

May 12, 1937.

DEPARTMENT OF COMMERCE
WASHINGTON

Secretary Roper today made public the report of the Accident Board of the Bureau of Air Commerce in connection with the fatal air line accident near Newhall, California, on January 12, 1937. The report is as follows:

REPORT OF THE ACCIDENT BOARD

Statement of probable cause concerning an accident which occurred to an aircraft of Western Air Express Corporation near Newhall, California, on January 12, 1937

To the Secretary of Commerce:

On January 12, 1937, at approximately 11:07 A. M., at a point about four miles southeast of Newhall, California, an airplane of United States registry, while being flown in scheduled interstate operation carrying mail, passengers and express, met with an accident with resultant fatal injuries to five of the thirteen persons on board, severe injuries to the remaining eight persons and the complete destruction of the aircraft.

The pilot, William W. Lewis, held a Federal transport pilot's license and a scheduled air transport rating. His latest Department of Commerce physical examination, taken on September 8, 1936, showed him to be in good physical condition for flying. His license and rating were renewed on September 22, 1936. The co-pilot, Clifford P. Owens, held a Federal transport pilot's license. His latest physical examination, taken on October 22, 1936, showed him to be in good physical condition. The third member of the crew was Miss Esther Jo Conner, stewardess.

Those persons fatally injured were:

James Braden, Cleveland, Ohio
Martin Johnson, New York, New York
A. L. Loomis, Omaha, Nebraska
E. E. Spencer, Chicago, Illinois
Co-Pilot Clifford P. Owens, Burbank, California

Those persons severely injured were:

Arthur S. Robinson, Inglewood, California
R. T. Anderson, Atlantic City, New Jersey
H. H. Hulse, Chicago, Illinois
Lita James, Los Angeles, California
Mrs. Osa Johnson, New York, New York
T. E. Tillinghast, Hartford, Connecticut
Pilot William W. Lewis, Los Angeles, California
Stewardess Esther Jo Conner, Glendale, California

The airplane, a Boeing, model 247-D, was inspected and approved for relicensure by the Department of Commerce on July 14, 1936, and bore Federal license number NC-13315. It was owned by the Western Air Express Corporation of Burbank, California, and at the time of the accident was being operated by that corporation on Trip No. 7, scheduled from Salt Lake City, Utah, to San Diego, California, with intermediate stops at Las Vegas, Nevada,

Los Angeles, California, and Long Beach, California. This operation was conducted under a valid Federal Letter of Authority.

This flight landed at Las Vegas, Nevada, at 8:27 A. M., being scheduled to depart from there ten minutes later. It was held over, however, for an additional twenty-three minutes for the purpose of further weather analysis. The clearance given at 9:00 A. M. was based upon the following weather observations:

Daggett: Ceiling estimated 7,000 feet, broken clouds, visibility 20 miles, temperature 30 degrees.

Palmdale: Ceiling estimated 2,000 feet, overcast, light snow and light fog, visibility 3 miles, temperature 30 degrees.

Saugus: Ceiling estimated 1,000 feet, overcast with light rain and light fog, visibility 2 miles, temperature 35 degrees.

Burbank: Ceiling estimated 3,000 feet, overcast, light rain, visibility 5 miles, temperature 43 degrees.

The clearance was to Daggett, California, subject to further clearance into Burbank if the weather remained favorable.

While enroute and nearing Daggett, the flight was cleared into Burbank, California, with Palmdale and Long Beach as alternates. Instrument flying was authorized as the weather at this time was reported as follows:

Palmdale: Ceiling estimated 2,000 feet, light snow, visibility 7 miles, temperature 32 degrees.

Saugus: Ceiling estimated 800 feet, visibility 2 miles, temperature 37 degrees, drizzling rain.

Burbank: Ceiling estimated 1,500 feet, visibility 6 miles, temperature 43 degrees, ragged ceiling.

At 10:40 A. M. the pilot reported that he was over Palmdale at an altitude of 7,000 feet over lower broken clouds and with high broken clouds above. The flight continued at this altitude until in the vicinity of Saugus. Sight of the ground was lost in the neighborhood of Acton where it became obscured by a solid overcast over which the flight proceeded. The cone of silence at Saugus was reached at 10:50 A. M. Here, in accordance with the prescribed procedure for making an instrument approach, Saugus to Burbank, the pilot made a right turn and followed the northwest leg of the Saugus radio range for three minutes. At the same time he descended from 7,000 feet to approximately 5,500 feet, lowered the landing gear and reduced the speed of the airplane to 120 miles per hour. At the end of the three minutes, a turn of 180° was made which headed the airplane back in the direction of Saugus and Burbank. During this maneuver, he radioed his company ground station at Burbank estimating his arrival time at that point as 11:06 A. M. The gradual descent brought the flight down into the overcast and very turbulent air conditions were encountered which made navigation of the aircraft difficult under instrument flying conditions.

At 10:57 A. M. the pilot informed his company officials at Burbank, via radio, that he was approaching Saugus from the north and that he was taking on "Quite a bit of ice". Immediately after crossing the Saugus cone of silence, this time at an altitude of 5,200 feet and flying in the direction of Burbank, the pilot switched his radio receiver from the Saugus range to the Burbank localizer. This is a privately operated, low powered radio range, located at the Union Air Terminal, Burbank. He expected to immediately pick up directional radio signals from the latter. However, at the moment the Burbank operator was using the localizer frequency for the voice transmission of instructions to other airplanes in the area. This precluded the transmission of the range signals for that period. The pilot, thinking that the voice broadcast would terminate momentarily, remained tuned in on the localizer until 11:01 A. M., at which time he transmitted a request that voice be discontinued. This request was complied with and the range signals turned on. At 11:05 A. M. the pilot radioed that he was flying down the localizer beam on the "N" (eastern) side. The weather at this time was not materially different from that recorded one hour earlier.

The pilot stated that when the range signals came on, he heard three distinct "N's" and realized that he was east of his course and probably over the higher mountains to the southeast of Saugus and east of Newhall pass. According to the testimony of the pilot, he immediately started a turn in order to get over lower terrain and back on course. At almost the same moment, he stated that he sighted two bushes out of the left window which was open and knew that a collision with the ground was imminent.

The airplane first struck the ground with the left wing tip. It then skidded along the side of the mountain in a curved path for approximately 125 feet, finally coming to rest headed in the opposite direction from which it struck. The point of collision was at an elevation of 3550 feet near the summit of Los Pinetos, the highest mountain in the immediate vicinity.

Analysis of this accident reveals that the flight encountered extremely turbulent air conditions when it entered the overcast near Saugus for an instrument approach to Burbank, which made instrument navigation very difficult. Also, ice was encountered and although this was such that it did not materially affect the performance of the airplane, it added to the concern and duties of the pilot and required a close watch and the continued adjustment of the power plant controls. Further, this was the first trip made together by the pilot and co-pilot and it is apparent that this influenced the pilot to undertake practically all of the duties connected with taking the flight from Saugus to Burbank. Ordinarily, this would not have been of great importance but under the circumstances it created a serious condition.

The method of making an instrument approach from Saugus to Burbank, as prescribed by the company, was briefly as follows: Cross the Saugus cone of silence at an altitude of 5,500 feet. Proceed on the south leg of the Saugus range for two minutes, descending at a rate that will place the flight at an elevation of about 4,500 feet. At the end of this two minutes, shift the radio receiver from the Saugus range to the Burbank localizer.

Then, descending at the rate of 525 feet per minute, use the localizer until either the ground is sighted or the cone of silence at Burbank is crossed. It is the responsibility of the pilot to request continuous operation of the localizer in ample time to be assured that it will be in operation when needed.

When the airplane crossed the Saugus cone of silence for an instrument approach to Burbank, its altitude was about 5,200 feet instead of the prescribed 5,500. This, however, is not significant and is understandable in view of the turbulent air conditions which made it difficult to hold a precise altitude. The pilot departed from standard procedure by switching at once to the Burbank localizer frequency instead of first following the south leg of the Saugus range for two minutes. When he found that voice was being broadcast from Burbank, it is apparent that he should have switched back to the Saugus range until the localizer was available rather than attempt to continue without radio range guidance. The control tower at Burbank had no specific request for continuous operation of the localizer range until 11:01 A. M., four minutes after the flight had passed Saugus. While it was the pilot's responsibility to make such specific request, in anticipation of his needs, it was reasonable for him to assume that the company dispatcher at Burbank, who had instructed him to make an instrument approach to that point, would have arranged with the control tower for the localizer service in accordance with his reported estimated time of arrival.

The actual course followed by the flight in the eight to ten minute interval between passing the Saugus range and the time of the accident cannot be accurately determined. The airplane was in the air for a sufficient time to have reached Burbank, approximately 17 1/2 miles from Saugus, while the accident occurred only 5 1/2 miles from Saugus. It is evident that during this interval the flight got considerably off course and made at least one circle over the terrain in the vicinity of the accident. It is probable that the pilot was circling until he could determine his position by the aid of the localizer. However, during this interval, he permitted the airplane to descend from 5,200 feet to a dangerously low altitude.

Summarizing, therefore, it is evident that several factors gave rise to this accident. Advance notification to the control tower at Burbank, either by the pilot or company personnel, would have assured continuous localizer operation, available to the pilot when needed. Continuing down the Saugus range for two minutes before switching to the Burbank localizer, as prescribed by the company, would have kept the pilot on course for at least two minutes longer and the danger of colliding with the mountains would have been reduced by that much. However, the Saugus range was in continuous operation and it is not understood why the pilot did not immediately switch back to this range when he discovered that the Burbank frequency was busy with voice transmission. This would have definitely guided him through the high mountains or until he had requested and received continuous operation of the Burbank range. Likewise, it is not understood why the pilot continued in descending flight without the aid of range guidance.

It is the opinion of the Accident Board that the probable cause of this accident was error on the part of the pilot for descending to a dangerously low altitude without positive knowledge of his position.