

## CIVIL AERONAUTICS BOARD

## AIRCRAFT ACCIDENT REPORT

ADOPTED: October 24, 1966

RELEASED: October 27, 1966

AAXICO AIRLINES, INC.  
DOUGLAS DC-6A, N6579C  
WHITEMAN AIR FORCE BASE  
KNOB NOSTER, MISSOURI  
MAY 18, 1965

SYNOPSIS

AAXICO Airlines, Inc., Douglas DC-6A, N6579C, operating as AAXICO Flight No. 1416B, a regularly scheduled Civil Air Movement (CAM) cargo flight, crashed during an approach to a landing at Whiteman Air Force Base (AFB), Knob Noster, Missouri, at approximately 0601 c.s.t., on May 18, 1965. The crew of three, the only persons on board, escaped uninjured.

The flight scheduled from Hill AFB, Ogden, Utah, to Offutt AFB, Omaha, Nebraska, with several scheduled stops at various Air Force Bases en route, departed Tinker AFB, Oklahoma City, Oklahoma, on an Instrument Flight Rules (IFR) flight plan at 0446 c.s.t., for Whiteman AFB. Shortly after departure the flight canceled IFR and continued in accordance with Visual Flight Rules (VFR). The flight approached Whiteman AFB from the south and was cleared for a straight-in visual approach to runway 36. At this time a line of thunderstorms was located to the west of the field, portions of which were moving across the approach end of the runway obstructing the crew's sighting of the base and runway. The flight continued the approach, encountering heavy rain which reduced visibility to the point that visual contact with the ground was lost. The aircraft struck the trees 4,204 feet short of the runway threshold and 740 feet to the right of the extended runway centerline while on a magnetic heading of 020 degrees. The aircraft continued to the ground, shearing the landing gear, the No. 4 engine and right outer wing panel, and slid approximately 1,200 feet on the bottom fuselage surface. Ground impact ruptured the right wing fuel tanks spilling fuel along the wreckage path which resulted in a ground fire of short duration. The left inboard tanks ruptured causing a fire which destroyed the fuselage interior.

The Board determines that the probable cause of this accident was an improperly executed landing approach into an area of adverse weather, during which the aircraft was allowed to descend to an altitude too low to avoid striking trees.

## 1. INVESTIGATION

## 1.1 History of Flight

AAXICO Airlines Douglas DC-6A, N6579C, operating as AAXICO Flight No. 1416B, a regularly scheduled military Civil Air Movement (CAM) cargo flight, departed

Hill AFB, Ogden, Utah, at 2155<sup>1/</sup> on May 17, 1965. The flight was destined for Offutt AFB, Omaha, Nebraska, with several scheduled stops at various Air Force bases en route. The flight arrived at Tinker AFB, Oklahoma City, at 0213 after a routine flight via Francis E. Warren AFB, Cheyenne, Wyoming.

At 0446, May 18, the flight departed Tinker AFB for Whiteman AFB, Knob Noster, Missouri, on an IFR flight plan. After the flight climbed on top of the overcast in the Tinker AFB area the captain canceled the IFR flight plan and continued to Whiteman AFB at 5,500 feet operating in accordance with Visual Flight Rules (VFR) -

At 0552:01, N6579C contacted the Whiteman AFB control tower and gave the flight's position as 29 DME<sup>2/</sup> miles south of the field, "VFR." The tower controller acknowledged the transmission and gave the flight the following information ". . . Measured three thousand eight hundred (3,800) broken, high overcast, visibility one zero (10 miles), altimeter two niner niner zero (29.90 inches HG) wind two seven zero (270) degrees, variable three zero zero (300) degrees at one zero (10 knots) active runway one eight . . ." The flight asked for and received approval to make a straight-in approach to runway 36.

At 0553:01 the flight asked the tower controller, "Is it raining there?" The controller answered, "Negative precipitation at the present time."

At 0554:04 the flight repeated that they were VFR at twenty-five hundred feet and was informed by the controller ". . . at the present time it is raining at Whiteman."

At 0557:29 N6579C reported, "Ten out," and was cleared to land. At 0559:54 the flight requested, "Whiteman Tower what's your weather now?" The controller answered, "Weather measured one thousand seven hundred (1,700) overcast, visibility ten with light rain showers, altimeter two niner niner two." The flight acknowledged receiving this information at 0600:10. The next transmission to the flight, made by the controller at 0604:49, was not acknowledged nor were several other attempts to contact the flight after this time. At approximately 0605 the controller alerted the crash crew.

The flight crew testified that the captain was flying the aircraft with the first officer handling the radio transmissions. At six DME miles south of the base both instrument landing system (ILS) receivers were switched to frequency 110.3 mcs. Both altimeters were set at 29.92, according to the crew. The captain did not utilize an approach chart.

According to the crew's testimony, at the outer marker the landing gear was lowered, the flaps were extended to 30 degrees and the aircraft was slowed to between 125-130 knots which was maintained throughout the approach. The captain testified, "After passing the outer marker we encountered light rain which progressively became heavier. This prompted our call (0559:54) to the tower requesting further weather conditions at the field. These weather conditions were given to me I believe as 1,700 feet and three miles which led me to believe, ". . . (we)

<sup>1/</sup> All times herein are central standard based on the 24-hour clock.

<sup>2/</sup> Distance Measuring Equipment.

should be breaking into a condition of clear visibility of three miles."

The captain further stated, ". . . it is advantageous to both the company and the crews to go VFR direct . . . the tower gave us landing Runway 18 and the weather which indicated landing (on) 36 was very feasible and to the advantage of the company and myself to continue straight in."

The first officer testified that when 35 to 40 miles out he saw lightning in the Whiteman area. All crewmembers reported, however, that there was no hail or lightning observed during the approach. The first officer stated he was looking ahead to pick up the runway and the visibility dropped to near zero in the area of heavy rain. He also stated that his ILS indicator indicated that they were about one dot high on the glide slope but on the localizer. He further stated that he was monitoring the altimeter and when it indicated 1,150 feet he cross-checked with the captain's altimeter and found it to be in agreement, he yelled, "minimums, let's go around." The captain ordered maximum power and flaps to 20 degrees. The four engines responded symmetrically. The captain rotated the aircraft by back pressure on the yoke and both pilots stated they observed a corresponding attitude change on their artificial horizons. At about this time the first officer observed the aircraft making contact with the trees. The captain retarded the throttles as the aircraft continued into the trees and made contact with the ground. The crew stated that at no time during the approach did they see Whiteman AFB, the runway, the runway lights or the approach lights. The tower controller testified that at no time during the approach did they see Whiteman AFB, the runway, the runway lights or the approach lights. The tower controller testified that at no time during the approach did he see the aircraft. A study of times of the recorded transmissions between the flight and Whiteman Control Tower indicated that the accident occurred at approximately 0600:52.

#### 1.2 Injuries to Persons

<u>Injuries</u>	<u>Crew</u>	<u>Passengers</u>	<u>Others</u>
Fatal	0	0	0
Non-fatal	0	0	0
None	3	0	

#### 1.3 Damage to Aircraft

The aircraft was destroyed by impact and ground fire.

#### 1.4 Other Damage

The aircraft damaged some trees, severed an electrical power line and tore down a section of the Whiteman AFB perimeter fence.

#### 1.5 Crew Information

Captain Ernest A. Tripp, age 43, held Airline Transport Pilot (ATR) certificate No. 306115 issued February 25, 1958, with type ratings in the C-46, DC-4, DC-6, and DC-7. He had accumulated a total of 15,498.4 hours pilot time which included 2,389.3 hours in the DC-6. He satisfactorily passed a first-class medical examination and was issued a certificate dated January 14, 1965, with no limitations. Captain Tripp received his original check as a DC-6 captain on January 17,

1962. On March 24, 1965, Captain Tripp was given an "unsatisfactory" by the company's chief pilot on a pilot proficiency flight check. The below average grade was awarded for performance in the following maneuvers: engine failure prior to  $V_1$  and at  $V_1$ ; <sup>3/</sup> rapid descent and pullup, maneuvering with engine out, instrument approach procedures, missed approach procedures, balked landing, maneuvering for landing at weather minimums, and emergencies. A Federal Aviation Agency (FAA) inspector riding as an observer during the flight completed an FAA check form and commented, "Airspeeds were high on canyon approach and circling minimums. While check is considered satisfactory, it was recommended that Captain Tripp be given an additional period on these two items." A recheck was given on March 25, 1965, by the company's check pilot and was passed satisfactorily with an overall average grade. However, Captain Tripp did receive one below average grade for "Rapid descent and pullup." The explanation comment made by the check pilot was "slow to establish positive climb attitude - flaps up too soon - overshoot return to initial altitude."

First Officer George D. Weitbregt, age 30, held ATR certificate No. 1488908 issued April 23, 1964, with type ratings in DC-6 and DC-7. He had accumulated a total of 4,481.7 flight hours which included 2,113.7 hours in the DC-6. He satisfactorily passed a first-class medical examination on January 15, 1965, with no limitations. Proficiency and equipment checks given on August 5, 1964, were passed satisfactorily. His last line check taken and satisfactorily passed was on July 10, 1964.

Flight Engineer Rudolph Hahn, age 31, held commercial pilot certificate No. 1508567, issued on March 5, 1962, with airplane single and multiengine land and instrument ratings. He also held flight engineer certificate No. 1602875 issued August 18, 1964, and airplane and powerplant certificate No. 1505950 issued July 18, 1961. He had a total of 1,013.4 hours of flying time which included 672.3 hours of DC-6 flight engineer time logged in the preceding 12 months. His last equipment check was passed on August 17, 1964, and his last line check on August 20, 1964. He was issued an FAA second-class medical certificate on April 6, 1965, with no limitations.

All three crewmembers had 23:35 hours of rest time prior to departure from Hill AFB. They had been on duty for 9:22 hours at the time of the accident of which 5:57 hours were flight time.

#### 1.6 Aircraft Information

N6579C, a Douglas DC-6A bore manufacturer's serial No. 45480 and fuselage No. 980. Manufacture was completed on April 29, 1958. At the time of the accident the aircraft had accumulated a total of 20,557:01 hours. Maintenance had been performed in accordance with FAA requirements. The aircraft was equipped with four Pratt & Whitney R-2800 engines which operate on 115/145 octane aviation gasoline. The engines were installed as follows:

$3/ V_1$  - Speed during take-off roll at which takeoff can be continued or aborted, on the pilot's decision, when the critical engine fails. (If the critical engine fails below  $V_1$ , takeoff is aborted. If it fails above  $V_1$ , takeoff is continued.)

<u>Position</u>	Serial No.	Time Since Overhaul	Total Time
1	34250	1753:40	20,841:31
2	27438	294:38	35,507:13
3	32306	1285:15	15,851:51
4	30888	1258:46	30,532:56

The engines powered Hamilton Standard 43E60 propellers.

The gross weight and center of gravity were within prescribed operating limits at the time of the accident.

#### 1.7 Meteorological Information

Prior to departure from Tinker AFB the captain was briefed by an Air Force weather forecaster on conditions to be expected. The briefing included Military Weather Warning Advisory No. 69 which was issued by the Air Force Severe Weather Center at Kansas City at 1800 on May 17, 1965. This warning advisory predicted a few thunderstorms with southeast to south gusts of 30 knots from 0600 to 1100 for May 18, 1965, over eastern Oklahoma, extreme southeastern Kansas and a portion of western Missouri which included Whiteman AFB. The written terminal forecast provided by the forecaster at Tinker AFB for the flight's expected time of arrival at Whiteman AFB was: 25,000 feet scattered, visibility 15 miles, wind 210 degrees 10 knots, altimeter setting 29.77 inches. This forecast was valid from 0430 to 0630. The forecaster stated that he briefed the pilot that the Whiteman AFB forecast called for intermittent ceilings of 3,000 feet, visibility 5 miles, thunderstorms, rain showers and hail, and variable gusty winds beginning at 0600. He did not enter this forecast on the DD Form 175-1, Flight Weather Briefing form.

The Kansas City radar weather observation made at 0540 showed that Whiteman AFB was in the leading edge of an area of thunderstorms which extended northeasterly and southwesterly for a considerable distance and was moving southeasterly at 25 knots.

Aviation weather observations taken at Whiteman AFB for the period involved were as follows:

0542 Special, measured ceiling 3,800 feet broken, high overcast, visibility 10 miles, thunderstorm, wind 200 degrees 7 knots, thunderstorm northwest moving northeast began at 0541, occasional lightning in clouds northwest, rain showers of unknown intensity southwest to northwest.

0558 Record Special, measured ceiling 1,700 feet overcast, visibility 10 miles, thunderstorm, very light rain showers, temperature 69F, dew point 62F, wind 210 degrees 6 knots, altimeter setting 29.92 inches, thunderstorm west to north moving northeast, occasional lightning in clouds northwest, rain showers of unknown intensity west to north to north-northeast.

0607 Special, measured ceiling 1,700 feet overcast, visibility 3 miles, thunderstorm, light rain shower, hail, wind 300 degrees 4 knots, thunderstorm overhead, occasional lightning all quadrants, hail began at 0605, hailstones 1/4 inch in diameter.

Most of the witnesses located near the accident site described thunderstorm activity in the area with heavy rain, lightning and strong northwesterly winds. None of these witnesses reported hail.

The flight crew reported that shortly after leaving Tinker AFB the weather en route to Whiteman AFB was clear with visibility unrestricted. Upon arriving in the area of Whiteman AFB they noticed a thunderstorm west of the field with showers extending to the east. The weather to the east of the base was clear. Visibility to the south was restricted due to the thunderstorm moving across the approach end of runway 36.

The accident occurred in the early morning daylight.

### 1.8 Aids to Navigation

Runway 36 at Whiteman AFB is equipped with ILS which was reported by Air Force technicians to have been capable of operating within acceptable tolerances at the time of the accident. The crew stated that both ILS receivers were functioning normally and that they observed no warning flags while on the approach for a landing.

The tower controller stated that at the approximate time of the accident the ILS localizer (LOC), the middle marker (MM), the outer marker (OM), the TACAN<sup>4/</sup> and the TVOR<sup>5/</sup> went into an alarm status. Base power serves the TACAN and private leased power serves the TVOR, OM, LOC, and MM. When the accident occurred, the commercial power line serving the LOC and MM was severed. About the same time the base was hit by lightning which caused other power failures. After the accident, base electronic maintenance personnel proceeded to the site of each NAVAID that had malfunctioned and found in each instance that either standby or regular power was available. No maintenance work was required to restore the NAVAIDs to normal operation at the equipment site.

The ILS glide slope is set at an angle of 2.87 degrees above the horizontal and intersects the runway 1,020 feet from the threshold or 2,020 feet from the end of the runway overrun. The glide slope centerline is 200 feet above the middle marker and 225 feet higher than the tree which was struck by the aircraft during the approach. The middle marker is located 0.6 miles from the runway threshold. The outer marker is five miles from the runway threshold. The ILS landing minima for Whiteman AFB at the time of this accident were ceiling 200 feet and visibility one-half mile.

### 1.9 Communications

Radio communications between the tower controller and the flight crew were conducted on frequency 126.2 mcs. All transmissions from the flight were made by the first officer who stated after the accident that there were no communication problems.

<sup>4/</sup> TACAN - Tactical Air Navigation. A military navigation aid which provides distance and directional information to appropriately equipped aircraft.

<sup>5/</sup> TVOR - Terminal very high frequency Omni directional radio range. Provides directional information over a limited distance to appropriately equipped aircraft.

## 1.10 Aerodrome and Ground Facilities

Runway 36 at Whiteman AFB is 12,400 feet long and 200 feet wide. It is constructed of concrete and has a 1,000-foot overrun strip at each end. The elevation is 835.91 feet at the landing end and 869.21 feet at the opposite end. The type "A" approach lights and high intensity runway lights were on, at an unknown intensity. At the time of the accident the strobe lights<sup>6/</sup> were off. The USAF instrument approach profile chart depicts the field elevation as 869 feet.

Air Traffic services at Whiteman AFB are provided by FAA-certificated, military controller personnel. The control tower is a VFR tower with controller's authority limited to the control of VFR traffic only.

## 1.11 Flight Recorders

There was no flight recorder installed on the aircraft nor was one required.

## 1.12 Wreckage

N6579C crashed approximately 4,200 feet south of runway 36, at Whiteman AFB. The total wreckage was confined to an area approximately 1,200 feet long and 200 feet wide. The fuselage and left wing inboard of the No. 2 engine were extensively damaged by fire.

The first impact markings were found in the top of a tree 48 feet above the ground, 740 feet east of the extended runway centerline, and 4,204 feet south of the threshold of runway 36. Ground elevation at the base of the tree is 848 feet. Initial ground impact was 377 feet from the tree at an elevation 854 feet (m.s.l.) on a magnetic heading of 020 degrees. Sections of the right wing, right flap, right aileron, No. 4 engine, right main landing gear, and the nose gear separated from the aircraft and were found along the skid path left by the aircraft from the point of first ground contact to the final stopping point. The distance from the point of first ground contact to the main wreckage was 1,200 feet and the fuselage was in an upright position on a magnetic heading of 160 degrees.

The fuel tanks were ruptured and fuel-fed ground fires did occur. The leading edge of the left wing, inboard of the No. 2 engine, and the fuselage from the aft pressure bulkhead to the cockpit entry door were extensively damaged by fire.

The retract cylinders for the nose gear and both main landing gear were recovered, examined and found to be in the fully extended position.

The flap actuators were examined and measurements of 6-1/2 inch extension of the inboard actuators and 4-1/2 inch extension of the outboard actuators were taken.

<sup>6/</sup> A condenser-discharge sequence flashing light system consisting of a series of brilliant blue-white bursts of light flashing in sequence along the approach lights.

Measurements of the swath through the trees made by the aircraft established an angle of descent of 7.3 degrees.

The settings found on the captain's and first officer's altimeters were 29.88' and 29.89, respectively. The crew testified that they had no operating difficulties with the aircraft or any of its components during the flight and that power had been applied and symmetrically received prior to impact.

### 1.13 Fire

The flight engineer reported that he first noticed fire out the right cockpit window just after the aircraft first made contact with the trees. As the aircraft came to a stop the cockpit began filling with smoke. Fire emanating from ignited fuel spilled from ruptured tanks, penetrated the fuselage and extensively damaged the interior of the fuselage from the aft pressure bulkhead to the cockpit entry door.

At 0605 the Whiteman AFB tower controller advised the base fire department by means of the primary crash phone that contact had been lost with the aircraft while on final approach and that a crash might have occurred. At 0612 the controller alerted all base activities concerned that a crash had occurred.

The Assistant Fire Chief and three units of firefighting equipment responded to the alarm by way of the perimeter road inside the base. Two other units utilized a road located outside the base. Both groups of vehicles converged on the burning aircraft and were actively engaged in combating the fire at 0617. Additional fire equipment was dispatched to the scene as off-duty and standby personnel reported for duty. Approximately 60 firefighters and 9 pieces of firefighting equipment all attached to Whiteman AFB participated in the operation. The fire was completely extinguished at 0730.

Difficulty was encountered in combating the fire inside the fuselage due to the fact that the cargo had shifted during the crash and had jammed the forward left cargo door from the inside. The cargo was removed through the aft left cargo door to allow access to the fire inside the fuselage.

### 1.14 Survival Aspects

This was a survivable accident. After the aircraft came to a stop the flight engineer stowed his seat which is located just aft and between the captain's and first officer's seats and opened the crew entrance door on the forward right side of the fuselage. The flight engineer followed by the first officer and the captain jumped to the ground five feet six inches below the door sill and walked away from the burning aircraft to await assistance. The evacuation was accomplished in pouring rain in approximately 15 seconds. None of the three crewmembers was injured.

### 1.15 Tests

The altimeters, airspeed indicators, vertical speed (rate of climb) indicators, turn and bank indicators, gyro horizons, radio magnetic indicators (RMI) and Omni bearing selectors (OBS) were removed from the wreckage and brought to a test facility for bench checks. All instruments were found to operate within tolerances with no discrepancies.



The pitot-static system was checked with a Burton test set. This test detected a leak in the captain's static system which was isolated to a section of line between the manifold mounted on the pressure bulkhead and the static port on the left side of the aircraft. Subsequent testing of the individual line did not disclose the source of the leak.

The VOR receivers and glide slope receivers were also removed from the wreckage as well as the cockpit ILS indicators. All units, including the localizer function of the VOR receivers, were tested and found to be operating satisfactorily.

## 2. ANALYSIS AND CONCLUSIONS

### 2.1 Analysis

Evidence resulting from the investigation indicated that there was no significant malfunctioning of the aircraft, its systems, or its components nor were there any malfunctions of the NAVAID systems at Whiteman AFB prior to aircraft impact. The measurements found on the flap actuators correspond to a flap setting of 20 degrees and the fully extended retract cylinders are representative of the landing gear being in the down position. These findings are in accord with and verify the crew's testimony as to the configuration of the aircraft.

The leak found in the captain's pitot-static system is attributed to a loose fitting since the leak could not be duplicated when the involved section of the line was tested. Since there are separate systems for the captain's and first officer's altimeters, this leak is not considered as being in the causative area. Had the leak been present prior to impact and of sufficient magnitude to have caused a discrepancy between the two altimeters, it would have been noted by the crewmembers prior to commencing the approach.

After departing Tinker AFB and climbing through an overcast the flight continued in VFR conditions. Upon arrival in the Whiteman AFB area the crew noticed a storm to the west of the base. This storm extended to the south and east preventing their seeing the base or the runway. The storm was moving southeasterly but the area to the east of the base was clear. Radio contact was made with the base when the flight was 29 miles south. The flight was given weather information which indicated to the crew that the base was VFR and they could see that at least part of the storm was lying between their position and the base. One minute later the crew was informed that it was raining at the base.

At ten miles out the flight was cleared to land and given weather information that indicated the base was VFR with light rain showers. The base and runway were still obscured from the crew's vision by the storm. While proceeding between the outer marker and middle marker in the area of heavy rain with restricted visibility, the crew again asked for the weather conditions and were given information indicating that the base was still VFR with light rain showers. However, conditions in which the aircraft was operating at this time were definitely not VFR. As the captain testified, his intention at this time was to penetrate the area of poor weather conditions caused by the thunderstorm, the center of which was approaching the base from the west, and be out in the clear in time to make a VFR landing. According to the captain's testimony he believed that at any moment, ". . . they would break out of the shower activity into a condition which was given as 1,700 feet and three

miles visibility in light rain." Actually the tower controller transmission, recorded at 0600, indicates the visibility was given as 10 miles. Visibility to the south was restricted due to the storm moving across the approach end of runway 36 but this information was not provided to the crew.

According to the crew the approach from the outer marker was made utilizing the ILS glide slope and localizer. The crew testimony indicated that with reference to cockpit instruments the aircraft was on the localizer making a normal approach except that they were, "About one dot high on the glide slope." The approach was continued until the altimeters indicated approximately 1,150 feet at which time the first officer called out, "Minimums, let's go around." The crew testified that missed approach procedures were initiated and shortly thereafter impact with the trees occurred.

The first tree that the aircraft struck was 740 feet to the right of the localizer (runway) centerline. The ILS glide slope centerline passes approximately 225 feet above the height of the top of the tree. An aircraft on the localizer and on the glide slope with the indicator indicating one dot high, would be approximately 30 feet above the glide slope centerline. The aircraft would be expected to clear the tree vertically by approximately 255 feet and laterally by 740 feet. The aircraft's altitude at this time would be 1,152 feet m.s.l., (elevation at the tree top was 896 feet). In addition, the settings found on the captain's and first officer's altimeters, 29.88 and 29.89, respectively, in lieu of the setting given by the tower controller (29.92), would add an additional 30 to 40 feet to the actual altitude of the aircraft.

At the time the crew states that they had reached 1,150 feet and were executing the missed approach procedure the aircraft's position with relation to the tree should have been 740 feet to the left (west) slightly south, and approximately 290 feet above it. From this position the Board considers it impossible for the aircraft to hit the tree in a wings level, slightly noseup attitude with a 7.3-degree angle of descent.

The crew testified that the ILS was being utilized in conjunction with the approach and that they were on the localizer course and slightly above the glide slope at the time the go-around was initiated, just prior to contact with the tree. However, based on the examination of all physical evidence it is apparent that full scale deflections of the localizer and glide slope indicators (full left - full-up) would have been displayed on the instrument at this point. It is, therefore, believed that the ILS was not being utilized in the manner stated by the crew and that a go-around was not initiated until the aircraft had descended well below the ILS minimums.

It is believed that when the aircraft entered the area of heavy rain and visibility deterioration the captain allowed the aircraft to descend lower than intended in an unsuccessful attempt to maintain visual contact with the ground. When visual contact was again established it was at an altitude too low to avoid striking the trees.

The impact heading of 20 degrees magnetic, in lieu of the runway heading of 360 degrees, can be accounted for by an attempt on the part of the captain to bring the aircraft into the clear area which he knew existed to the east of Whiteman AFB or through the initiation of a missed approach.

At the time N6579C was making the approach, the storm was having its greatest effect on the areas to the west and south of the base. The Board is of the opinion that a VFR approach and landing could have been made if the flight had circled the base to the east and landed on runway 18.

It is obvious the crew did not maintain VFR during the approach. Since they were operating on a VFR flight plan they were obligated to conduct the flight in VFR conditions. In order to continue the flight into an area of instrument weather the pilot is required to change to an IFR flight plan. In this instance, to do this would have involved a delay as the flight would have to remain in VFR conditions while the IFR request was being processed.

The reason the route into the area of restricted visibility was chosen is reflected in the captain's testimony when he stated that the weather, as given indicated landing (on) 36 was very feasible and it was to the advantage of the company and himself to continue straight in.

During the approximately eight-minute period during which the flight was in radio contact with the tower, the controller made four separate transmissions giving weather information to the flight. None of these transmissions included any information regarding the thunderstorm which was just west of the base and affecting conditions at the base. The controller testified that he knew of the presence of the thunderstorm both through visual sighting and from the weather data supplied by base weather. It must be pointed out, however, that while the controller was physically located on one side of the storm which was affecting the approach area to runway 36, the flight was on the other side of the same storm and the crew should have been self alerted to the potential hazards associated with flying into it.

## 2.2 Conclusions

### (a) Findings

1. The aircraft, powerplants; and all systems were capable of normal operation.
2. The crew canceled their IFR flight plan shortly after departure from Tinker AFB and continued in VFR conditions until just after passing the outer marker while inbound to runway 36 at Whiteman AFB.
3. The ILS at Whiteman AFB was on and functioning properly during the approach of N6579C.
4. There was a southeasterly moving line of thunderstorms just west of Whiteman AFB at the time N6579C was approaching.
5. An area of heavy rain associated with the thunderstorms was situated south of the base obstructing the crew's visual contact with the base and runway, as well as the tower controller's visual sighting of the aircraft.
6. The crew was briefed prior to departure from Tinker AFB regarding the possibility of thunderstorms in the Whiteman area upon their arrival.

7. The crew saw the storm area as they approached the base.
8. The captain directed the flight into the storm area expecting to come out on the other side in time to make a VFR landing.
9. The crew did not attempt to obtain an IFR flight plan prior to penetrating the storm.
10. In the area of restricted visibility and heavy rain, ground contact was lost and the captain allowed the aircraft to descend below the glide slope and to the right of the extended runway centerline.
11. A go-around was not initiated at the ILS landing minimums.
12. When visual contact with the ground was again established the altitude was too low to avoid striking the trees.
13. The tower controller did not give the flight any information regarding the presence of the thunderstorm in the area.
14. Weather conditions at the base were satisfactory for VFR operation.
15. A VFR approach and landing could have been made if the flight had circled the base to the east and landed on runway 18.
16. Fire was due to impact.
17. This was a survivable accident.

(b) Probable Cause

The Board determines that the probable cause of this accident was an improperly executed landing approach into an area of adverse weather, during which the aircraft was allowed to descend to an altitude too low to avoid striking trees.

BY THE CIVIL AERONAUTICS BOARD:

/s/ CHARLES S. MURPHY  
Chairman

/s/ ROBERT T. MURPHY  
Vice Chairman

/s/ G. JOSEPH MINETTI  
Member

/s/ WHITNEY GILLILLAND  
Member

/s/ JOHN G. ADAMS  
Member