

**Aviation Safety Investigation Report
199801079**

**Boeing Co
B737**

06 April 1998

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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.

FACTUAL INFORMATION

Following a request from an Australian Army (Army) unit for the use of the Port Wakefield proof firing range (designated as restricted area R295 A to F), the Defence Corporate Support Centre (Support Centre) in Adelaide mailed notices to a number of organisations on 3 April 1998. These local procedures included notification to the Royal Australian Air Force (RAAF) at Edinburgh for the issue of a notice to airmen (NOTAM). R295 A, B and E were required for missile firings on 6 and 7 April 1998 and would be active from the surface to 33,000 ft. The lowest useable level by overflying aircraft was 34,000 ft. The letter to RAAF Base Edinburgh was not received prior to the period nominated for the activity and a NOTAM was not issued.

On Monday 6 April 1998 the Army unit arrived at the proof firing range and was cleared by the range control officer (RCO) to conduct their exercise from 1200 Central Standard Time. When the requesting unit arrived at the range, the RCO assumed that a NOTAM had been issued and that the other agencies had been notified.

At approximately 1230 and 1445, Boeing 737 aircraft operating scheduled passenger flights from Sydney to Perth on air route Q32 passed through the northern portion of R295E at flight level (FL) 280 and FL310 respectively. During the period between the range opening and detection of the second B737 overflying the range, the unit had fired two target missiles. The B737s had flown through an active firing range.

Detection of the B737

The RCO heard the second B737 as it flew through the area and cancelled the exercise for the Army unit. At 1455, he rang Adelaide Air Traffic Control (ATC) to confirm that the range was active to 33,000 ft. Subsequently, ATC ascertained, and advised the RCO, that a NOTAM had not been issued for the activity.

Notification procedures

Army procedures required the unit intending to operate on the range to notify the Support Centre. The Support Centre was to advise the appropriate airspace authority prior to the activity for the issue of a NOTAM. The Support Centre used RAAF Edinburgh as the appropriate authority for the issue of a NOTAM for a range activity. The orders did not specify a minimum period of notice to the Support Centre. The Manual of Air Traffic Services (MATS) required a restricted area NOTAM to be issued a minimum of 8 hours prior to the commencement of operations.

There were no procedures requiring the unit intending to use the range to confirm that the activity had been notified in accordance with Army procedures. The RCO was not required to check that a NOTAM and notices to other authorities had actually been issued prior to approving operations on the range.

The procedures did not require the RCO or the unit to confirm the commencement or completion of operations with any air traffic service (ATS) agency.

Range surveillance

The RCO had radar to assist in the surveillance of that portion of the range over the Spencer Gulf. The radar was capable of detecting vessels on the water and persons on the tidal flats but was not designed to detect aircraft at high altitude. Because of these design and operating mode limitations, the radar did not detect the B737s. The range staff did not maintain a record of unauthorised entries to the range.

ANALYSIS

The process for requesting activation of the range was reliant upon staff members completing actions, which subsequently transferred the responsibility for completion to another person. Failure to complete an action by any one position in the required sequence of events would result in the notification process, for range activation, to stop. This process had no checks to ensure that subsequent actions had been completed or for feedback to occur if any action did not happen. Overall, the procedure was a fail-unsafe process. A final check with the relevant ATS agency prior to clearing the unit to operate on the range would have alerted the RCO to the fact that a NOTAM had not been issued.

The RCO was reliant on visual and limited electronic surveillance of the range area which was not conducive to the detection of high flying aircraft. A check with the ATS agency would have established if any aircraft were operating within the range at high altitude.

SIGNIFICANT FACTORS

1. Range procedures did not require the Support Centre or the unit requesting the use of the range to confirm that a NOTAM had been issued.
2. The Support Centre did not allow sufficient time for the notice to be received and for a NOTAM to be issued.
3. Range procedures did not require the RCO to confirm, with the relevant ATS agency, that a NOTAM had been issued or whether there were any aircraft in the area prior to approving operations on the range.
4. Range surveillance facilities were unlikely to detect aircraft operating at high altitude within the range.

SAFETY ACTION

Local safety action

The Support Centre has amended procedures to require 21 days notice of range activities and will notify the appropriate authority 14 days prior to the activity for submission of a NOTAM. Additionally, the appropriate authority will fax a copy of the request for a NOTAM to the Support Centre as confirmation. Furthermore, the unit intending to operate on a range must access the aeronautical information service and obtain a copy of the current NOTAM for the activity prior to commencing operations. RCO clearance for operations on a range is subject to the unit providing a copy of the current NOTAM.

Bureau of Air Safety Investigation safety action

As a result of the investigation of this and another similar occurrence, the Bureau of Air Safety Investigation issued the following interim recommendations to the Australian Defence Force and to Airservices Australia on 30 June 1998:

"IR980086

The Bureau of Air Safety Investigation recommends that the Australian Defence Force, with the assistance of Airservices Australia, review airspace activation procedures to ensure that appropriate and fail-safe notification actions have been completed prior to the commencement of military activities.

IR980087

The Bureau of Air Safety Investigation recommends that Airservices Australia assist the Australian Defence Force to review airspace activation procedures to ensure that appropriate and fail-safe notification actions have been completed prior to the commencement of military activities".

The following response to the interim recommendation was received from Airservices Australia on 27 July 1998:

"I refer to your letter of 29 June enclosing Interim Recommendation IR980087. The subject of notification and activation of areas for Military activity will be referred to the National Airspace Management and Air Traffic Services Sub Committee (NAMPS) of the Air Coordinating Committee (ACC) for resolution. As a joint Australian Defence Force/Airservices Australia forum, NAMPS is the appropriate body to review airspace activation procedures relating to military activity".

Response classification: CLOSED - ACCEPTED

