Adopted: June 29, 1942
File No. 2951-41

REPORT OF THE CIVIL AERONAUTICS BOARD
of the
Investigation of an Accident Involving Aircraft in
Scheduled Air Carrier Operation

Major damage was received by a Lockheed 10-A aircraft in an accident which occurred about 12:04 a.m. (CST) on June 11, 1941, at the Municipal Airport, Sioux City, Iowa. The plane, NC 16058, was owned and operated by Mid-Continent Airlines. The crew consisted of Captain L William Moomaw, First Officer Peter Carruthers, both of whom were properly certificated and appropriately rated, and a steward, A. C. Warr. There were seven revenue passengers aboard. None of the occupants was injured.

The flight, designated by the air carrier as Flight 8 of June 10, 1941, originated at Tulsa, Oklahoma, at 7:30 p.m., with Minneapolis, Minnesota, as its destination. Intermediate stops were scheduled at Kansas City, Missouri, Omaha, Nebraska, Sioux City, Iowa, and Sioux Falls, Huron and Watertown, South Dakota. A crew and aircraft change was made at Kansas City and the flight proceeded to Omaha Although it was scheduled to depart this point at 10:50 p.m., the flight was delayed on account of weather and actual departure was not made until 11:28 p.m. Contact flying conditions prevailed between Omaha and Sioux City However, due to the fact that severe static made radio communication difficult, the crew listened to the radio only intermittently and missed two special weather broadcasts from Sioux City, one at 11:45 p.m. reporting the wind as SSW-7, the other at 11:56 p.m. reporting heavy rain and the wind as SSE-8. At 11:53 the flight reported its position over Onawa, at 3000 feet with unlimited visibility, and estimated arrival at Sioux City ten minutes later, or at 12:03 a.m. At 11.57 the Mid-Continent Airlines' radio operator at Sioux City radioed Flight 8 clearance to land and gave the following weather report: "Contact; ceiling 1300 ft.; overcast, visibility 3½ miles, light rain; Kollsman 29.68, field clear, surface wind south at 2 mph." At the time this message was broadcast, Flight 8 was six minutes south of the field and had started to descend for a landing. First Officer Carruthers was at the controls and, on the strength of the weather report from the Company operator, made his landing from south to north on the North-South runway, which is 3173 feet long. Captain Moomaw stated that while he thought the approach was rather high, he did not consider it sufficiently serious for him to take over at that time. Wheel contact was made approximately midway of the length of the runway at a moment when heavy rainfall restricted visibility Abnormal dimness of the boundary and range lights made them invisible to the crew thus giving a false indication of the length of runway still available. The East-West runway is near the north boundary of the field and when it became visible in the landing light beam, the crew could determine its position. Realizing they were too near the end of the runway for an emergency take-off, Captain Moomaw took control and applied full brakes. Failing to obtain any noticeable braking effect, he tried, by use of right brake and left motor, to groundloop to the right. The plane turned

15 or 20 degrees but it continued along a straight path. When the posts of the fence and the boundary light standards showed up in the landing light beam, Captain Moomaw straightened out to hit this obstruction head-on. The plane went through the fence, across the road and about 200 feet into a plowed field, where it came to rest in a normal position.

Subsequent investigation disclosed that Mid-Continent Airlines encouraged its station personnel to make weather observations and relay these observations to crews of approaching flights. In this case, the operator stepped outside and observed the windsock on the hangar about 125 yards away. The windsock was hanging down at the time but apparently this was due to the fact that it was water-soaked and very heavy The operator subsequently stated that he observed the anemometer on top of the Weather Bureau office and that it was turning slowly. However, he did not enter the Weather Bureau office to take a reading from the anemometer indicator. The observation relayed to Flight 8 was apparently a combination of the Weather Bureau report and the observation made by the Company operator, it was inaccurate to the extent that the pilot landed in a heavy rainfall with a tail-wind of approximately 8 m p h. while expecting conditions of light rain and negligible wind. Investigation further disclosed that the boundary lights at Sioux City were known to have defective wiring which caused them to dim intermittently during rain. These lights were dim during the landing of Flight 8, depriving the crew of the principal landmark by which the flight's position on the runway could be judged. Investigation failed to reveal that there had been any malfunctioning of the aircraft or any of its components, including the brakes.

PROBABLE CAUSE: Inaccurate weather observation made by the Company radio operator and reported to the flight crew, resulting in pilot making a downwind landing.

CONTRIBUTING FACTOR: Failure of the airport lighting system.

BY THE BOARD:

/s/ Harold Charles Brown
Secretary