



Australian Government
Australian Transport Safety Bureau

1 June 2015

Senator Bill Heffernan
Chair
Senate Standing Committee on Rural and Regional Affairs and Transport
Parliament House
Canberra ACT 2600

Dear Senator Heffernan,

Subject: Budget Estimates May 2015

I write regarding some information given at Senate Estimates on May 28, some details of which were unintentionally inaccurate and could be misinterpreted.

In response to a question from Senator Rice in relation to the Integrated Marine Observing System acoustic detections around the time of the loss of MH370, I stated that there was a detection approximately an hour after the aircraft exhausted its fuel in a north-westerly direction - towards Diego Garcia and the Maldives.

This evidence may have been misleading and I wish to tender further information in relation to the analysis of acoustic detections in the search for MH370.

Low frequency hydro-acoustic signals present in the Indian Ocean were examined between March and June 2014 to determine whether they could provide any information to help define the search area. These signals were recorded by hydrophones as part of the United Nations Comprehensive Nuclear-Test-Ban-Treaty Organisation (CTBTO) or the Integrated Marine Observing System (IMOS).

Recordings of low-frequency underwater acoustic signals from data loggers and hydrophones off the WA coast (these hydrophones are located in the Perth Canyon to the west of Rottnest Island not Carnarvon as I stated) were retrieved and analysed by Curtin University's Centre for Marine Science and Technology during the search for MH370.

The ATSB requested the Curtin University Centre for Marine Science and Technology (CMST) and the Defence Science and Technology Organisation to analyse these signals in an attempt to detect and localise underwater sounds that could be associated with the impact of the aircraft on the water or with the implosion of wreckage as the aircraft sank.

One acoustic event of interest was identified that occurred at a time that could have potentially linked it to MH370. This event appeared to have been received just after 0130 UTC on 8 March 2014 on one of the IMOS recorders near the Perth Canyon (RCS) and at the CTBTO hydro-acoustic station at Cape Leeuwin (HA01). A detailed analysis of these signals resulted in an approximate localisation for the source of the event. Based on the propagation speed of acoustic signals, the timing of the event was compatible with the time of the last satellite handshake with the aircraft, which occurred at approximately 0019 UTC, shortly before the aircraft is calculated to have entered the ocean. The location of this acoustic event was, however, incompatible with the satellite to aircraft range derived from the handshake.

Using the three hydrophones from the Cape Leeuwin station, Curtin University subsequently calculated a precise bearing that showed the signal came from the northwest, in the central Indian Ocean, with the most likely location calculated to be 5.93°S, 77.22°E with a corresponding time of the event approximately of 0039 UTC. There is however uncertainty about where the event occurred and therefore about the time taken for the signal to arrive at the hydrophone array.

In summary, all the acoustic events recorded around the time of the likely splashdown of MH370 were carefully analysed. The one event which may have occurred close to the right time came from a direction in the Indian Ocean which was not compatible with the data derived about the aircraft's position from the satellite handshakes.

I apologise for the inaccuracy and trust that this clarifies the matter.

Yours sincerely

Peter Foley
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Australian Transport Safety Bureau