facility and the FAA regional operations center."

No company flight plan for the accident flight was discovered by investigators.

AIRCRAFT INFORMATION

The airplane was maintained on an FAA Approved Airplane Inspection Program (AAIP). The company's AAIP, dated April 1, 1997, specifies an inspection cycle that has a routine inspection (every 7 days, or 25 hours), an interim continuity check (every 50 hours), Phase A (150 hours), Phase B (300 hours), Phase C (450 hours), and Phase D (600 hours). Review of a copy of the AAIP, located in the company's office, did not reveal any revisions, and specified that it applied to a Douglas DC-3 airplane, N305SF, serial number 6205. A copy of the AAIP with current revisions, one applying to the accident airplane, was not located.

A review of available maintenance records located by the company's director of maintenance, revealed the number one engine was changed on September 12, 2000. At that time, the airplane had accrued 55,800.0 hours. The last maintenance record of any inspection was a routine inspection, conducted on December 9, 2000. At that time, the accident airplane had accrued 55,877.1 hours. A notation in a copy of an aircraft flight log, dated December 21, 2000, indicated the airplane had accrued 55,884.7 hours. No other maintenance records, flight logs, or pilot logs were located.

The airplane was not equipped, nor was it required to be equipped with, a cockpit voice recorder, or a ground proximity warning system.

METEOROLOGICAL INFORMATION

Weather observations at Unalaska are augmented by an FAA contract weather observer (call sign, Dutch Weather), on a radio frequency of 129.5 MHz. Weather information from the weather observer is available by telephone, or by radio, at the Unalaska Airport.

An area forecast issued on January 23, 2001 at 1737, and valid until January 24 at 1200, contained a synopsis that stated, in part: "Complex low pressure around a 959 millibar low will slowly weaken and persist over the Aleutian Islands and southern Bering Sea. An associated occluded front near St. Paul Island, Alaska, and over the Alaska peninsula will move into

interior southwestern Alaska and Kodiak Island by 1200."

The area forecast for Unimak Pass, Alaska, to Adak, Alaska, and valid until January 24 at 0600, stated, in part: "Clouds and weather. AIRMET for IFR conditions and mountain obscuration. Occasional ceilings below 1,000 feet, visibility below 3 statute miles in light snow, light rain and snow. No change. Otherwise, clouds at 1,000 feet scattered, 2,000 feet broken, tops at 12,000 feet. Occasionally 500 feet scattered, 1,000 feet overcast, visibility 3 statute miles in light snow, light rain and snow. Surface wind from the south with gusts to 25 knots. Outlook, valid from January 24 at 0600 to 2400, marginal VFR conditions with ceilings in rain showers and snow; wind. Turbulence expected in the lee of rough terrain, and isolated moderate turbulence below 6,000 feet. Icing and freezing level, isolated moderate rime icing in clouds from 2,000 to 12,000 feet. Freezing level near the surface."

A terminal forecast for Unalaska, issued on January 23, 2001, at 1435 and valid from 1500 to January 24 at 1500 stated, in part: Wind, 210 degrees at 15 knots, gusts to 25 knots; visibility greater than 6 statute miles in light rain showers and snow; clouds and sky condition, 600 feet scattered, 1,200 feet broken, 3,000 feet overcast. Temporary changes expected between 1500 to 0900 on January 24, visibility 3 statute miles in flight rain showers and snow, 600 feet broken, 1,200 feet overcast. Between 0900 and 1100 on January 24, wind conditions expected to be 240 degrees at 20 knots with gusts to 30 knots. Amendments to the forecast limited to clouds, visibility, and wind.

On January 23, 2001, at 2135, an automated weather observation system (AWOS) at Unalaska was reporting in part: Wind, 210 degrees (true) at 7 knots; visibility, 8 statute miles; clouds and sky condition, few at 200 feet, 1,800 feet broken, 4,100 feet overcast; temperature, 36 degrees F; dew point, 28 degrees F; altimeter, 28.83 inHg. In the area of intended flight, no illumination of the terrain, or any ground-based lighting was present.

COMMUNICATIONS

The common traffic advisory frequency (CTAF) at the Unalaska Airport is 122.6 MHz. The CTAF provides for local traffic advisories, and is remotely tied to the Cold Bay Flight Service Station. The CTAF is not recorded. An additional source of communication and weather information at Unalaska is the weather observer (Dutch Weather). Under a separate contract for services, the weather observer provides additional information to air carrier aircraft operating up to 150 miles from Unalaska, about local conditions at the airport. Communications on the Dutch Weather radio frequency are not recorded.

The only record of communications maintained by the FAA were telephone and radio conversations between the flight service station facilities at Kenai, and Cold Bay, and the airplane crew during the initial flight from Anchorage to Unalaska. No communications were received from the accident airplane for the return flight from Unalaska.

A transcript of the air to ground communications between the airplane and all involved FAA ATC facilities is included in this report.

AERODROME AND GROUND FACILITIES

The Unalaska airport, elevation 22 feet msl, is equipped with a single, hard-surfaced runway, on a 120/300 degree magnetic orientation on Amaknak Island. Runway 30 is 3,900 feet long by 100 feet wide, and is positioned along the edge of Mount Ballyhoo that rises to 1,650 feet north of the airport. The arrival end of runway 30 is positioned at the edge of Dutch Harbor.

The departure end of runway 30 is positioned at the edge of Unalaska Bay. Beyond the end of the runway 30, open water and rising volcanic island terrain are present.

The airport is served by two nonprecision instrument approach procedures, an NDB and a GPS approach. The NDB is positioned near the departure end of runway 30. An obstacle departure procedure for runway 30 states, in part: "Maintain visual flight until intercepting the 355 degree bearing from the Dutch Harbor NDB at 2 DME. Climb on the 355 degree bearing from the Dutch Harbor NDB to 7,000 feet, then climb on course."

WRECKAGE AND IMPACT INFORMATION

The National Transportation Safety Board investigator-in-charge (IIC) arrived in Unalaska on January 25, but high winds and low visibility prevented travel to the accident scene. On January 26, the IIC went to the accident scene with Unalaska DPS and mountain rescue personnel. High winds and whiteout conditions prevented a detailed examination of the airplane wreckage, but at the point of rest, the airplane was observed to have collided with about 35 degree upsloping, snow-covered terrain at 1,500 feet msl, on a magnetic heading of 320 degrees. (All heading/bearings noted in this report are oriented toward magnetic north.)

With the exception of the tail section, all of the airplane's major components were found at the main wreckage area. Wreckage debris was distributed at an angle, both lateral and upward, across the mountain slope. The cockpit area, and forward fuselage were extensively crushed and consumed by a postcrash fire. The wings had extensive spanwise leading edge aft crushing and folding in the area of center wing and fuselage, between the outboard portions of each engine. The ailerons remained attached to their respective wings. About 30 feet of the outboard end of the right wing separated from the inboard end and slid downhill. A large portion of the upper roof area of the forward fuselage was peeled away from the fuselage sides and was positioned parallel to the wings at the point of rest.

About 30 feet of the aft fuselage separated from the forward portion of the airplane and slid downhill. The aft pivoting portion of the cargo door remained attached to the fuselage. The forward pivoting portion of the cargo door was missing from its attach points. The vertical stabilizer and the rudder remained attached to the empennage and each had minor wrinkling. The left horizontal stabilizer remained attached to the fuselage, and had minor denting and wrinkling. The left elevator was missing from its attach points. The right horizontal stabilizer remained attached to the empennage and had downward bending of the outboard end. The inboard third of the right elevator remained attached to the stabilizer, but the outboard third was missing from its attach points.

Both propeller assemblies separated from their respective engines, and each were located to the right, and downhill, of the main wreckage. Each had circumferential scratching on their respective propeller domes. Two of the three right engine propeller blades remained attached to the hub and had chordwise scratching, torsional twisting, and "S" bending. The third blade was broken out of the hub. The left engine propeller blades remained attached to the hub and had aft bending, chordwise scratching, torsional twisting, and "S" bending.

The right engine sustained impact damage to the front portion of the case. The left engine sustained impact and fire damage to the case.

MEDICAL AND PATHOLOGICAL INFORMATION

A postmortem examination of the captain and the first officer was conducted under the

authority of the Alaska State Medical Examiner, 4500 S. Boniface Parkway, Anchorage, Alaska, on January 31, 2001. The examination revealed the cause of death for the captain and the first officer was attributed to massive blunt force impact injuries.

A toxicological examination of the captain was conducted by the FAA's Civil Aeromedical Institute (CAMI) on April 30, 2001. The examination revealed the following in the blood:

Cocaine (0.062 ug/ml, ug/g)

Benzoyllecgonine (0.159 ug/ml, ug/g)

Ecgonine methyl ester (0.078 ug/ml, ug/g)

The following was found in the urine:

Cocaine (0.846 ug/ml, ug/g)

Norcocaine

Benzoyllecgonine (7.76 ug/ml, ug/g)

Norbenzoyllecgonine (0.511 ug/ml, ug/g)

Hydroxybenzoyllecgonine

Ecgonine ethyl ester

Ecgonine methyl ester (5.203 ug/ml, ug/g)

Anhydroecgonine methyl ester (0.035 ug/ml, ug/g)

Ecgonine (15.126 ug/ml, ug/g)

All of the above listed drugs are either cocaine, or metabolites of cocaine. Cocaine is a controlled dangerous substance, and is prohibited by the FAA. It produces excitement and euphoric effects, restlessness, anxiety, paranoia, and may produce tremor, delirium, convulsions, cardiac damage, and compulsive psychological need. Withdrawal from cocaine use may produce depression and fatigue.

A toxicological examination of the first officer was conducted by CAMI on March 28, 2001. The examination revealed the following:

Amitriptyline detected in the blood, and present in the liver. Amitriptyline is a prescription antidepressant drug that has sedative effects, and has several warnings, which include use by patients with a history of seizure.

Nortriptyline (0.432 ug/ml, ug/g) detected in the blood, and present in the liver. Nortriptyline is a prescription antidepressant drug that has several warnings, which include advice to physicians to closely monitor patients with a history of seizures, and a warning that the drug may impair the mental and physical abilities required for the performance of hazardous tasks.

Therapeutic levels of Nortriptyline are 0.05 to 0.15 ug/ml. The above listed medications are considered to be mood-ameliorating drugs and require a review by the FAA's medical certification division before use by pilots.

A review of the first officer's applications for medical certificates did not reveal any notation of a prescription for the above listed medications. The first officer's most recent application for a medical certificate listed a previous visit to a dentist.

FIRE

A postcrash fire consumed the cockpit and forward portion of the fuselage.

SEARCH AND RESCUE

The Unalaska DPS coordinated the search and rescue response to the accident scene. They requested support from the U.S. Coast Guard who initially provided an H-65 Dolphin helicopter. The Unalaska DPS also requested mountain rescue personnel to assist in the on-scene portion of the search and rescue mission. Low clouds, high winds, and blowing snow, prevented rescue personnel from arriving at the crash site until January 26th. Parajumper personnel from the Air National Guard, 210th Rescue Squadron, Anchorage, augmented by Unalaska DPS and volunteer personnel, were inserted at the accident site by a U.S. Coast Guard HH-60 Jayhawk helicopter. Whiteout conditions prevailed at the crash scene, but the airplane crew were located in the snow, to the left of the center of wreckage impact, and extracted from the mountain by rescue personnel.

ADDITIONAL INFORMATION

The Department of Transportation (DOT) under 49 CFR Part 40, has established drug testing procedures for employers in the transportation industry. The FAA, as part of the DOT, has established the Aviation Drug Abatement Program. It mandates drug testing for marijuana, cocaine, opiates, amphetamines, phencyclidine, and alcohol. The drug abatement program has provisions, among others, for the testing of aviation workers as pre-employment testing, periodic testing, random testing, postaccident testing, and testing based on reasonable cause. If a worker holds an aviation medical certificate, issued under 14 CFR Part 67 (medical standards for certification of airmen), and tests positive for drugs under the DOT's drug abatement program, the FAA's Federal Air Surgeon is notified. If a pilot has a past history of substance abuse identified during the process of obtaining a medical certificate (Part 67), and substantiates recovery, the pilot may be issued a medical certificate. If the pilot does not test positive for drug use under the DOT's guidelines, the pilot is not subject to any increased surveillance by either the FAA's medical certificate program, or the DOT's drug testing program.

Continuous poor weather conditions, including high winds and snow, prevented the NTSB IIC from returning to the accident scene. On August 20, 2001, after the accident scene was free of snow, an insurance agency adjuster traveled to the scene to assess removal of the wreckage, and he photographed the area. Several of his photographs are attached to this report.

WRECKAGE RELEASE

The Safety Board did not take custody of the wreckage. No parts or components were retained by the Safety Board.

Pilot Information

Certificate:	Airline Transport; Commercial	Age:	53, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land; Single-engine Sea	Seat Occupied:	Unknown
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	06/03/2000
Occupational Pilot:		Last Flight Review or Equivalent:	03/22/2000
Flight Time:	15000 hours (Total, all aircraft)		

Co-Pilot Information

Certificate:	Airline Transport; Flight Instructor; Commercial	Age:	39, Female
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane Single-engine; Instrument Airplane	Toxicology Performed:	Yes
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	07/18/2000
Occupational Pilot:		Last Flight Review or Equivalent:	04/16/2000
Flight Time:	3000 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Douglas	Registration:	N19454
Model/Series:	DC-3	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	25309
Landing Gear Type:	Retractable - Tailwheel	Seats:	3
Date/Type of Last Inspection:	12/07/2000, AAIP	Certified Max Gross Wt.:	26900 lbs
Time Since Last Inspection:	7.6 Hours	Engines:	2 Reciprocating
Airframe Total Time:	55877.1 Hours at time of accident	Engine Manufacturer:	P&W
ELT:	Installed, activated, aided in locating accident	Engine Model/Series:	R-1830-92
Registered Owner:	MAJESTIC LEASING INC.	Rated Power:	1200 hp
Operator:	Galaxy Air Cargo Inc.	Operating Certificate(s) Held:	On-demand Air Taxi (135)
Operator Does Business As:	Majestic Air Cargo	Operator Designator Code:	GX7C

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Night/Dark
Observation Facility, Elevation:	PADU, 22 ft msl	Distance from Accident Site:	5 Nautical Miles
Observation Time:	2135 AST	Direction from Accident Site:	129°
Lowest Cloud Condition:	Few / 200 ft agl	Visibility	8 Miles
Lowest Ceiling:	Broken / 1800 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	196°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	28.83 inches Hg	Temperature/Dew Point:	2°C / -2°C
Precipitation and Obscuration:			
Departure Point:	Unalaska, AK (PADU)	Type of Flight Plan Filed:	None
Destination:	Anchorage, AK (PANC)	Type of Clearance:	None
Departure Time:	2130 AST	Type of Airspace:	Class G

Airport Information

Airport:	UNALASKA (PADU)	Runway Surface Type:	Asphalt
Airport Elevation:	22 ft	Runway Surface Condition:	Dry
Runway Used:	30	IFR Approach:	None
Runway Length/Width:	3900 ft / 100 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	2 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Fatal	Latitude, Longitude:	53.960000, -166.621389

Administrative Information

Investigator In Charge (IIC):	Scott Erickson	Report Date:	10/24/2002
Additional Participating Persons:	DALTON FORTNEY; FAA-AL-ANC FSDO 03; ANCHORAGE, AK		
Publish Date:			
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.ntsbt.gov/pubdms/ .		

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](#).