

Global Reporting Format: Guidance to Aerodrome Operators on how to respond to changing conditions

Introduction

The Runway Condition Assessment Matrix (RCAM) enables aerodrome personnel to make an assessment based on visual observation of contaminants on the runway surface, specifically the contaminant type, depth and coverage, as well as the Outside Air Temperature (OAT). The assessment information is used to develop the Runway Condition Report (RCR). Once promulgated, there is an operational need for the information in the RCR to be kept up to date and accurate. Consequently, for the aerodrome personnel monitoring and reporting the runway surface conditions, it is important to focus on identifying and reporting any significant changes whenever they occur. A significant change is a change that requires new information in any item of the RCR.

As described in ICAO PANS Aerodrome (Doc 9981), a change in the runway surface condition used in the runway condition report is considered significant whenever there is:

- any change in the RWYCC;
- any change in contaminant type;
- any change in reportable contaminant coverage according to Table II-2-1;
- any change in contaminant depth according to Table II-2-2; and
- any other information, for example a pilot report of runway braking action, which according to assessment techniques used, are known to be significant.

The maintenance of an accurate RCR falls into two processes, Reassessment and Downgrading/Upgrading. In considering the second process, when all other observations, experience and local knowledge indicate to trained aerodrome personnel that the primary assignment of the RWYCC does not accurately reflect the prevailing conditions, a downgrade or upgrade can be made. However, the process was designed for States that experience severe winter such as the Great Lakes, USA, Canada, and Alaska, not the UK.

In temperate climate States such as the UK, there is the potential for confusing 'Downgrading' and 'Upgrading' with change as the weather deteriorates or improves. As mentioned above, this is not what the procedure was designed for. The key to applying upgrade or downgrade procedures is based on the original assessment of the RWYCC being incorrect but all other conditions remain as reported. Further information is included in the detailed sections below.

Reporting of the runway surface condition should continue to reflect significant changes until the runway is no longer contaminated. When this situation occurs, the aerodrome will issue a runway condition report that states the runway is wet or dry as appropriate.

Reassessment

To allow aircraft movements to take place, snow, slush and ice should be removed from as much of the movement area as is required for safe operations. Whenever possible, the full length and width of runways should be cleared completely. Mechanical snow clearing equipment, such as blowers, sweepers, ploughs and rotary brushes, should form the main part of the snow clearance equipment used at most large aerodromes. Slush and associated standing water should be cleared whilst it is forming. Clearance may have to be repeated at intervals and some interruption of operations may be inevitable.

The objective of clearing is to remove contaminants that have a negative effect on aircraft performance. Aerodrome should make every attempt to report each runway third with a similar RWYCC for simplicity.

Slippery Wet

Consideration should be given to ensuring the removal of contaminants (Rubber, etc) that would lead to the promulgation of 'Slippery wet' runway which would automatically result in a RWYCC 3 when the other thirds are possibly RWYCC 5 due to wet runway or slush less than 3 mm depth. Ideally this should be achieved before the onset of winter as part of the ongoing runway maintenance programme.

An example of this in the UK could relate to the RCR reporting...

5/5/3 100/100/100 02/02/02 WET/WET/WET

...however, following the removal of the 'rubber' the subsequent report could be issued.....

5/5/5 100/100/100 02/02/02 WET/WET/WET

This second example avoids the 'human factors' issue with ATC potentially having to reverse the string for ATIS.

Upgrading

Upgrading is only possible from very low RWYCC's. These are conditions not expected to be experienced in the UK. Therefore, it is not expected that aerodrome operators will be in a position where they will need to implement the process.

PANS Aerodromes includes the statement that if sand or other runway treatments are used to support upgrading, the runway surface is assessed frequently to ensure the continued effectiveness of the treatment. This gives a clue to the conditions and how the upgrade process is used.

ICAO Circular 355 states that when a friction measuring device is used for upgrading purposes, a preponderance of evidence needs to exist. To upgrade an RWYCC 0 or 1 to RWYCC 3 or less, the friction measuring device must demonstrate an equivalent friction to that of a wet runway (RWYCC 5) or higher. The friction measuring device can only be used, with State approval, on ice (RWYCC 1) or compacted snow, but as that is RWYCC 3 anyway, it does not qualify for upgrade.

Therefore, the use of the upgrade process in the UK is discouraged.

Downgrading

As mentioned above, aerodrome operators are falling into the trap of thinking "downgrade" when conditions deteriorate. This is incorrect and their thoughts should be to issue a new Runway Condition Report (RCR), not implement the downgrading process.

However, as described above, there may be a situation where, following receipt of an AIREPs, the RWYCC will need to be assessed again. It is worth remembering that the aerodrome operator will initially be promulgating low RWYCC numbers, again, not conditions that would be expected in the UK, remembering that two consecutive pilot reports of runway braking action of **POOR** shall trigger a reassessment if a RWYCC of 2 or better has been reported and when one pilot has reported a runway braking action of **LESS THAN POOR**, the suspension of operations on that runway shall be considered.

Summary

Throughout the weather event, it is expected the aerodrome operator will maintain the accuracy of the RCR through reassessment as the conditions change and issue a new RCR should any of the reported items change.

The use of Downgrading and Upgrading is discouraged as they relate to a specific process not designed or expected to be used in the UK and replaced by the term Reassessment.

The guidance above is to give aerodrome operators the information regarding downgrading and upgrading, however, as described above, we would not expect aerodrome operators to be in a position where they would have to implement this process.