



# DEBRIEFING

**Flight Safety is Everybody's Business**

## Landing in 2 minutes

Periodically, a flight safety occurrence catches the eye of those in the flight safety business. It contains information, observations, lessons and hopefully solutions. These occurrences are investigated and well documented within the Flight Safety Information System (FSIS); but not everyone has access to FSIS, so the word is not necessarily spread to the breadth of those who could use the information. That's where this publication, *Debriefing*, comes in. A good example is FSIS air incident number 115071 from December 2003. By way of introduction, the incident involved a CC-130 Hercules (Herc) aircraft landing at night in Alert.

First, let's begin with the disclaimer that goes with all flight safety investigations and flight safety reporting - *Flight Safety incident reports are produced under the authority of the Minister of National Defence (MND) pursuant to Section 4.2 of the Aeronautics Act (AA), and in accordance with A-GA-135-001/AA-001, Flight Safety for the Canadian Forces. They are prepared solely for the purpose of accident prevention and shall not be used for legal, administrative or disciplinary action.* Please keep that in mind as you read paragraph 8 (Report Description), paragraph 22 (Investigation Narrative), paragraph 23 (Cause Factors) and paragraph 24 (Preventative Measures).

One final caution: as these incidents are meant to inform and to generate discussion, not gossip, a few deidentification measures have been taken such as the removal of the call sign.

"Para 8. AIRCRAFT LANDED PRIOR TO CONFIRMING RUNWAY CLEAR. When the aircraft on final called "landing in two minutes," they were advised by Alert Radio to "standby, do not

land yet, the runway is not ready." The aircraft continued its final approach and requested Alert to expedite. Alert Radio then provided the runway condition and weather report to the crew. The aircraft landed without receiving confirmation that the runway was clear.



**CC-130 Hercules on final approach in Alert**

Para 22. The Herc departed Iqaluit to deliver four pallets weighing 15,000 lbs into Alert. Their intention was to drop off the load, take on 10,000 lbs of cargo in Alert and return to Iqaluit later that day.

Twenty minutes prior to landing, the Herc contacted Alert Radio, advised them of the cargo to be offloaded, obtained the cargo onload data and latest weather conditions, and broadcasted its intention to carry out the full procedure Non Directional Beacon (NDB) approach for runway 23 in Alert. Arriving 45 minutes earlier than itinerary and realizing that this might not provide sufficient time for the ground personnel to get ready, the Herc stated: "Alert Radio, it's the Herc, just advise us if Firefox (fire response personnel) and everybody else is ready for us -- if not, we'll wait a little bit." The Met Tech interpreted this statement as the Herc would be entering a hold until Alert was ready for their arrival. This misunderstanding was demonstrated in the Met Tech's following broadcast

on 126.7 MHz for both Firefox and arriving aircraft to hear: "All stations, this is Met, be advised the aircraft is going to go into a holding pattern until everyone is in position. Met out." The Herc crew did not react to this broadcast and proceeded to carry out the full procedure NDB 23. No mandatory procedural calls were made by the Herc in accordance with the GPH 204, section 716 until on final approach. These mandatory calls are to ensure deconfliction with both air and ground traffic and may have alerted the Met Tech to the Herc's actual intentions.

After turning inbound, the Herc broadcasted its position and that it was landing in two minutes. This was the first indication to the Met Tech that the Herc was not in a hold and was about to land. Since Firefox was not yet in position for the landing, the Met Tech advised the Herc that the runway was not ready yet, therefore, do not land. The Herc responded that they were landing in two minutes and requested that Alert expedite. Alert Radio replied with the wind, runway condition, navaid status and airfield status. When interviewed, the Aircraft Commander stated he could not see any traffic on the runway and therefore disregarded the Met Tech's advisory not to land.

At uncontrolled aerodromes, verification that a runway is unobstructed rests with the Aircraft Commander. At CFS Alert, pilots rely on Alert Radio to provide this information, especially during winter months when it is in darkness for 24/7.

Para 23. PERSONNEL MANAGEMENT/ GROUP HEADQUARTERS (GHQ) TRAINING. Met Techs manning Alert Radio were not provided adequate training regarding air radio terminology in order to obtain situational awareness on airborne traffic.

PERSONNEL PILOT (32A) INFORMATION/ COMMUNICATION. The pilot did not respond to the Met Tech's broadcast that the aircraft was entering a hold. As a result, an ambiguity existed - the aircraft continued on its approach while the Met Tech believed it was entering a holding pattern - and it was not identified until the aircraft was on final approach.

PERSONNEL PILOT (32A) RESOURCES. The pilot chose to discount the Met Tech's advisory to not land as Alert Radio does not have controlling authority.

PERSONNEL PILOT (32A) COMPLACENCY. The

pilot did not broadcast the mandatory radio calls (GPH 204, section 716, which directs mandatory calls at uncontrolled procedural airports) due to isolated location of Alert and general lack of traffic.

PERSONNEL PILOT (32A) JUDGEMENT. Although advised not to land by the Met Tech, the pilot continued the approach to landing in the absence of an immediate need to land.

Para 24. BRIEF ALL AIRCREW. This incident will be briefed at the next unit quarterly Flight Safety meeting with emphasis on the requirement for clear communication at all times (including mandatory calls) and the importance of using all available resources, especially when operating in isolated locations.

ADDITIONAL/ENHANCED TRAINING. A revised training package for Met Techs posted to CFS Alert containing training on pilot terminology at uncontrolled aerodromes is in the implementation process by 1 CAD A3 Aerospace Standards."

#### **Epilogue:**

The Firefox vehicles that were on the runway were monitoring the radios and also saw the Hercules' lights on approach so they vacated the runway in plenty of time. The Hercules landed without any further incident. The revised training package for Met Techs (it is designed to broaden an individuals familiarity with air operations but clearly defines the scope of his duties and air traffic controller is not one of them) mentioned in paragraph 24 was recently published and can be accessed at the following web address under "What's New": [http://winnipeg.mil.ca/a3ar/index\\_e.htm](http://winnipeg.mil.ca/a3ar/index_e.htm) For anyone familiar with FSIS, you will note that this investigation was done under the previously (pre-January 1 2004) used "Cause Factors" system. The new system for investigations is called HFACS, which stands for Human Factors Analysis and Classification System.

The assignment of Cause Factors is done by the investigator, normally the Unit Flight Safety Officer (UFSO) or Unit Flight Safety NCM (UFSNCM), and then verified at the Wing level by the Wing Flight Safety Officer (WFSO) before being sent nationally on FSIS. This incident highlights the importance of communications and communications procedures for the safety of air operations. Concise but complete communications are required for clarity of the messages being passed.