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Australian Transport Safety Bureau

ATSB TRANSPORT SAFETY INVESTIGATION REPORT
Aviation Occurrence Report – 200503921
Final

Crew incapacitation – SASRO (IFR), Tasman Sea
12 August 2005
VH-OGP
Boeing Company 767-338ER

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Crew incapacitation – SASRO (IFR), Tasman Sea – 12 August 2005, VH-OGP, Boeing Company 767-338ER

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Abstract

The Boeing 767 aircraft was conducting an international passenger flight from Auckland to Melbourne. During cruise the pilot in command (PIC) felt increasingly fatigued, and while outside the flight deck his condition deteriorated. He felt shaky and nauseous, and had pain in the back of his head and neck. He was administered oxygen by a member of the cabin crew. The PIC was relieved of duty and the flight continued to the destination with the copilot at the controls. An alert phase was declared. After landing the PIC was taken to hospital for observation. Subsequent tests proved inconclusive, but no evidence was found of a heart-related problem.

The pilot reported a history of stress-related difficulties over several years. He had received treatment for anxiety through a combination of a stress management and medication, in the form of a selective serotonin reuptake inhibitor (SSRI). The pilot was also being treated for hypertension. It is possible that the incapacitation of the PIC was related to an anxiety reaction precipitated by a combination of factors including low blood pressure due to hypertension medication, fatigue and a head cold.

The CASA policy of granting medical certification to some private and commercial pilots and air traffic controllers who are taking medication such as SSRIs differs from that of most other Civil Aviation Authorities. However, the approach taken by CASA is in line with that recommended by the Aerospace Medical Association. In 2005, CASA published a safety evaluation of the policy. The report concluded that the policy was appropriate and that there were no safety concerns relating to the practice.

THE AUSTRALIAN TRANSPORT SAFETY BUREAU

The Australian Transport Safety Bureau (ATSB) is an operationally independent multi-modal Bureau within the Australian Government Department of Transport and Regional Services. ATSB investigations are independent of regulatory, operator or other external bodies.

The ATSB is responsible for investigating accidents and other transport safety matters involving civil aviation, marine and rail operations in Australia that fall within Commonwealth jurisdiction, as well as participating in overseas investigations involving Australian registered aircraft and ships. A primary concern is the safety of commercial transport, with particular regard to fare-paying passenger operations. Accordingly, the ATSB also conducts investigations and studies of the transport system to identify underlying factors and trends that have the potential to adversely affect safety.

The ATSB performs its functions in accordance with the provisions of the *Transport Safety Investigation Act 2003* and, where applicable, relevant international agreements. The object of a safety investigation is to determine the circumstances in order to prevent other similar events. The results of these determinations form the basis for safety action, including recommendations where necessary. As with equivalent overseas organisations, the ATSB has no power to implement its recommendations.

It is not the object of an investigation to determine blame or liability. However, it should be recognised that an investigation report must include factual material of sufficient weight to support the analysis and findings. That material will at times contain information reflecting on the performance of individuals and organisations, and how their actions may have contributed to the outcomes of the matter under investigation. At all times the ATSB endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner.

Central to the ATSB's investigation of transport safety matters is the early identification of safety issues in the transport environment. While the Bureau issues recommendations to regulatory authorities, industry, or other agencies in order to address safety issues, its preference is for organisations to make safety enhancements during the course of an investigation. The Bureau prefers to report positive safety action in its final reports rather than making formal recommendations. Recommendations may be issued in conjunction with ATSB reports or independently. A safety issue may lead to a number of similar recommendations, each issued to a different agency.

The ATSB does not have the resources to carry out a full cost-benefit analysis of each safety recommendation. The cost of a recommendation must be balanced against its benefits to safety, and transport safety involves the whole community. Such analysis is a matter for the body to which the recommendation is addressed (for example, the relevant regulatory authority in aviation, marine or rail in consultation with the industry).

FACTUAL INFORMATION

A Boeing Company 767-338ER aircraft, registered VH-OGP, was being operated on an international passenger flight from Auckland, New Zealand to Melbourne, Vic. On board the aircraft were a pilot in command (PIC), a copilot, seven cabin crew and 177 passengers. At the top of climb after departure from Auckland, the PIC advised the copilot that he intended to cease duty in Melbourne due to his concerns about possible sinus problems and a slight feeling of being unwell. At that time he felt he was able to function normally as a member of the flight crew. Subsequently, the PIC's condition deteriorated and he was relieved of duty.

During cruise, the PIC felt increasingly fatigued. He left the flight deck to use the adjacent toilet, and subsequently sought assistance from cabin crew members who were in the forward galley at the time. He felt shaky and nauseous, and had pain in the back of his head and neck. A member of the cabin crew administered oxygen and the PIC was assessed as unfit for duty[1]. The copilot assumed command of the aircraft, advised air traffic control of the situation, and requested medical assistance on arrival. An alert emergency phase was declared.

From top of descent until landing, a cabin crew member with previous flying experience remained on the flight deck in an observer seat, listening to air traffic control radio transmissions and monitoring the copilot for any signs of incapacitation. During the approach and landing, the PIC returned to the flight deck and his seat, seatbelt, and harness were adjusted so that he could not inadvertently interfere with the operation of the aircraft.

An ambulance met the aircraft after landing and the PIC was taken to hospital for observation, where his condition improved. Subsequent tests proved inconclusive and no evidence was found of a heart-related problem.

The PIC later reported a history of stress-related difficulties over several years, mostly related to unstructured situations such as the home environment, rather than the more structured work environment. He had received treatment for anxiety through a combination of a stress management and medication, in the form of a selective serotonin reuptake inhibitor (SSRI). The PIC was also being treated for hypertension. The PIC reported that on the day of the incident he woke at 0340 for a 0615 departure, and that his sleep that night had been disrupted.

Civil Aviation Safety Authority (CASA) medical staff were aware of, and were monitoring, the treatment of the PIC's medical condition. Part of that monitoring required the PIC's aircrew medical certificate to be reviewed and approved by CASA annually before renewal. Normally a pilot's medical renewal is assessed and approved by a designated aviation medical examiner on behalf of CASA.

The Civil Aviation Safety Authority (CASA) policy is to manage the medical certification of some private and commercial pilots and air traffic controllers who are taking medication such as SSRIs. That approach differs from that of most other civil aviation regulatory authorities. The CASA approach is in line with that recommended by the Aerospace Medical Association (AsMA). For example, a 2004 AsMA position paper on *Aeromedical Regulation of Aviators Using Selective*

1 The aircraft was approximately midway through the flight near SASRO reporting point, located on the boundary between the Brisbane and Auckland Flight Information Regions

Serotonin Reuptake Inhibitors for Depressive Disorders proposes that an aeromedical protocol be adopted by aviation certificatory and regulatory authorities to remove absolute prohibitions against pilots flying while taking SSRIs. The reasons that AsMA gave for this proposal included evidence that:

- professional pilots may refuse SSRI medication and continue to fly without undergoing treatment appropriate for their medical condition in order to avoid being grounded
- a significant number of US professional pilots take SSRI medication while continuing to fly without informing the US Federal Aviation Administration
- the use of SSRIs has little or no detrimental effect in automobile, bus, and truck drivers.

In 2005, CASA undertook a retrospective case-control study in order to evaluate the safety of the policy of certifying aircrew and air traffic controllers based on meeting set criteria while using antidepressants. The study matched data collected by CASA medical staff from 1993 to 2004 with de-identified data for aviation accidents and incidents collected by the Australian Transport Safety Bureau for the same period.

The report of the validation study, *Antidepressant usage and civilian aviation activity in Australia 1993-2004: An assessment of policy for the management of aircrew and air traffic controllers taking antidepressant medication*, was released by CASA in September 2005. The report concluded that current CASA policy was appropriate and that there were no safety concerns relating to the practice.

ATSB Comment

It is possible that the PIC's incapacitation was related to an anxiety reaction precipitated by a combination of factors including low blood pressure due to hypertension medication, fatigue and a head cold.