

**Aviation Safety Investigation Report
199400478**

**Cessna Aircraft Company
Skylane**

22 February 1994

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NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at www.atsb.gov.au.

The Bureau did not conduct an on scene investigation of this occurrence. The information presented below was obtained from information supplied to the Bureau.

Occurrence Number: 199400478 **Occurrence Type:** Accident
Location: 28km NW Cowarie Station
State: SA **Inv Category:** 4
Date: Tuesday 22 February 1994
Time: **Time Zone** CSuT
Highest Injury Level: Fatal
Injuries:

	Fatal	Serious	Minor	None	Total
Crew	1	0	0	0	1
Ground	0	0	0	0	0
Passenger	0	1	0	0	1
Total	1	1	0	0	2

Aircraft Manufacturer: Cessna Aircraft Company
Aircraft Model: 182Q
Aircraft Registration: VH-WIS **Serial Number:** 18267124
Type of Operation: Non-commercial Aerial Application/Survey etc
Damage to Aircraft: Destroyed
Departure Point: Cowarie Station SA
Departure Time: 0730 CSuT
Destination: Cowarie Station SA

Crew Details:

Role	Class of Licence	Hours on Type	Hours Total
Pilot-In-Command	Private	1150.0	1150

Approved for Release: Friday, April 21, 1995

The pilot, accompanied by a young employee, departed Cowarie Station airstrip at about 0730 CSuT to carry out an aerial inspection of the property.

The pilot's wife was in the habit of maintaining contact with the aircraft at regular intervals using a CB radio. When the pilot failed to respond to a scheduled call at 1000 CSuT she became worried and contacted relatives and friends for advice. She continued making calls at 15 minute intervals, but without response. The police were notified and an aerial search initiated. The aircraft wreckage was found at 1820. The pilot had received fatal injuries, and the employee seriously injured. The time of the accident cannot be determined, but probably prior to 1000 CSuT.

The aircraft, while flying on a heading of about 100 degrees, had struck a tree approximately 30 feet above ground level with the right wing, which separated causing the aircraft to roll inverted and impacted the ground in a nose low attitude about 100 metres from the tree.

An inspection of the aircraft by the police officer at the accident site revealed that all seats except that of the pilot were missing. They were later found in the property hangar. He also found a green garbage bag in the aircraft containing numerous small pieces of meat resembling dog baits, with other similar size pieces of meat lying nearby.

A certain amount of confusion existed as to whether the aircraft had been involved in a dog baiting operation. When interviewed the employee was extremely vague, and stated that he was unable to remember anything from breakfast time that morning until after the accident. He could not remember the reason for the flight, at what height the aircraft had been flying prior to the accident, or if he had been correctly seated. Later when interviewed by the police he stated that there had been no dog baiting gear in the aircraft, and that in the 11 months working at the property he had never seen dog baiting carried out.

When the pilot's wife advised the police of her concern at not being able to contact the aircraft, she told the constable that her husband and the employee had gone flying to check water conditions, and conduct some dog baiting. Later in a statement given to the police she said that the dog baits were kept in the hangar.

The aircraft wreckage was retrieved for further inspection. Indications were that the aircraft had impacted the tree, then the ground at a relatively fast forward speed. The cabin roof was crushed and the tail unit to cabin area failed between the luggage door opening and the right (passenger) door. The luggage door, still attached to the cabin area, was undamaged indicating that it was probably open at the time of impact. If closed it would have offered a certain amount of structural integrity to that area of the fuselage, and also sustain some degree of damage.

The aircraft appeared to be in good condition and regularly maintained. A bulk strip and inspection of the engine showed that it was capable of normal operations, and the propeller damage indicated that the engine was under power at the time of impact.

The amount of fuel on board is unknown, but if the aircraft had suffered fuel exhaustion, or any other similar problem, the terrain was such that a survivable forced landing could have been made.

The Bureau of Meteorology advised that the general weather in the Maree to Birdsville area early that morning was fine with one octa of cloud at 5000 feet and light winds, but storms and heavy rain became evident during the day.

The emergency locator beacon (ELB) installed in the aircraft failed to activate at impact. A new battery had been fitted recently, and the unit tested in the normal manner by turning on and listening for a signal. Dismantling of the ELB revealed the impact switch to be faulty, and was probably in this condition prior to the accident.

A post mortem carried out on the pilot revealed a 9% carbon monoxide level. The pathologist believed this to be significant, and although not enough to cause the pilot to pass out, would have caused him some confusion.

Removal of the co-pilot and rear bench seat from the aircraft would have allowed the necessary space to carry a bag of dog baits, and given the employee easy access to the luggage compartment door while seated on the floor. It is therefore feasible that the luggage door was open as the means for the employee to drop these baits. The location of the open door would have allowed exhaust gases to swirl back into the cabin, with the associated carbon monoxide effecting both pilot and passenger.

Inspection of the cabin heat and exhaust systems indicated that they had been serviceable prior to the accident, and would not have contributed to carbon monoxide ingress to the cabin. All door and window seals were intact and there was no evidence of any exhaust gas leakage past them.

Although it cannot be shown that the pilot was actually low flying and dog baiting, the evidence suggests that this type of operation had been carried out. The pilot did not have any formal low flying training, qualifications or approvals. There were no approved Flight Manual supplements, or other instructions issued allowing this aircraft to operate with doors opened or removed.

Safety Action

As a result of this occurrence, the following Safety Advisory Notice has been issued.

Safety Advisory Notice

The Bureau of Air Safety Investigation suggests that the Civil Aviation Authority:

- i) Publish an article on the dangers of carbon monoxide ingestion from medical and operational perspectives, highlighting the dangers of flying with doors removed or open, particularly if such an operation is not approved in the aircraft flight manual; and
- ii) publish an article stressing the need for appropriate training and approvals to be obtained before undertaking low flying operations.

In light of this occurrence, it is suggested that the article could incorporate both topics.
