Aviation Safety Investigation Report 199800408

Boeing Co
B767

15 January 1998

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Aviation Safety Investigation Report

199800408

Occurrence Number:	199800408	**Occurrence Type:**	Incident
Location:	37km WSW Sydney, Aerodrome		
State:	NSW	**Inv Category:**	4
Date:	Thursday 15 January 1998		
Time:	1824 hours	**Time Zone**	EST
Highest Injury Level:	None		

Aircraft Manufacturer:	Boeing Co		
Aircraft Model:	767-238		
Aircraft Registration:	VH-EAO	**Serial Number:**	23403
Type of Operation:	Air Transport Domestic High Capacity Passenger Scheduled		
Damage to Aircraft:	Nil		
Departure Point:	Melbourne Vic.		
Departure Time:	1740 EST		
Destination:	Sydney NSW		

Approved for Release: Saturday, July 11, 1998

The Boeing 767 departed Melbourne at approximately 0640 UTC for a scheduled flight to Sydney. The aircraft had an estimated arrival time at Sydney of approximately 0725. The crew had been given the Terminal Area Forecast (TAF) issued at 0000 and the Trend Type Forecasts (TTFs) issued at 0100 and 0430 at flight planning and these indicated that the visibility would be in excess of 10 km and the cloud base would be mostly above 2,500 ft.

The routine meteorological report (METAR) which was issued at 0600 indicated that visibility would be reduced to 9,000 m in haze and that the lowest cloud base would be 4 oktas at 1,500 ft. The crew received this forecast by the aircraft communication addressing and reporting system (ACARS) during the pre-flight preparation at Melbourne. A terminal area forecast was issued at 0606 and this indicated that the cloud base would be 3 oktas at 1,000 ft. Another METAR was issued at 0630 and this indicated that the cloud would be 1 okta at 1500 feet with 7 oktas at 1,800 ft. The visibility on this report was indicated to be in excess of 10 km.

A further METAR was issued at 0700 and this indicated that the cloud base would be 3 oktas at 1,400 ft, with further cloud of 7 oktas at 1,800 ft. The visibility, however, had decreased to 8000 m in drizzle. This forecast had the term NOSIG appended to it indicating that there was no significant change expected within the next 3 hours.

A special weather report (SPECI) was issued at 0717, which indicated that the cloud base had lowered to 2 okta at 900 ft and that the visibility had decreased to 6,000 m in drizzle and mist. Coincident with the issuing of this report, a TTF was issued and this forecast was appended with the term INTER which indicated that for periods of up to 30 minutes during the validity period of the forecast the visibility would decrease to 6,000 m and that the cloud base would be 2 oktas at 1,000 ft with further cloud of 7 oktas at 1,500 ft.

On arrival in the Sydney terminal area, the aircraft received the automatic terminal information service (ATIS), which indicated that the visibility had reduced to 4,000 m in rain and that the cloud base had lowered to 800 ft. This weather was worse than that which the crew had expected from the forecasts. The aircraft landed uneventfully at 0724.

A report from the Bureau of Meteorology (BOM) indicated that the weather conditions were consistent with the passage of a southerly change that had passed through Sydney approximately 2 hours prior to the aircraft departing Melbourne. Forecasts issued by BOM over the period from 0600 to 0717 indicated a gradual decrease in the visibility and a lowering of the cloud base. All of these forecasts were available to the crew in flight on a request basis. The ATIS for the period from 0655 to 0713 also indicated that the cloud base was gradually lowering and that the visibility was decreasing. The crew would also have had this information available to them in flight.

Forecasts issued by BOM were based on observations from trained weather observers situated at Sydney airport as well as output from a number of weather stations around the Sydney area and throughout the country. It also took into account predictions from the numerous computer programs available to BOM. Because of the time taken to analyse all the available data, there was a time delay in updating the weather forecasts.

The ATIS provided by personnel in the control tower at Sydney airport is based largely on visual observation of the conditions prevailing at the airport at the time. As control over the issuing of the ATIS rested with the personnel in the control tower, changes to the information could have been made almost instantaneously.

The time delay experienced could be observed with BOM's issue of another SPECI at 0730, indicating that the cloud base had lowered even further. Even though there were only 13 minutes between the two SPECI reports, it was during this time that the incident aircraft, as well as others, landed.