Advisory Circular

NIGERIAN CIVIL AVIATION AUTHORITY (NCAA) **NCAA-AC-ARD0032**

ISSUE NO 1 **17th AUGUST, 2021**

ASSESSMENT AND REPORTING OF RUNWAY SURFACE CONDITION USING GLOBAL REPORTING FORMAT

1.0 GENERAL

Nigerian Civil Aviation Authority Advisory Circulars from Aerodrome Standards Department contain information about standards, practices and procedures that the Authority has found to be an Acceptable Means of Compliance (AMC) with the associated Regulations.

An AMC is not intended to be the only means of compliance with a regulation, and consideration will be given to other methods of compliance that may be presented to the Authority.

2.0 PURPOSE

This Advisory Circular provides methods, acceptable to the Authority, for showing compliance with the implementation of the Global Reporting Format for Runway Surface Condition assessment of Nig. CARs Part 12 and 14 as well as explanatory and interpretative material to assist in showing compliance.

It is expected that Aerodrome Operators and other stakeholders should take this guidance material as a reference/guide to comply with required standards for the GRF implementation.

3.0 APPLICATION

The material contained in this Advisory Circular mainly applies to:

(i) Aerodrome Operators holding an Aerodrome Certificate issued pursuant to Part (12) of the Nigeria Civil Aviation Regulations (CARs) including Aerodrome Operators of public use aerodromes;
(ii) Air Navigation Service providers as well as aircraft operators (Airlines);
(iii) Nigerian Civil Aviation Authority Inspectors with certification and safety oversight responsibilities

This document is also available to the aviation industry at large for information purposes.

4.0 REFERENCE

The Advisory Circular relates specifically to Part 12.6 and Part 14.4 of Nig. CARs.

5.0. STATUS OF THIS AC

This is the first AC to be issued on this subject

APPROVAL PAGE

ASSESSMENT AND REPORTING OF RUNWAY SURFACE CONDITION USING GLOBAL REPORTING FORMAT

ADVISORY-CIRCULAR-NCAA-AC-ARD0032

This document is approved by:

Captain Musa S. Nuhu
Director General

AMENDMENT PROCEDURES

The Director, Aerodrome and Airspace Standards is responsible for the development, issuance and control of amendments to this document. The Document Controller is responsible for distribution of amended copies of the AC to Departmental staff and technical library and in making it available on NCAA website: ncaa.gov.ng for public use.

Each page will show the document number, issue/amendment number, issue date and page number at the base of the page.

All amendments must be recorded in the Record of Amendments.

Any observation made or contribution to the content of this document by the user should be directed to the following address for consideration and adoption:

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RECORD OF AMENDMENTS

Issue No/ Amendment No	Page(s) Affected	Date Entered	Entered By	Signature

NIGERIAN CIVIL AVIATION AUTHORITY
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Record of amendment	5	17th August, 2021
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ABBREVIATIONS

AC	Advisory Circular
AIS	Aeronautical Information Service
AMSCR	Aircraft Movement and Surface Condition Report
ATS	Air Traffic Service
AIREP	Air Report
CL	Centreline
GRF	Global Reporting Format
ICAO	International Civil Aviation Organization
NCAA	Nigerian Civil Aviation Authority
Nigeria CAA	The Authority
Nig. CARs	Nigeria Civil Aviation Regulations
NOTAM	Notice To Airmen
RWY	Runway
RCAM	Runway Condition Assessment Matrix
RWYCC	Runway Condition Code
RCR	Runway Condition Report
RSC	Runway Surface Condition
SARPs	Standards and Recommended Practices

1.0 DEFINITIONS

When the following terms are used in this AC, they have the following meanings:

(i) **Runway:** a defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

(ii) **Runway Condition Report:** means a report that details the surface conditions of all movement areas at an aerodrome, including runways and taxiways.

(iii) **Contaminant:** means material that collects on a surface, including standing water (*Note: snow, slush compacted snow, ice, frost, ice control chemicals have not been included since they will not apply in tropical climate)*

(iv) **Contaminated runway:** A runway is contaminated when a significant portion of the runway surface area (whether in isolated areas or not) within the length and width being used is covered by standing water (*Note: snow slush compacted snow, ice, frost, ice control chemicals have not been included since they will not apply in tropical climate)*

Note: mud, dust, sand, volcanic ash, oil and rubber and sand are also contaminants but are not included in the definition of contaminated runway because their effect on runway surface friction characteristics and the runway condition code cannot be evaluated in a standardized manner.

(v) **Dry:** means a surface condition that is free of visible moisture and has no observed contaminants.

(vi) **Paved surface:** means a surface of asphaltic concrete (flexible) or Portland cement concrete (rigid).

(vii) **Percent coverage of contaminant:** means the estimated amount of contaminant present on the surface of the runway and reported as percentage of the assessed surface.

(viii) **Runway Condition Assessment Matrix:** means a matrix allowing for the assessment of runway condition code, using associated procedures, from a set of observed runway surface condition(s).

(ix) **Runway Condition Code:** means a number describing the runway surface condition.

(x) **Runway Surface Condition:** means the portion of the RCR which reports the surface condition of the runway.

(xi) **Significant change:** means, with respect to runway surface condition includes, but is not limited to: changes in type of contaminant, measurable changes in depth of contaminant, following the application or removal of sand or chemicals following rubber deposit removal or sweeping; changes in conditions caused by rapid increases or decreases in temperature.

(xii) **Slippery (when) wet runway:** means a wet runway where the surface friction characteristics of the runway have been determined to be degraded.

Note: A runway or its portion is deemed as having degraded friction characteristics when friction measurements, as conducted in accordance with NCAA-AC- ARD014, on Runway Friction are below the minimum friction levels specified in Nig.CARs Part 12.

(xiii) **Snowtam:** A special series NOTAM given in a standard format providing a surface condition report notifying the presence or cessation of hazardous conditions due to snow, ice, slush, frost, standing water or associated with snow, slush, ice or frost on the movement area.

Note: Snowtam is issued when the depth of water on the movement area is greater than 3mm and declared as standing water.

(xiv) **Standing water:** means water of depth greater than (3 mm).

(xv) **Wet:** means a surface condition where there is any visible dampness or water up to and including (3 mm) deep.

2.0 INTRODUCTION

ICAO had released Amendment 13B to annex 14 Vol. I which incorporates the newly globally harmonized methodology for reporting runway surface condition in July 2016 (Effective date). This amendment is expected to become applicable from 04 November 2021. Nigeria CAA has already established national plan of action which provides a road map for the implementation of the ICAO Global Reporting Format for movement area condition. The Authority will amend its regulations to incorporate ICAO annex amendments as they relate to Global Reporting Format before the applicability date.

As part of the plan, a national focal point has been designated while national and local teams have been established to facilitate implementation of the plan of action. Ultimately, it is intended that, through discharge of assigned task and provision of adequate training, all relevant personnel in the aerodrome condition reporting process chain would have acquired necessary competences to enable them to perform assigned duties related to assessment and reporting of movement area conditions

Implementation by Nigeria is intended to be in line with the methodologies described in this AC and is consistent with those specified by ICAO.

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3.0 OPERATIONAL NEED FOR REPORTING

The flight crew needs information relevant for the safe operation of the aircraft, as far as it is relevant to the conditions of the runway surface, obtained through the use of NOTAMs (slippery wet runway) and the Runway Condition Report (RCR).

In order to produce a RCR, necessary assessment needs to be carried out by the aerodrome operators' personnel to determine the runway condition code, RWYCC using the runway condition assessment matrix RCAM.

It is the task of the aerodrome personnel assessing and reporting runway surface conditions to determine the RWYCCs that appropriately reflect the conditions on the runway and that are to be used for the performance check at the time of arrival.

It is important that the aerodrome personnel understand the operational use of the RWYCC by the flight crew in order to assess and report it properly.

The operational need for the information can be categorized as:

(i) Relevant for aeroplane performance;

(ii) Relevant for situational awareness; and

(iii) Relevant if there has been any significant change.

Note. — The need for information on any significant changes coincides with the trigger for generating new information in the RCR.

The information relevant for aeroplane performance is needed for:

(i) Flight planning;

(ii) Cockpit preparation for departure;

(iii) Cruise (i.e. alternate flight watch, in-flight re-planning); and

(iv) Approach preparation.

Information relevant for situational awareness is needed for:

(i) Flight planning;

(ii) Cockpit preparation for departure;

(iii) Cruise;

(iv) Approach preparation;

(v) Descent;

(vi) Approach; and

(vii) Taxi-in.

If there has been any significant change, such information may be needed for:

(i) Taxi-out;

(ii) Line-up and take-off or missed approach;

(iii) Descent;

(iv) Approach; and

(v) Taxi-in.

There is an operational need for the information in the RCR during all phases of flight except for the climb phase and actual landing phase. 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.

Note. — The flight crew's ability to receive the RCR in the various phases of flight is dependent upon the technology made available to them and, as a consequence, such ability will vary between aeroplane operators.

4.0 THE ELEMENTS OF THE GLOBAL REPORTING FORMAT

There are five principal elements that define the concept underlying the assessment and reporting methodology of the Global Reporting Format. These elements are enumerated below:

(i) Runway condition report (RCR);

(ii) Runway condition assessment matrix (RCAM);

(iii) Runway condition code (RWYCC);

(iv) Runway surface conditions; and

(v) Runway surface condition descriptors.

4.1 RUNWAY CONDITION ASSESSMENT MATRIX (RCAM)

(i) The RCAM is a matrix used to determine a runway condition code, from a set of observed runway surface condition(s) and associated procedures.

(ii) Details respecting the RCAM are provided in Section 5.2.7 of this AC.

4.2 RUNWAY CONDITION CODE (RWYCC)

(i) The Assessment Criteria consist of Runway Surface Descriptions which are used to determine the Runway Condition Code (RWYCC).

(ii) Flight crews use the RWYCC for determining the landing performance of their aeroplane. (The RWYCC is not utilized for determining aeroplane take-off performance.)

(iii) The process for determining the RWYCC is provided in Section 5.2.7 of this AC.

4.3 RUNWAY SURFACE CONDITIONS.

There are four defined runway surface conditions:

(i) Dry runway;

(ii) Wet runway;

(iii) Slippery (when) wet runway; and

(iv) Contaminated runway

4.4 RUNWAY SURFACE CONDITION DESCRIPTORS.

There are eight contaminated runway surface condition descriptors, out of which only one (standing water) is applicable in the tropical region:

S/N	CONDITION DESCRIPTORS	APPLICABILITY IN NIGERIA
1	Standing water	APPLICABLE
2	Compacted snow	NOT APPLICABLE
3	Dry snow	NOT APPLICABLE
4	Frost	NOT APPLICABLE
5	Ice	NOT APPLICABLE
6	Slush	NOT APPLICABLE
7	Wet ice	NOT APPLICABLE
8	Wet snow	NOT APPLICABLE

5.0 RUNWAY CONDITION ASSESSMENT PROCESS

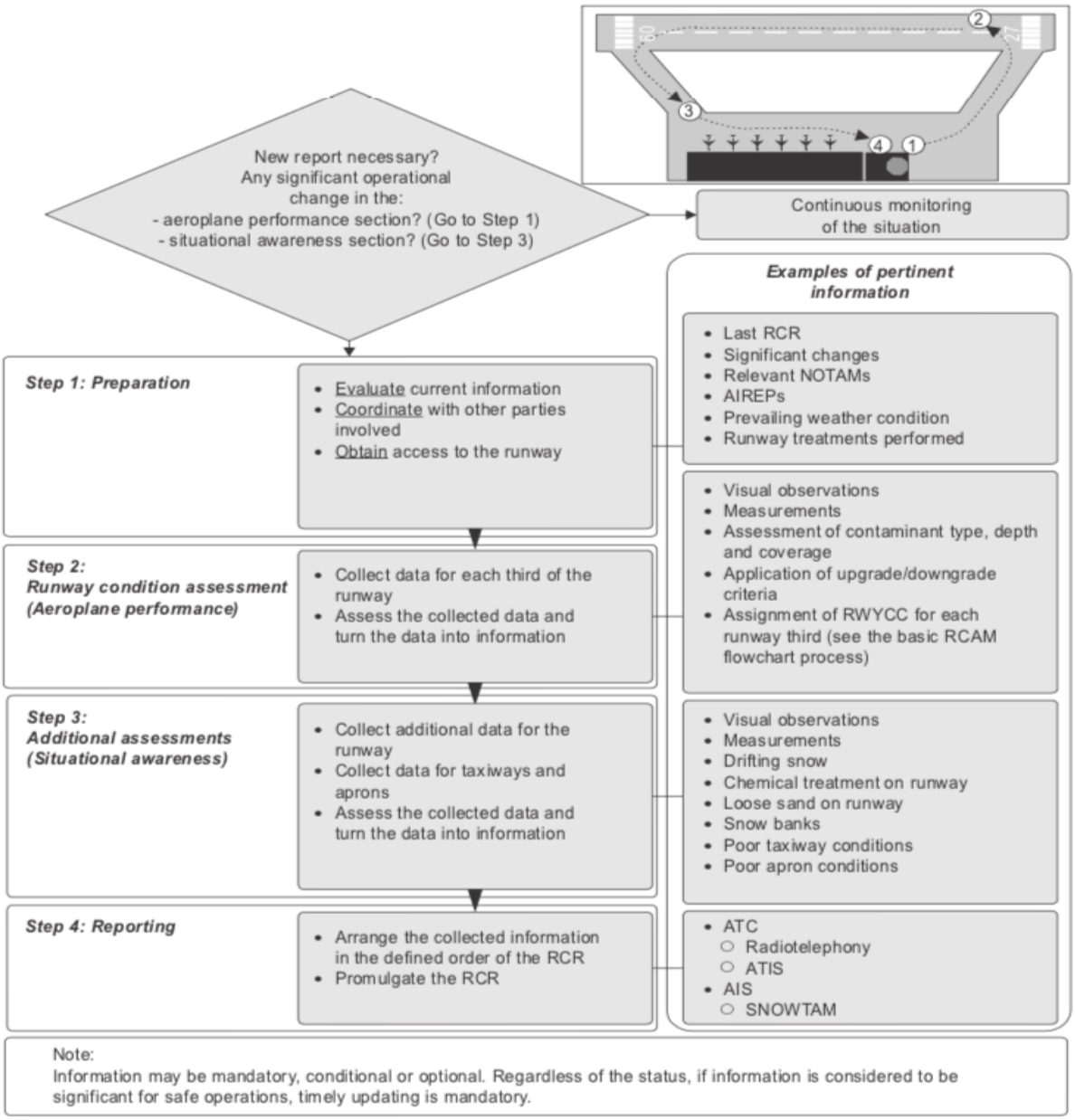


Figure 5-1: The Generic Runway Condition Assessment Process

5.1 STEP 1 – PREPARATION

5.1.1 MONITORING FOR TIMELY ASSESSMENT AND REPORTING PURPOSES

The aerodrome operator should adopt procedures for monitoring of the situation for data collection and reporting purposes. A procedure should include designation of a monitoring personnel, how the monitoring is to be done, actions to be taken to ensure effective monitoring and the scope of monitoring. The scope should include the monitoring of pavement surface condition including type, depth and coverage of contaminant, monitoring of air traffic and pilot communication in respect of reported RCR and pilot report, monitoring of changing weather patterns.

5.1.2 CRITERIA FOR PREPARATION OF NEW REPORT

(a) Preparation of a runway condition report is initiated when assessment shows that a significant change in runway surface condition occurs.

(b) 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.

5.2 STEP 2 – RUNWAY CONDITION ASSESSMENT

5.2.1 DATA COLLECTION

a) The basic data to be collected are those required for completing the performance calculation section and the situational awareness section of the runway condition report. Most of the data are to be obtained by visual observation.

b) For the performance calculation section, the data include percentage coverage of contaminant, depth of contaminant and contaminant type.

c) For the situational awareness section, the data include: signs of loose sand and chemical treatment on runway, taxiway and apron conditions

d) Contaminant depth, when visually assessed should always be verified by physical measurement.

5.2.2 DATA ASSESSMENT CRITERIA FOR REPORTING

A number of criteria has been established for assessing the contaminant depth and coverage and in determining whether to downgrade or upgrade of reported runway condition

5.2.3 CONTAMINANT IMPACT ON AEROPLANE STOPPING PERFORMANCE

Different contaminants affect the contact area between the tire and runway surface, where the stopping force is generated, in different ways. A water film of any depth leads to the partial separation (viscous aquaplaning) or total separation (dynamic aquaplaning) of the tire from the surface. The smaller the surface, the smaller the force of adhesion, and the less braking is available. This is why the maximum braking force decreases at higher speed and depends on contaminant depth. Other fluid contaminants have a similar effect. A deterministic classification of the stopping performance can be made only for the contaminants listed in the RCAM. For other reportable contaminants (oil, mud, ash, etc.), there is a large variance in the aeroplane performance effect, or insufficient data are available to permit a deterministic classification. An exception is rubber contamination, for which in-service data indicate that an assumption of RWYCC 3 restores usual performance margins. Runway surface treatments with sand, grit or chemicals may be very effective or detrimental depending on the conditions of the application, and no credit can be attributed to such treatment without verification and validation.

5.2.4CONTAMINANTS DEPTH ASSESSMENT AND REPORTING CRITERIA

Depth of the contamination. The industry accepts that the threshold for the effect of depth of fluid contaminants on aeroplane performance is 3 mm. Below this threshold, any type of fluid contaminant can be removed from the tire/runway contact zone either by forced drainage or by compressing the contaminant into the macrotexture of the surface, thus allowing adhesion between tire and surface, albeit on less than the full footprint surface area. This is why contamination depths of up to 3 mm are expected to provide similar stopping performance as a wet runway. The physical effects causing reduced friction forces begin to take effect from very small film thickness, which is why damp conditions are considered to provide no better braking action than a wet runway. It is important for aerodrome personnel to be aware of the fact that the capability to generate friction in wet conditions (or with thin layers of fluid contaminants) highly depends on the inherent qualities of the runway surface (friction characteristics) and may be less than normally expected on poorly drained, polished or rubber-contaminated surfaces. Above the 3 mm threshold, the impact on friction forces is more significant, leading to classification in lower RWYCCs. Above this depth, and depending on the density of the fluid, additional drag effects start to apply due to displacement or compression of the fluid and impingement on the airframe of the aeroplane. These latter effects depend on the depth of the fluid and affect the aeroplane's ability to accelerate for take-off. It is thus important to report depths with the precision required.

(a) When the depth of contaminant(s) is variable:

(i) The maximum depth should be selected since only one depth is required based on the report format and the maximum depth is the most important information for pilots; and

(ii) The remarks section may be used to report a range of values for depth.

(b) Contaminant depths will be reported for:

(i) Standing Water;

(c) For STANDING WATER, 4mm is the minimum depth which can be reported. (When the water depth is 3mm or less, the runway is reported to be WET).

Table 5-1: Contaminant Depth Assessment/Reporting Criteria

Contaminant	Valid Values to be Reported (mm)	Significant Change
STANDING WATER	04, then assessed value	3mm up to and including 15mm

Note 1. — For STANDING WATER, 04 (4 mm) is the minimum depth value at and above which the depth is reported. (From 3 mm and below, the runway third is considered WET).

Note 3. — Above 4 mm for STANDING WATER and 3mm an assessed value is reported and a significant change relates to observed change from this assessed value.

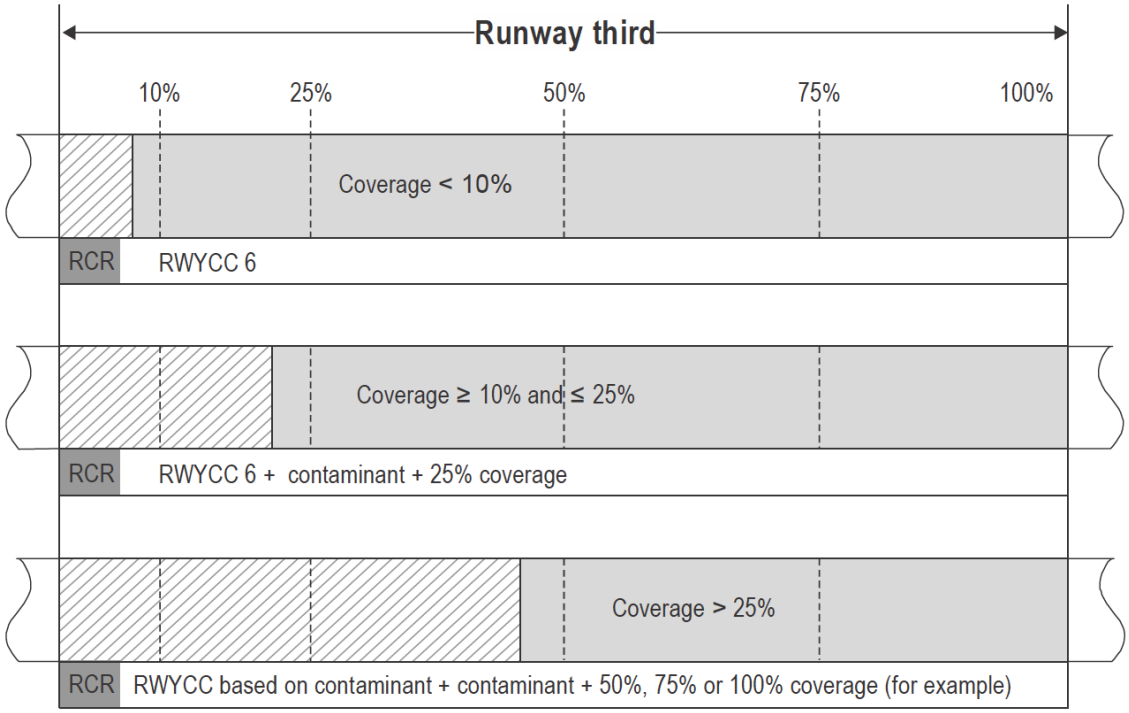
Table 5-2: Percentage of Coverage for Contaminants

ASSESSED PERCENT	REPORTED PERCENT
10-25	25
26-50	50
51-75	75
76-100	100

For a given runway third, the "DRY" condition is not reported unless there are contaminants in other runway third(s) and the runway third is 100% DRY.

Note – Criteria for assigning runway conditions codes are given in Table 2-4

Figure 5-2: Illustration of Contaminant Code Determination Criteria



5.2.4 ASSESSMENT AND REPORTING UNDER RAPID CHANGING CLIMATIC CONDITIONS

When a runway has been treated with chemicals to mitigate a specific contaminant and the resulting surface is now "WET", this condition should also be reported with the associated RWYCC, if applicable. Due to the dynamic nature of rainfall conditions, the timely and accurate reporting of conditions when water or moisture is present on the runway, is recognized to be challenging. For example, during an active thunderstorm a runway may rapidly transition from dry, to wet (water 3mm or less) to contaminated with standing water (4mm or greater), in a very short period of time. In addition, variations in the drainage capabilities of a runway and/or portions of a runway further complicate accurate reporting. Therefore, airport or aerodrome operators may not be able to report these conditions.
Where practicable, the expeditious reporting of wet runway conditions is encouraged.

To facilitate the accurate reporting of standing water, aerodrome operators should also be aware of the conditions which would lead to the accumulation of standing water including:

(i) The drainage characteristics of their runways, and

(ii) The rate and amount of precipitation.

5.2.5 ASSESSMENT CRITERIA FOR "SLIPPERY WHEN (WET) RUNWAY"

(a) A runway or any portion of a runway is deemed as having low friction (e.g. due to rubber accumulation, surface texture degradation, etc.) when the friction measurements (as measured by a continuous friction measuring device are below the minimum friction level specified in Nig.CARs Part 12.6.

(b) In accordance with Nig.CARs Part 12.6 a conventional NOTAM (as opposed to an RCR) which states that a runway may be "slippery when wet" is issued whenever the surface friction characteristics of a runway have been determined to be degraded, as described above.

Note: The designation "slippery when wet" – when applied to a conventional NOTAM – is a function of the friction characteristics of the pavement.

(c) The aerodrome operator may cancel this conventional "slippery when wet" NOTAM only when the runway friction level meets or exceeds the minimum standard.

(d) The following applies to aerodromes that report these wet conditions and also report RWYCCs:

(i) When there is a "slippery when wet" conventional NOTAM in effect and there is 3mm or less water present on the runway surface, an RCR is issued with a runway condition of "SLIPPERY (WHEN) WET." (I.e. The runway condition "SLIPPERY (WHEN) WET" with a RWYCC 3 is used, as opposed to "WET" with a RWYCC 5).

(ii) In the case described in (i), a RWYCC no higher than 3 should be assigned for the entire runway (e.g. 3/3/3).

(iii) When the runway is contaminated with standing water (greater than 3mm), a RWYCC no higher than 2 is to be reported.

(iv) If the aerodrome operator deems a downgrade is necessary, the downgrade must be made such that all three runway thirds match (e.g. 2/2/2; or 1/1/1).

5.2.6 CRITERIA FOR RE-ASSESSMENT OF DATA AND UPDATING OF REPORT

A change in the runway surface condition used in the runway condition report is considered significant to warrant a re-assessment whenever there is:

(i) Any change in the RWYCC;

(ii) Any change in contaminant type;

(iii) Any change in reportable contaminant coverage according to Table 5-2;

(iv) Any change in contaminant depth according to Table 5-1; and

(v) any other information, for example a pilot report of runway braking action, which according to assessment techniques used, are known to be significant.

5.2.7 EXAMPLE OF REPORTING DEPTH OF CONTAMINANT WHENEVER THERE IS ASIGNIFICANT CHANGE

(a) After the first assessment of runway condition, a first runway condition report is generated. The initial report is:
6/6/6 10/10/10 02/02/02 STANDING WATER/STANDING WATER/WET

Note.— The full information string is not used in this example.

(b) With continuing rainfall, a new runway condition report is required to be generated as subsequent assessment reveals a change in the runway condition code. A second runway condition report is therefore created as:

6/6/6 10/10/10 04/04/04 STANDING WATER/ STANDING WATER/ STANDING WATER

(c) With even more rainfall, further assessment reveals the depth of water has increased 4mm to 6mm (standing water) along the entire length of the runway. However, a new runway condition report is not required because the runway condition code has not changed (change in depth is less than the significant change threshold of 3 mm).

(d) A final assessment of the water reveals that the depth has increased to 7 mm. A new runway condition code is required because the change in depth from the last runway condition report (second runway condition code) i.e. from 3 mm to 7 mm is greater than the significant change threshold of 3 mm. A third runway condition report is thus created as below:

6/6/6 10/10/10 07/07/07 STANDINGWATER/ STANDING WATER/ STANDING WATER

5.2.8 RUNWAY CONDITION ASSESSMENT MATRIX AND ASSIGNMENT OF RUNWAY CONDITION CODE

(a) The Runway Condition Assessment Matrix (RCAM) (Table 2-4) is the method by which the aerodrome operator determines a Runway Condition Code (RWYCC) for each runway third, whenever a contaminant is present on the runway surface.

(b) This Assessment Criteria section of the RCAM consists of a Runway Surface Description and a Runway Condition Code. The Runway Surface Descriptions in each category are linked to the corresponding Runway Condition Code based on their effect on aeroplane braking performance.

(c) The Runway Surface Description column of the RCAM lists contaminants that are directly correlated to aeroplane landing performance. The description sections, ranging in terms of slipperiness, are categorized based on type and depth of contaminant and outside air temperature.

(d) Runway Condition Codes (Format: X/X/X) represent the runway condition description. It provides a standardized “shorthand” format for reporting runway condition, which can be used by pilots to determine landing performance parameters.

(e) A RWYCC is determined for each runway third based on type and depth of contaminant.

(f) The RCAM applies only to paved (asphalt and concrete) runway surfaces and does not apply to unpaved or partially paved surfaces.

(g) When runway condition information is reported in thirds a RWYCC is to be reported. Conversely, if the runway condition information is not entered for each runway third, then the RWYCC will not be reported.

Table 5-3: Runway Condition Assessment Matrix

Runway Condition Assessment Matrix			
Assessment Criteria		**Downgrade Assessment Criteria**	
Runway Surface Description	**RWYCC**	**Aeroplane deceleration or directional control observation**	**Pilot Breaking Action**
DRY	6		N/A
WET (the runway surface is covered by any visible dampness or water up to and including 3 mm deep)	5	Braking deceleration is normal for the wheel braking effort applied AND directional control is normal	GOOD
WET ("Slippery wet" runway)	3	Braking deceleration is noticeably reduced for the wheel braking effort applied OR directional control is noticeably reduced	MEDIUM
STANDING WATER (more than 3 mm depth) SLUSH (more than 3 mm depth) (Temperate climate only)	2	Braking deceleration OR directional control is between medium and poor	MEDIUM TO POOR

5.2.9 Examples of Use of Assessment Criteria for Determining Runway Condition Codes

(a) When the runway third contains a single contaminant, the RWYCC for that third is directly based on that contaminant in the RCAM as follows:

(i) If the contaminant coverage for that third is less than 10 per cent, a RWYCC of 6 is to be generated for that third and no contaminant is to be reported. If all thirds have less than 10 per cent contaminant coverage, no report is generated; or

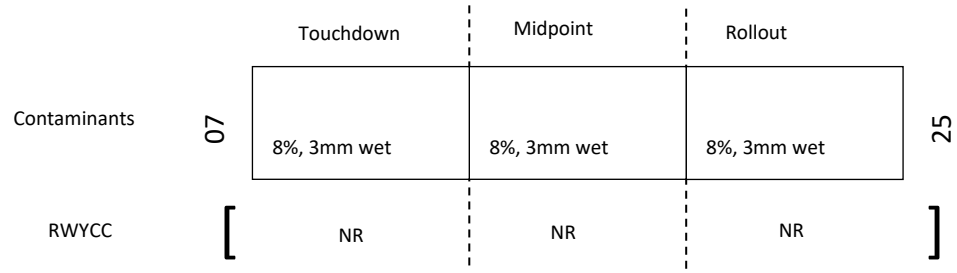


Figure 5-3: less than 10% coverage per runway third

(ii) if the per cent contaminant coverage for that third is greater than or equal to 10 per cent and less than or equal to 25 per cent, a RWYCC of 6 is to be generated for that third and the contaminant reported at 25 per cent coverage; or

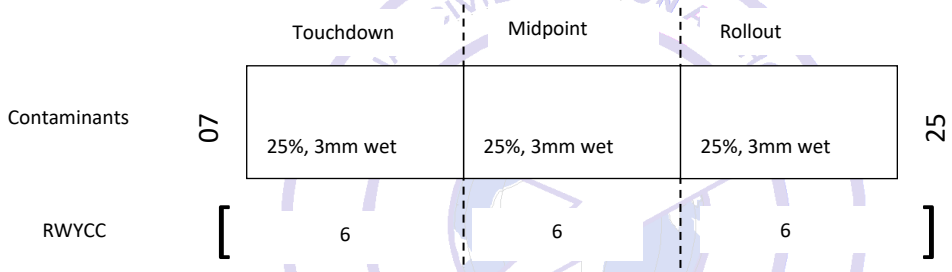


Figure 5-4: Greater than or equal to 25% coverage per runway third

(iii) if the percent contaminant coverage for that third is greater than 25 per cent, the RWYCC for that third shall be based on the code for that contaminant as specified in the RCAM;

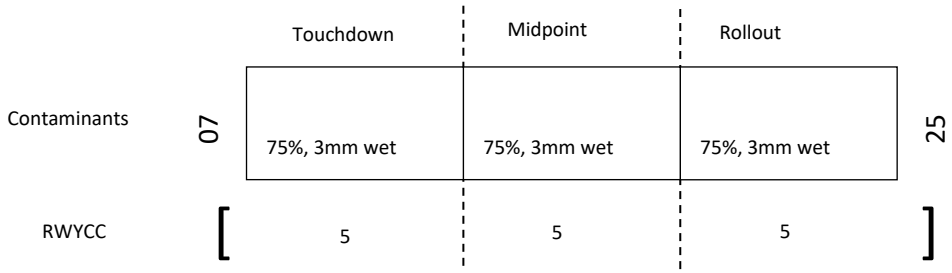


Figure 5-5: Greater than 25% coverage per runway third

5.2.9 UPGRADING AND DOWNGRADING RUNWAY CONDITION CODE

(a) Given the variability of certain contaminants, there are circumstances when a RWYCC of 0 or 1 may not be as slippery as the RWYCC generated by the RCAM.

(b) An assigned RWYCC 5, 4, 3 or 2 shall not be upgraded.

(c) An assigned RWYCC 1 or 0 can be upgraded using the following procedures (but see also d):

(i) if a properly operated and calibrated State-approved measuring device and all other observations support a higher RWYCC as judged by trained personnel;

(ii) The decision to upgrade RWYCC 1 or 0 cannot be based upon one assessment method alone. All available means of assessing runway slipperiness are to be used to support the decision;

(iii) When RWYCC 1 or 0 is upgraded, the runway surface is assessed frequently during the period the higher RWYCC is in effect to ensure that the runway surface condition does not deteriorate below the assigned code; and

(iv) Variables that may be considered in the assessment that may affect the runway surface condition, include but are not limited to:

(1) Rainfall conditions;

(2) Effects of wind;

(3) Frequency of runway in use; and

(4) Type of aeroplane using the runway.

(d) Upgrading of RWYCC 1 or 0 using the procedures in (c) shall not be permitted to go beyond RWYCC 3.

(e) 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.

(f) Pilot reports may also provide useful information. These reports may be limited to the specific sections of the runway in which wheel braking was applied and should be used accordingly.

(g) The aerodrome operator should consider downgrading a RWYCC when the friction measurements (if available), pilot reports or other observations reveal that the runway surface is more slippery than the RWYCC that was initially determined.

(h) The aerodrome operator should exercise vigilance and downgrade the RWYCC when appropriate – so that flight crews are provided with a RWYCC that best reflects the actual slipperiness of the runway.

(i) The shaded area of the RCAM provides Downgrade Assessment Criteria

(j) Where available, the pilot reports of runway braking action should be taken into consideration as part of the ongoing monitoring process, using the following principle:

(i) A pilot report of runway braking action is taken into consideration for downgrading purposes; and

(ii) A pilot report of runway braking action can be used for upgrading purposes only if it is used in combination with other information qualifying for upgrading.

Note 1 —the procedures for making special air-reports regarding runway braking action are contained in the Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM, Doc 4444), Chapter 4, and Appendix1, Instructions for air-reporting by voice communication.

(k) Two consecutive pilot reports of runway braking action of POOR shall trigger an assessment if an RWYCC of 2 or better has been reported.

(l) When one pilot has reported a runway braking action of LESS THAN POOR, the information shall be disseminated, a new assessment shall be made and the suspension of operations on that runway shall be considered

5.3 STEP 3 – ADDITIONAL ASSESSMENT

Assessment of Taxiway and Apron

Due to the lower speed of aircraft on the taxiway and apron, assessment should be for the purpose of ensuring that information to be gathered and reported on the condition of the runway and taxiway has impact on safety and normal operations such as the risk of becoming stuck, losing control on a slippery surface or damaging the aircraft.

5.3.1 Nature and Presentation of Taxiway and Apron Data

(a) It is important to provide pertinent and concise information. Where possible, the use of approved abbreviations is recommended.

Note: Airport and aerodrome operators are cautioned against providing excessive and overly detailed information regarding the condition of taxiways and aprons. This can be a needless distraction and is a disservice to flight crews as it adds significantly to pilot workload and may contribute to flight crews missing other critical information.

(b) Only one type of surface condition and corresponding depth, if applicable, should be reported for taxiways and aprons. The percentage of contaminants is not to be reported.

(c) Taxiway and apron information can include but is not limited to:

- type of contaminant and depth,
- qualitative friction (e.g., “BRAKING ACTION POOR”),
- Presence of treatments.

(d) If the same conditions apply to several taxiways or aprons, the information should be grouped together. The term ALL TWY or ALL APN can be used to describe the conditions that apply to all taxiways and/or aprons.

(e) Examples:

RMK: TWY B BRAKING ACTION POOR

RMK: APN II AND III CHEMICALLY TREATED

5.4 STEP 4 – REPORTING

5.4.1 PRODUCING A RUNWAY CONDITION REPORT (RCR)

(a) The information to be reported shall be compliant with the RCR which consists of:

(i) Aeroplane performance calculation section; and

(ii) Situational awareness section.

(b) The information shall be included in an information string in the following order using only AIS-compatible characters:

(i) Aeroplane performance calculation section:

(1) Aerodrome location indicator;

(2) Date and time of assessment;

(3) Lower runway designation number;

(4) RWYCC for each runway third;

(5) Percent coverage contaminant for each runway third;

(6) Depth of loose contaminant for each runway third;

(7) Condition description for each runway third; and

(8) Width of runway to which the RWYCCs apply if less than published width.

(ii) Situational awareness section:

(1) Reduced runway length;

(2) Loose sand on the runway;

(3) Chemical treatment on the runway;

(4) Taxiway conditions;

(5) Apron conditions;

(6) National-approved, and published use of, measured friction coefficient; and

(7) Plain language remarks.

5.4.2 Aeroplane Performance Section

(c) The aeroplane performance calculation section is a string of grouped information separated by a space " " and ends with a return and two line feed "≪≡". This is to distinguish the aeroplane performance calculation section from the following situational awareness section or the following aeroplane performance calculation section of another runway.

TABLE 5-5: RUNWAY CONDITION REPORT

	Runway Condition Report		
	Aeroplane Performance Calculation Section		
	Information	**Description**	**Format/Example**
A	**Aerodrome location indicator** (Mandatory Information).	A four-letter ICAO location indicator in accordance with Doc 7910, Location Indicators	**Format**: nnnn **Example**: ENZH
B	**Date and time of assessment** (Mandatory Information).	Date and time (UTC) when the assessment was performed by the trained personnel.	**Format**: MMDDhhmm **Example**: 09111357
C	**Lower runway designation number**: (Mandatory Information).	A two- or three-character number identifying the runway for which the assessment is carried out and reported.	**Format:**nn[L] or nn[C] or nn[R] **Example**: 09L

D	**Runway condition code for each runway third** (Mandatory Information).	A one-digit number identifying the RWYCC assessed for each runway third. The codes are reported in a three-character group separated by a "/" for each third. The direction for listing the runway thirds shall be in the direction as seen from the lower designation number.	**Format**: n/n/n **Example**: 5/5/2
		When transmitting information on runway surface conditions by ATS to flight crews, the sections are, however, referred to as the first, second or third part of the runway. The first part always means the first third of the runway as seen in the direction of landing or take-off as detailed in PANS-ATM (Doc 4444).	
E	**Per cent coverage contaminant for each runway third:** (Conditional Information). It is not reported for one runway third if it is dry or covered with less than 10 per cent.	A number identifying the percentage coverage. The percentages are to be reported in an up-to-nine character group separated by a "/" for each runway third. The assessment is based upon an even distribution within the runway thirds using the guidance in Table 2-2	**Format:** [n]nn/[n]nn/[n]nn **Example**: 25/50/100 NR/50/100* 25/NR/100** 25/50/NR ***
		:if contaminant coverage is less than 10% in the first third. **: if contaminant coverage is less than 10% in the middle third. *:if contaminant coverage is less than 10% in the last third*	
F	**Depth of loose contaminant: for each runway third:** (Conditional Information).	A two- or three-digit number representing the assessed depth (mm) of the contaminant for each runway third. The depth is reported in a six to nine character group separated by a "/" for each runway third as defined in Table 2-4. The assessment is based upon an even distribution within the runway thirds as assessed by trained personnel. If measurements are included as part of the assessment process, the reported values are still reported as assessed depths, as the trained personnel have placed their judgment upon the	**Format:** [n]nn/[n]nn/[n]nn **Exmp:** 04/06/12 [STANDING WATER]

		measured depths to be representative for the runway third.	
		When the depth of the contaminants varies significantly within a runway third, additional information is to be given in the plain language remark part of the situational awareness section of the runway condition report. *Note.— In this context a significant variation in depth in the lateral direction is more than twice the depth indicated in column 3 of Table 2-1. Further information is available in Circular 329 — Assessment, Measurement and Reporting of Runway Surface Conditions.*	
g.	**Condition description for each runway third:** (Mandatory Information).	To be reported in capital letters using terms specified in 2.9.5 of Annex 14, Volume I. These terms have been harmonized with the terms used in the Standards and Recommended Practices in Annexes 6, 8, 11 and 15. The condition type is reported by any of the following condition type descriptions for each runway third and separated by an oblique stroke "/".	**Format:**nnnn/nnnn/nnnn **Example:**WET/WET/WET
		Only STANDING WATER and WET are applicable for tropical climate	
	Width of runway to which the RWYCCs apply if less than published width (Optional Information)	Is the two-digit number representing the width of cleared runway in metres? If the cleared runway width is not symmetrical along the centre line, additional information is to be given in the plain language remark part of the situational awareness section of the runway condition report.	**Format:**nn **Example:** 30

	Aeroplane Performance Calculation Section		
	(All individual messages in the situational awareness section end with a full stop sign. This is to distinguish the message from subsequent message(s).)		
	Information	**Description**	**Format/Example**
a.	**Reduced runway length** (Conditional Information)	The information is provided when a NOTAM has been published with a new set of declared distances affecting the LDA.	**Format:** Standardized fixed text RWY nn [L] or nn [C] or nn [R] LDA REDUCED TO [n]nnn **Example**: RWY 22L LDA REDUCED TO 1450.
b.	**Loose sand on the runway** (Optional Information)		**Format:** RWY nn[L] or nn[C] or nn[R] LOOSE SAND **Example**: RWY 02R LOOSE SAND
c.	**Chemical treatment on the runway**(Mandatory Information)		**Format:** RWY nn[L] or nn[C] or nn[R] CHEMICALLYTREATED **Example:** RWY 06 CHEMICALLY TREATED.
d.	**Taxiway conditions** (Optional Information)		**Format:** TWY [nn]n POOR **Example:** TWY B POOR.
e.	**Apron conditions** (Optional Information)		**Format:** APRON [nnnn] POOR **Example:** APRON NORTH POOR
f.	**National-approved and published use of measured friction coefficient** (Optional Information)		**Format:** [State set format and associated procedures] **Example:** [Function of State set format and associated procedures].
i	**Plain language remarks using only allowable characters in capital**	Where possible, standardized text should be developed.	**Format:** Combination of allowable characters where use of full stop « . » marks the end of the message.

	letters (Optional Information)	Allowable characters: A B C D E F G H I J K LM N O P Q R S T U V W X Y Z 0123456789 / [oblique stroke] "." [period]" " [space]	

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6.0 PROMULGATINGTHE RUNWAY CONDITION REPORT (RCR)

(a) The need to report and promulgate runway surface conditions are specified in Aerodrome Standards Manual (ASM) 6.2.9.1, which stipulates that information on the condition of the movement area and the operational status of related facilities shall be provided to the appropriate aeronautical information services (AIS) units, and similar information of operational significance to the ATS units, to enable those units to provide the necessary information to arriving and departing aircraft.

(b) When the runway is wholly or partly contaminated by standing water, the runway condition report should be disseminated through the AIS and ATS services. When the runway is wet, not associated with the presence of standing water, the assessed information should be disseminated using the runway condition report through the ATS only.

6.1 Dissemination by AIS

An example of a complete information string prepared for dissemination is as follows:

[COM header and Abbreviated header] (Completed by AIS)

GG EADBZQZX EADNZQZX EADSZQZX 070645 EADDYNYX
SWEA0151 EADD 02170055
SNOWTAM 0151

[Aeroplane performance calculation section]

EADD 02170055 09L 5/5/5 100/100/100 NR/NR/NR WET/WET/WET

[Situational awareness section]

RWY 09L LOOSE SAND TWY B POOR. APRON NORTH POOR.

6.2 Dissemination by ATS

Procedures for the provision of information to arriving aircraft are contained in Procedures for Air Navigation Services — Air Traffic Management MOS 3.22.4.1-Essential Information on Aerodrome conditions).

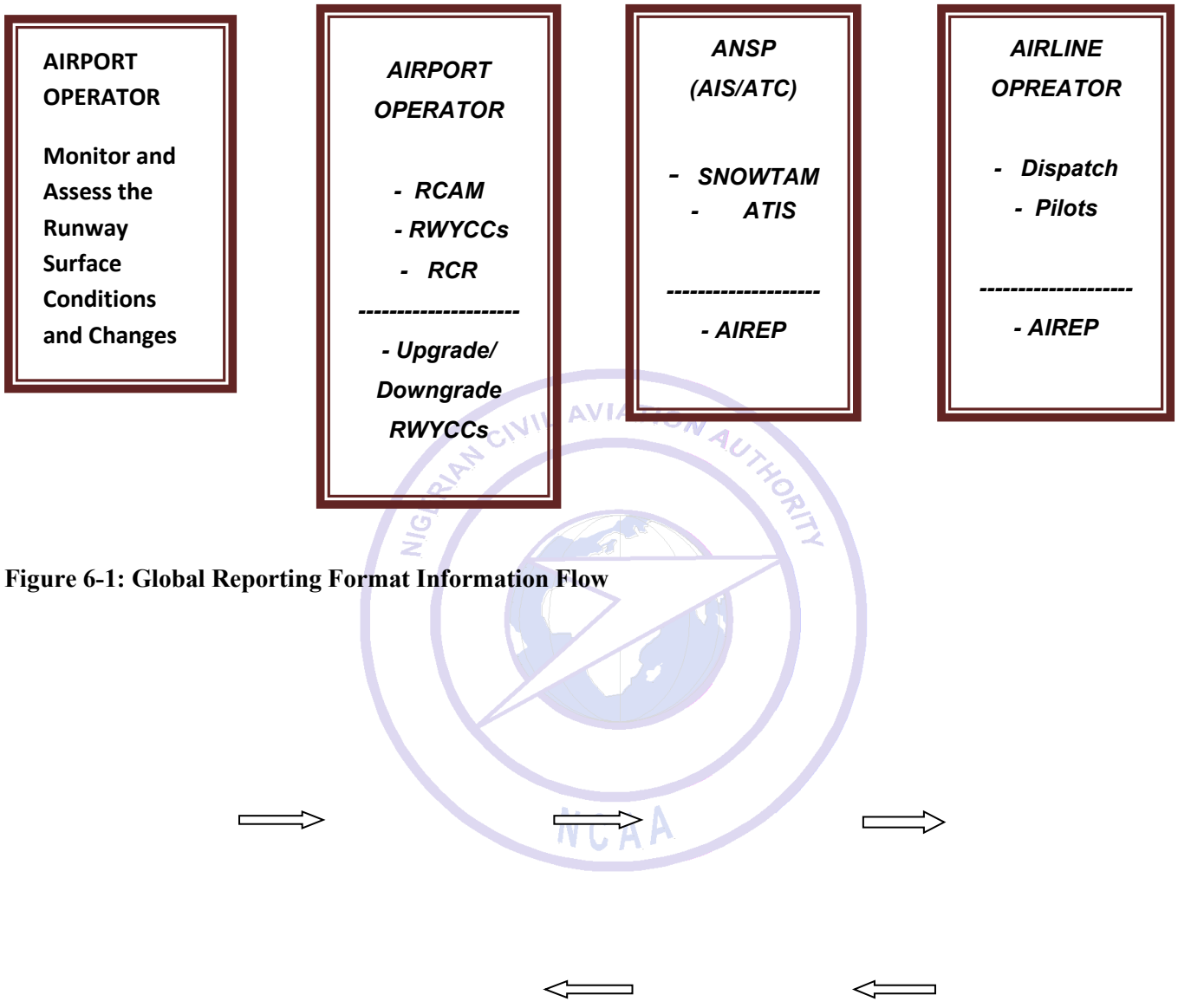
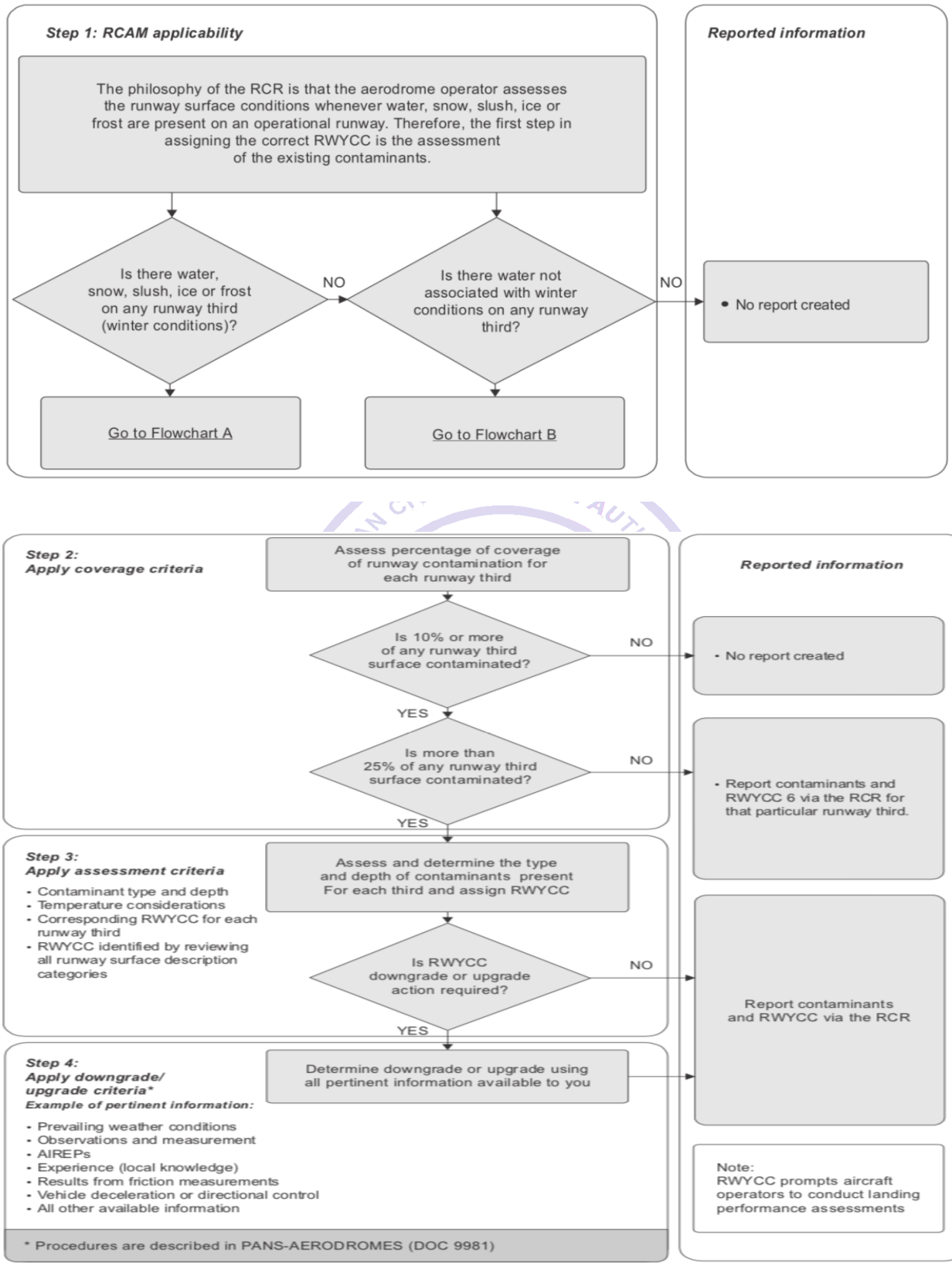


Figure 6-1: Global Reporting Format Information Flow


Step 1: RCAM applicability
The philosophy of the RCR is that the aerodrome operator assesses the runway surface conditions whenever water, snow, slush, ice or frost are present on an operational runway. Therefore, the first step in assigning the correct RWYCC is the assessment of the existing contaminants.
Is there water, snow, slush, ice or frost on any runway third (winter conditions)?
NO
Is there water not associated with winter conditions on any runway third?
NO
Go to Flowchart A
Go to Flowchart B
Reported information
• No report created
Step 2:
Apply coverage criteria
Assess percentage of coverage of runway contamination for each runway third
Is 10% or more of any runway third surface contaminated?
NO
YES
Is more than 25% of any runway third surface contaminated?
NO
YES
Reported information
- No report created
- Report contaminants and RWYCC 6 via the RCR for that particular runway third.
Step 3:
Apply assessment criteria
- Contaminant type and depth
- Temperature considerations
- Corresponding RWYCC for each runway third
- RWYCC identified by reviewing all runway surface description categories
Assess and determine the type and depth of contaminants present For each third and assign RWYCC
Is RWYCC downgrade or upgrade action required?
NO
YES
Report contaminants and RWYCC via the RCR
Step 4:
Apply downgrade/ upgrade criteria*
Example of pertinent information:
- Prevailing weather conditions
- Observations and measurement
- AIREPs
- Experience (local knowledge)
- Results from friction measurements
- Vehicle deceleration or directional control
- All other available information
Determine downgrade or upgrade using all pertinent information available to you
Note:
RWYCC prompts aircraft operators to conduct landing performance assessments
* Procedures are described in PANS-AERODROMES (DOC 9981)

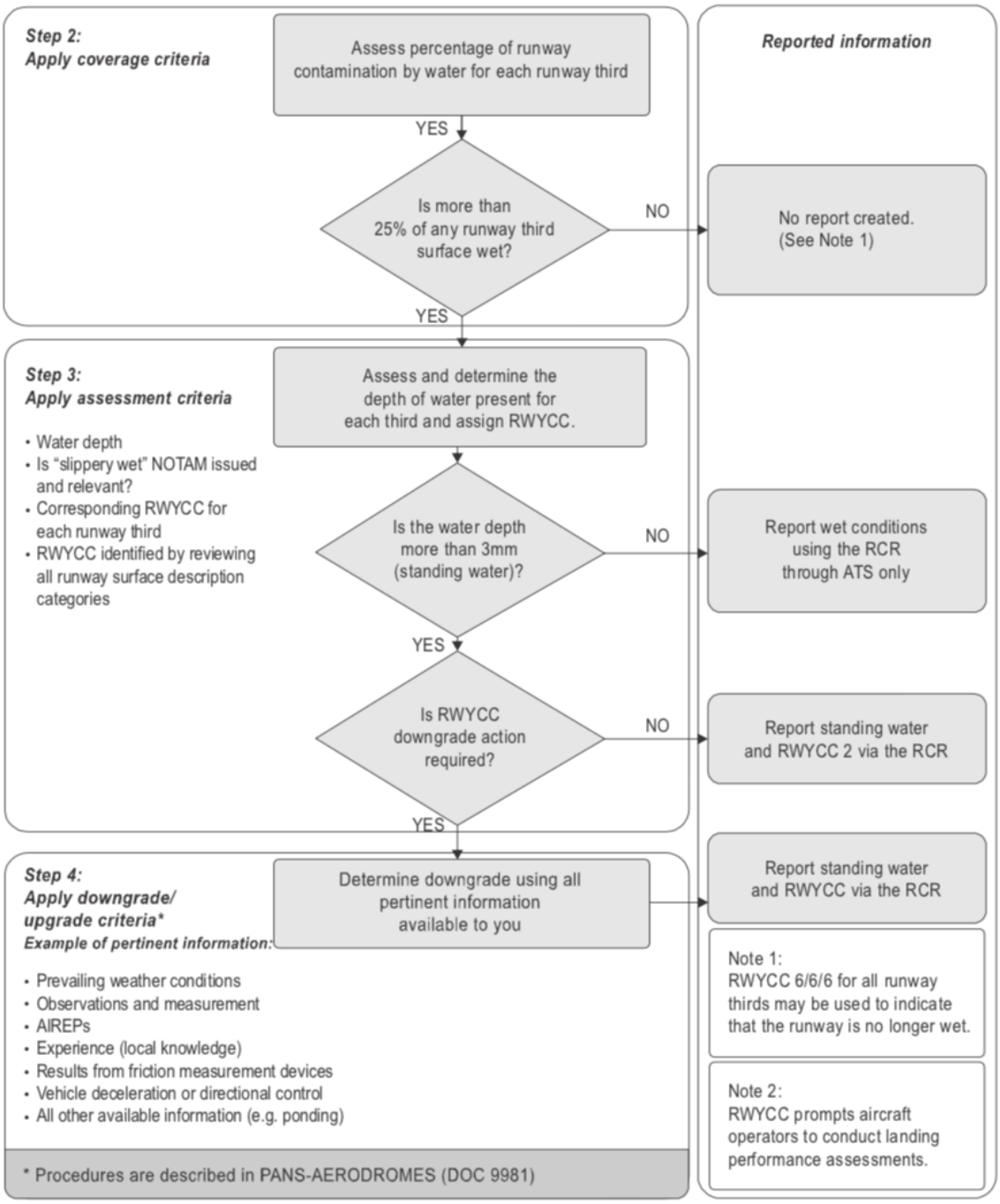


Figure 6-2: The Basic RCAM Flowchart Process

Appendix 1 — Training

Background

It is the responsibility of the Aerodrome operators to ensure that their personnel are adequately trained, so that they can perform their duties. This is reflected in theNig. CARs 12.6.3.1(f) (1) which states, in part:

"The operator shall train all personnel who access movement and safety areas and perform duties in compliance with the Requirements of this Regulation. This training shall be completed prior to the initial performance of such duties for all personnel. Thereafter, all personnel shall be retrained at least once every 3 years. The curriculum for initial and recurrent training shall include at least the following areas:

(f) In respect of aerodrome maintenance, the training of personnel shall include the following areas as appropriate:

(1) Maintenance of runway, taxiway and apron (paved and unpaved).

It is recommended that Aerodrome Operators develop a training program for all personnel who will assess and report runway conditions. This training program should include:

- (a) Initial Training; and
- (b) Recurrent training.

Initial Training

(1) For the purpose of Initial Training, all concerned GRF stakeholders (aerodrome operators, ANSPs, Airlines etc.) shall:

- (a) Utilize the information in this AC to develop and conduct training which includes both:
    - (i) a review of the theoretical concepts; and
    - (ii) practical exercises

On-The-Job Training (OJT)

- Scenario-based training, which allows airport and aerodrome personnel to practice reporting conditions under various conditions, is considered to be a particularly effective.
- Test Assessment is at the discretion of the OJT supervisor.

- (b) Maintain records of completed training for the duration of the trainee's employment.

(2) Initial training should include, but is not limited to, a review of the following topics:

- (a) Background

  This section is intended to help trainees understand:

  - (i) the importance of accurate and timely reporting of runway surface conditions; and
  - (ii) how this information is utilized by flight crews
- (b) Implementation of the Global Reporting Format (GRF)
- (c) Reporting Criteria for Aircraft Movement and Surface Condition Report (AMSCR)
- (d) Runway Condition Assessment Matrix (RCAM)
- (e) Process to Determine the RWYCC
- (f) Other Reported Runway Condition Information
- (g) Taxiway and Apron Information
- (h) Order of Reporting Runway Condition Information
- (i) Requirements to Issue a New Significant Change
- (j) Validity Period
- (k) Sampleof Runway Condition Report
- (l) Assessment and reporting of runway surface friction characteristics
- (m) Calibration, maintenance and use of runway friction measurement device
- (n) Measurement technique and assessment.

Recurrent Training

(1) For the purposeof Recurrent Training, airport all GRF concerned stakeholders (aerodrome operators, ANSPs, Airlines etc.) shall:

- (a) Utilize the information in this AC to develop and conduct appropriate training for their personnel which:
  - (i) focuses primarily on the practical aspects of runway condition assessment and reporting; and
  - (ii) Incorporates "lessons learned" from the previous year(s) operations.
  - Test Assessment is at the discretion of the OJT supervisor.
- (b) Maintain records of completed training for the duration of the trainee's employment.
- (c) Be conducted at least once every 3 years.

Table showing specific training for each stakeholder;

SN	Stakeholder	Training
1	Aerodrome Operator	Global Reporting Format (emphasis on assessment procedures/skills, visual estimation of contamination, visual reading of depth of contamination, Situational Awareness)
1	AeroMet	Weather Forecast
2	ATS	Global Reporting Format (emphasis on Aeroplan Performance with regards weather conditions, production of RCR, downgrading/upgrading RWYCC, reading SNOWTAM, Situational Awareness)
3	AIS	Global Reporting Format (emphasis on generating SNOWTAM)
4	Airfield Operations Officers	Global Reporting Format (emphasis on Aeroplan Performance with regards weather conditions, production of RCR, downgrading/upgrading RWYCC, reading SNOWTAM ,Situational Awareness)
5	Flight Crew	Global Reporting Format (emphasis on Aeroplan Performance with regards weather conditions, reading SNOWTAM, Situational Awareness)

Appendix II

Stakeholders Responsibilities

As expected, the effective application of GRF requires the collective effort of severalstakeholders from all domains of the aviation system.Invariably, the key players of theprocess are aerodrome operators and air navigation services providers.

The CAA is responsible for the promotion, coordination and oversight of the process at the national level. It is understood that Air Operators should be prepared for the introduction of GRF as shouldbe General Aviation and Military operators.

NCAA:

- Prepare instructions to give guidance and direction to its aerodrome inspectors on a review of aerodrome operator's documented GRF procedures to ensure correctness and completeness before approval is given.
- Amend guidance material on information to be included in the Aerodrome Manual.
- Amend surveillance and certification checklist, to accommodate GRF requirements.
- Monitor GRF implementation.

The Aerodrome Operator:

- Procedures for implementation and monitoring of the general situation should include;
    a. Designation of the responsible person,
    b. How the monitoring is to be done,
    c. Actions to be taken to ensure effective monitoring and
    d. The scope of monitoring.
- The scope should cover the monitoring of pavement surface condition including type, depth and coverage of contaminants, monitoring of air traffic and pilot communication in respect of reported RCR and pilot report, monitoring of changing weather patterns.
- Detailed procedures for assessing runway surface condition, in line with the guidance provided by the CAA, should also be included as part of the aerodrome operators standard operating procedures.
- Develop and Amend existing training programme to include subjects related torunwaysurface conditionreporting as per appendix 1 above.
- Information on the procedures for verification and validation of the content of the RCR in the SNOWTAM prior to dissemination, should also be furnished in the procedure document.

- Coordinate with the respective Air Navigation Service Provider to ensure seamless transmission of RCRtakingintoaccounttheapplicableaeronauticaldatatransferprotocols.
- Inform all aerodrome users, particularly the General Aviation community and the military on GRFimplementation,ideallythroughestablishedLocal Runway SafetyTeam (GRF Local Team)
- Apply the approved change management process and conduct a safety riskassessmenttoaddress anypotential concerns.
- In conjunction with Air Navigation Service Provider, conduct system testing to ensure a smoothtransitionontarget date
- UpdateoccurrencereportingprocesstoincludeGRF.

AIS/ATC Providers:

- The Aeronautical Information Service Provider should update the SNOWTAM template used for issuing/receiving SNOWTAM.
- Ensure that these updates are reflected in its operating documents as necessary. Amend and introduce new procedures for the implementation of GRF.This shall considerthereceiptandforwardingofAIREPstotheaerodromeoperator.
- Coordinate with the aerodrome operator to establish the appropriate methodologyfor the receipt of the RCR considering the applicable aeronautical data transferprotocols.
- Develop and amend existing training programmes to include subjects related toGRF application, with interest groups mainly consisting of: a) Management; b)ATCOs; c) AIS personnel.Training subjects should primarily focus on: RCRdecoding;SNOWTAM, andRadiotelephony transmissionof RCR.
- Apply the established change management process and conduct a safety risk assessment to address any concerns stemming pre-implementation.
- In conjunction with aerodrome operator, conduct system (trial) testing to ensure effectiveimplementationon target date.

Aeronautical Meteorological Service Provider

- Shall issue a SPECI on change in weather.
- Shall transmit SPECI to ATS unit and via AFTN/AMHS as OPMET.

Aircraft Operators/Airlines- Flight Crew

- Shall use SNOWTAM to adjust aircraft performance based on reported condition.
- Shall produce AIREP to ATS based on the performance of their aircrafts.
- Shall give AIREP to ATS on change in established condition.

Appendix III-

Required Equipment/Tools.

a) Aerodrome Operators should procure and maintain relevant tools, materials and other resources required for the assessment and reporting of runway surface conditions and should ensure they are readily accessible and deplored to good use whenever the need arise. A list of the possible resources required are listed below.

i) Tools Required

1) Linear Measurement

2) Height/Depth measuring tool

3) Field Area measuring tool

4) Scientific Calculator

5) Field Data Collection Sheets

6) Runway Condition Reporting Format sheet

7) SNOWTAM Report Format

Table showing specific tools for each stakeholder;

SN	Stakeholder	Equipment
1	AeroMet	AWOS, AFTN/AMHS
2	ATS	VHF radio, AFTN, MIDAS IV
3	AIS	AFTN
4	Airfield Operations Officers	VHF radio, Operations Vehicle, Safety boots, Raincoat, measuring rods,
5	Flight Crew	Radio

Appendix IV

Snowtam Format

(applicable 4 November 2021)

(COM heading)	(PRIORITY INDICATOR)	(ADDRESSES)	≪<≡
	(DATE AND TIME OF FILING)	(ORIGINATOR'S INDICATOR)	≪<≡
(Abbreviated heading)	S W * (SWAA* SERIAL NUMBER)	(LOCATION INDICATOR) DATE/TIME OF ASSESSMENT	(OPTIONAL GROUP) ≪<≡(
SNOWTAM	(Serial ≪<≡		

Aeroplane performance calculation section			
(AERODROME LOCATION INDICATOR)	M	A)	≪<≡
(DATE/TIME OF ASSESSMENT *(Time of completion of assessment in UTC)*)	M	B)	
(LOWER RUNWAY DESIGNATION NUMBER)	M	C)	
(RUNWAY CONDITION CODE ON EACH RUNWAY THIRD) (From Runway Condition Assessment Matrix (RCAM) 0, 1, 2, 3, 4, 5 or6)	M	D)	/ /
(PER CENT COVERAGE CONTAMINANT FOR EACH RUNWAY THIRD)	C	E)	/ /
(DEPTH *(mm)* OF LOOSE CONTAMINANT FOR EACH THIRD OF RUNWAY)	C	F)	/ /
(CONDITION DESCRIPTION OVER TOTAL RUNWAY LENGTH *(Observed on each runway third, starting from threshold having the lower runway designation number)* STANDING WATER WET	M	G)	/ /
(WIDTH OF RUNWAY TO WHICH THE RUNWAY CONDITION CODES APPLY, IF LESS THAN PUBLISHED WIDTH)	O	H)	≪<≡≡
Situational awareness section			
(REDUCED RUNWAY LENGTH, IF LESS THAN PUBLISHED LENGTH *(m)*)	O	I)	
(DRIFTING SNOW ON THE RUNWAY)	O	J)	
(LOOSE SAND ON THE RUNWAY)	O	K)	
(CHEMICAL TREATMENT ON THE RUNWAY)	O	L)	
(TAXIWAY CONDITIONS)	O	P)	
(APRON CONDITIONS)	O	R)	
(MEASURED FRICTION COEFFICIENT)	O	S)	
(PLAIN-LANGUAGE REMARKS)	O	T)	) ≪≡

NOTES:
1. *Enter ICAO nationality letters as given in ICAO Doc 7910, Part 2 or otherwise applicable aerodrome identifier.
2. *Information on other runways, repeat from B toH.

3. *Information in the Situational Awareness section repeated for each runway, taxiway and apron repeat as applicable whenreported. 4. *Words in brackets ( ) not to betransmitted. 5. *forlettersA)toT)refertothe*InstructionsforthecompletionoftheSNOWTAMformat,paragraph1,itemb)*	

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Appendix V

RUNWAY CONDITION REPORT (RCR)	
Aeroplane performance calculation section	
Information	**Source**
Aerodrome location indicator	ICAO Doc 7910, *Location Indicators*
Date and time of assessment	UTC time
Lower runway designation number	Actual runway (RWY)
RWYCC for each runway third	Assessment based upon RCAM and associated procedures
Per cent coverage contaminant for each runway third	Visual observation for each runway third
Depth of loose contaminant for each runway third	Visual observation assessed for each runway third, confirmed by measurements when appropriate
Condition description (contaminant type) for each runway third	Visual observation for each runway third
Width of runway to which the RWYCCs apply if less than published width	Visual observations while at the RWY and information from local procedures/snow plan
Situational awarenesssection	
Reduced runway length	NOTAM
Drifting snow on the runway	Visual observation while at RWY
Loose sand on the runway	Visual observation while at RWY
Chemical treatment on the runway	Known treatment application. Visual observation of residual chemicals on the runway
Taxiway conditions	Visual observation, AIREP, reported by other aerodrome personnel, etc
Apron conditions	Visual observation, AIREP, reported by other aerodrome personnel, etc
National approved and published use of measured friction coefficient	Dependent upon the State set or agreed standard
Plain language remarks using only allowable characters in capital letters	Any additional operational significant information to be reported

Appendix VI

Runway Condition Assessment Worksheet

Aerodrome

Date/Time (UTC) of assessment (MMDDhhmm)

Lower Runway Designator

°C Outside Air Temperature

Initials

Assess the % coverage of runway contamination for each runway third

< 10% coverage	≥ 10% - ≤ 25% coverage	> 25% coverage
NR (No contaminant is reported) RWYCC - 6 to be generated for that third.	Report contaminant coverage at 25% RWYCC - 6 to be generated for that third.	>25 to ≤50 report coverage as 50% >50 to ≤75 report coverage as 75% >75 to 100 report coverage as 100%

RWYCC for that third shall be based on the contaminant present & temperature considerations

NOTE: RCR not required if all RWY thirds have <10% coverage (unless making a final report to advise the RWY is no longer contaminated)

1st RWY Third

For coverage 25% or less (≤25%) enter Code 6.
For coverage greater than 25% (>25%), follow the steps below

- Identify any contaminant that covers more than 25% of the RWY third
- Identify % coverage
- Identify depth (if applicable)
- Identify Runway Condition Code
- Record the most restrictive code in the box to the right

RWYCC

Dry 6 | Wet (Damp) 5 (% Cov. 25/50/75/100) | Frost 5 (% Cov. 25/50/75/100) | Slippery Wet (Below Min Friction Level Classification) 3 (% Cov. 25/50/75/100)

Standing Water/ Slush >3mm 2 (% Cov. 25/50/75/100) | Slush 3mm or less 5 (% Cov. 25/50/75/100) | Dry or Wet snow >3mm 3 / 3mm or less 5 (% Cov. 25/50/75/100) | Dry or wet snow on compacted snow 3 (% Cov. 25/50/75/100)

Depth: 3mm or less | Assessed depth (mm):

Mark depth only for: Standing Water, Slush, Wet or Dry Snow, Any snow on top of compacted snow

-15°C or below 4 (% Cov. 25/50/75/100) | Compacted snow | Above -15°C 3 (% Cov. 25/50/75/100)

Ice 1 (% Cov. 25/50/75/100) | Wet Ice, Water on compacted snow, snow on ice 0 (% Cov. 25/50/75/100)

2nd RWY Third

For coverage 25% or less (≤25%) enter Code 6.
For coverage greater than 25% (>25%), follow the steps below

- Identify any contaminant that covers more than 25% of the RWY third
- Identify % coverage
- Identify depth (if applicable)
- Identify Runway Condition Code
- Record the most restrictive code in the box to the right

RWYCC

Dry 6 | Wet (Damp) 5 (% Cov. 25/50/75/100) | Frost 5 (% Cov. 25/50/75/100) | Slippery Wet (Below Min Friction Level Classification) 3 (% Cov. 25/50/75/100)

Standing Water/ Slush >3mm 2 (% Cov. 25/50/75/100) | Slush 3mm or less 5 (% Cov. 25/50/75/100) | Dry or Wet snow >3mm 3 / 3mm or less 5 (% Cov. 25/50/75/100) | Dry or wet snow on compacted snow 3 (% Cov. 25/50/75/100)

Depth: 3mm or less | Assessed depth (mm):

Mark depth only for: Standing Water, Slush, Wet or Dry Snow, Any snow on top of compacted snow

-15°C or below 4 (% Cov. 25/50/75/100) | Compacted snow | Above -15°C 3 (% Cov. 25/50/75/100)

Ice 1 (% Cov. 25/50/75/100) | Wet Ice, Water on compacted snow, snow on ice 0 (% Cov. 25/50/75/100)

3rd RWY Third

For coverage 25% or less (≤25%) enter Code 6.
For coverage greater than 25% (>25%), follow the steps below

- Identify any contaminant that covers more than 25% of the RWY third
- Identify % coverage
- Identify depth (if applicable)
- Identify Runway Condition Code
- Record the most restrictive code in the box to the right

RWYCC

Dry 6 | Wet (Damp) 5 (% Cov. 25/50/75/100) | Frost 5 (% Cov. 25/50/75/100) | Slippery Wet (Below Min Friction Level Classification) 3 (% Cov. 25/50/75/100)

Standing Water/ Slush >3mm 2 (% Cov. 25/50/75/100) | Slush 3mm or less 5 (% Cov. 25/50/75/100) | Dry or Wet snow >3mm 3 / 3mm or less 5 (% Cov. 25/50/75/100) | Dry or wet snow on compacted snow 3 (% Cov. 25/50/75/100)

Depth: 3mm or less | Assessed depth (mm):

Mark depth only for: Standing Water, Slush, Wet or Dry Snow, Any snow on top of compacted snow

-15°C or below 4 (% Cov. 25/50/75/100) | Compacted snow | Above -15°C 3 (% Cov. 25/50/75/100)

Ice 1 (% Cov. 25/50/75/100) | Wet Ice, Water on compacted snow, snow on ice 0 (% Cov. 25/50/75/100)

Situational Awareness Section

- RWY Reduced length — LDA ..... m
- RWY Drifting snow — RWY Loose sand
- RWY Snowbanks L of CL ..... m / R of CL ..... m
- TWY Snowbanks L of CL ..... m / R of CL ..... m
- Asymm. reduced RWY width R/L ..... m FM CL
- TWY ..... Poor
- Apron ..... Poor
- Other .....

RWY Treatment Used?

Time Applied: _____

Chem. Treatment — Liquid / Solid | Plowed | Swept | Sanded | Scarified

Notes .....

State approved CFME Braking coefficient

Mμ not to be transmitted in RWY Condition Report

Adjusted RWYCC

ONLY if Downgrade/ Upgrade Assessments used

Downgrade/ Upgrade Criteria: AIREP | CFME | Other

RCR

Aerodrome / Date & Time / RWY / RWYCC / % Coverage / Depth in mm

Contaminant Type 1st third / Contaminant Type 2nd third / Contaminant Type 3rd third

Plain language remarks .....

Reduced RWY width in m (if applicable)