



RWANDA

CIVIL AVIATION AUTHORITY

ADVISORY CIRCULAR
RCAA-AC- ATS 009

REPORTING OF RUNWAY SURFACE CONDITIONS

PURPOSE

This Advisory Circular (AC) provides guidance to the Air Navigation Services Provider (ANSP) on the dissemination of information regarding water on the movement area and explain the forthcoming Rwandan implementation of the International Civil Aviation Organization (ICAO) Global Reporting Format (GRF) for runway condition reporting.

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SECTION 1: GENERAL

1.1 STATUS OF THIS ADVISORY CIRCULAR

1.2 BACKGROUND

- A. ICAO Standards require runway surface condition to be assessed and the report in a timely and uniform manner. These Standards have been incorporated into the pertinent Rwanda civil aviation regulations.
- B. The applicable organizations include, but are not limited to—
 - 1) Air traffic services
 - 2) Metrological services
 - 3) Aeronautical Information Services

1.3 APPLICABILITY

The guidance in this AC is applicable air navigation service providers, whether as a stand-alone system or incorporated into a safety management system.

1.4 RELATED REGULATIONS

The following regulations are directly applicable to this advisory circular—

- Rwanda Civil Aviation Regulation, Part 25,24 and 22,
- Rwanda Civil Aviation Technical Standards (AIS, ATS and MET)

1.5 RELATED PUBLICATIONS

For further information on this topic, organizations are advised to review the following publications and regulatory requirements—

- 1) ICAO DOC.10066 – PANS- AIM
- 2) ICAO DOC.9981– PANS – Aerodromes
- 3) ICAO DOC.7910– Location Indicators
- 4) ICAO DOC.4444– PANS-ATM

1.6 INTRODUCTION

This Advisory Circular (AC) provides guidance on the dissemination of information of standing water on the movement area and this information will be made available to flight operations personnel, including flight crews and services responsible for pre-flight information

1.7 DISSEMINATION OF INFORMATION ON RUNWAY SURFACE

When provided by the appropriate aerodrome unit;

1.7.1 **The AIS Provider** will distribution the information of standing water on movement area as SNOWTAM Format (Section 2), through Aeronautical Information Fixed Services (AFS).

1.7.2 **The MET Provider** will report the state of the runway condition as supplementary information to METAR/SPECI.

1.7.3 **The ATS Provider** will report the surface runway conditions as follows:

- After an aircraft has established communication with the unit providing approach control service, as specified in RACTS-ATS will transmit to the aircraft the current runway surface conditions, in case of precipitants or other temporary hazards;
- During final approach, the significant changes in runway surface conditions;

SECTION 2: SNOWTAM FORMAT.

(COM heading)	(PRIORITY INDICATOR)	(ADDRESSES)		<E	
	(DATE AND TIME OF FILING)	(ORIGINATOR'S INDICATOR)		<E	
(Abbreviated heading)	(SW* SERIAL NUMBER)		(LOCATION INDICATOR)	DATE/TIME OF ASSESMENT	(OPTIONAL GROUP)
	S	W	.	.	<E

SNOWTAM →	(Serial number)	<E	
Aeroplane performance calculation section			
(AERODROME LOCATION INDICATOR)	M	A)	<E
(DATE/TIME OF ASSESSMENT <i>(Time of completion of assessment in UTC)</i>)	M	B)	→
(LOWER RUNWAY DESIGNATION NUMBER)	M	C)	→
(RUNWAY CONDITION CODE (RWYCC) ON EACH RUNWAY THIRD) <i>(From Runway Condition Assessment Matrix (RCAM) 0, 1, 2, 3, 4, 5 or 6)</i>	M	D)	// →
(PER CENT COVERAGE CONTAMINANT FOR EACH RUNWAY THIRD)	C	E)	// →
(DEPTH (mm) OF LOOSE CONTAMINANT FOR EACH RUNWAY THIRD)	C	F)	// →
(CONDITION DESCRIPTION OVER TOTAL RUNWAY LENGTH) <i>(Observed on each runway third, starting from threshold having the lower runway designation number)</i>	M	G)	// →
COMPACTED SNOW DRY DRY SNOW DRY SNOW ON TOP OF COMPACTED SNOW DRY SNOW ON TOP OF ICE FROST ICE SLUSH STANDING WATER WATER ON TOP OF COMPACTED SNOW WET WET ICE WET SNOW WET SNOW ON TOP OF COMPACTED SNOW WET SNOW ON TOP OF ICE			→
(WIDTH OF RUNWAY TO WHICH THE RUNWAY CONDITION CODES APPLY, IF LESS THAN PUBLISHED WIDTH)	O	H)	<E
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)	→
(SNOWBANKS ON THE RUNWAY) <i>(If present, distance from runway centre line (m) followed by "L", "R" or "LR" as applicable)</i>	O	M)	→
(SNOWBANKS ON A TAXIWAY)	O	N)	→
(SNOWBANKS ADJACENT TO THE RUNWAY)	O	O)	→
(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 to H. 3. Information in the situational awareness section repeated for each runway, taxiway and apron. Repeat as applicable when reported. 4. Words in brackets () not to be transmitted. 5. For letters A) to T) refer to the <i>Instructions for the completion of the SNOWTAM Format</i> , paragraph 1, item b).			

SIGNATURE OF ORIGINATOR *(not for transmission)*

SECTION 3: INSTRUCTIONS FOR THE COMPLETION OF THE SNOWTAM FORMAT

An AIS officer reporting the surface runway condition should take into considerations the following instructions:

3.1 GENERAL

- a) When reporting on more than one runway, repeat Items B to H (aeroplane performance calculation section).
- b) The letters used to indicate items are only used for reference purpose and should not be included in the messages. The letters, M (mandatory), C (conditional) and O (optional) mark the usage and information and shall be included as explained below.
- c) Metric units shall be used and the unit of measurement not reported.
- d) The maximum validity of SNOWTAM is 8 hours. New SNOWTAM shall be issued whenever a new runway condition report is received.
- e) A SNOWTAM cancels the previous SNOWTAM.
- f) The abbreviated heading “TTAAiiii CCCC MMYYGggg (BBB)” is included to facilitate the automatic processing of SNOWTAM messages in computer data banks. The explanation of these symbols is:

TT = data designator for SNOWTAM = SW;

AA = geographical designator for States, e.g. LF = FRANCE, EG = United Kingdom (see *Location Indicators* (Doc 7910), Part 2, Index to Nationality Letters for Location Indicators);

iiii = SNOWTAM serial number in a four-digit group;

CCCC = four-letter location indicator of the aerodrome to which the SNOWTAM refers (see *Location Indicators* (Doc 7910));

MMYYGGgg = date/time of observation/measurement, whereby:

MM = month, e.g. January = 01, December = 12

YY = day of the month

GGgg = time in hours (GG) and minutes (gg) UTC;

(BBB) = optional group for correction, in the case of an error, to a SNOWTAM message previously disseminated with the same serial number = COR.

Note 1. — Brackets in (BBB) are used to indicate that this group is optional.

Note 2. — The information groups are separated by a space, as illustrated above.

- g) The text “SNOWTAM” in the SNOWTAM Format and the SNOWTAM serial number in a four-digit group shall be separated by a space, for example: SNOWTAM 0124.
- h) For readability purposes for the SNOWTAM message, include a line feed after the SNOWTAM serial number, after Item A, and after the aeroplane performance calculation section.
- i) When reporting on more than one runway, repeat the information in the aeroplane performance calculation section from the date and time of assessment for each runway before the information in the situational awareness section.
- j) Mandatory information is:
 - 1) AERODROME LOCATION INDICATOR,
 - 2) DATE AND TIME OF ASSESSMENT,
 - 3) LOWER RUNWAY DESIGNATOR NUMBER,
 - 4) RUNWAY CONDITION CODE FOR EACH RUNWAY THIRD, and
 - 5) CONDITION DESCRIPTION FOR EACH RUNWAY THIRD (when runway condition code (RWYCC) is reported 1–5)

3.2 AEROPLANE PERFORMANCE CALCULATION SECTION

Item A — Aerodrome location indicator (four-letter location indicator).

Item B — Date and time of assessment (eight-figure date/time group giving time of observation as month, day, hour and minute in UTC).

Item C — Lower runway designator number (nn[L] or nn[C] or nn[R]).

Note. — Only one runway designator is inserted for each runway and always the lower number.

Item D — Runway condition code for each runway third. Only one digit (0, 1, 2, 3, 4, 5 or 6) is inserted for each runway third, separated by an oblique stroke (n/n/n).

Item E — Per cent coverage for each runway third. When provided, insert 25, 50, 75 or 100 for each runway third, separated by an oblique stroke ([n]nn/[n]nn/[n]nn).

Note 1. — *This information is provided only when the runway condition for each runway third (Item D) has been reported as other than 6 and there is a condition description for each runway third (Item G) that has been reported other than DRY.*

Note 2. — *When the conditions are not reported, this will be signified by the insertion of “NR” for the appropriate runway third(s).*

Item F — Depth of loose contaminant for each runway third. When provided, insert in millimeters for each runway third, separated by an oblique stroke (nn/nn/nn or nnn/nnn/nnn).

Note 1. — *This information is only provided for the following contamination types:*

- *standing water, values to be reported 04, then assessed value. Significant changes 3 mm up to and including 15 mm;*
- *Slush, values to be reported 03, then assessed value. Significant changes 3 mm up to and including 15 mm;*
- *Wet snow, values to be reported 03, then assessed value. Significant changes 5 mm; and*
- *Dry snow, values to be reported 03, then assessed value. Significant changes 20 mm.*

Note 2. — *When the conditions are not reported, this will be signified by the insertion of “NR” for the appropriate runway third(s).*

Item G — Condition description for each runway third. Insert any of the following condition descriptions for each runway third, separated by an oblique stroke.

COMPACTED SNOW
DRY SNOW
DRY SNOW ON TOP OF COMPACTED SNOW
DRY SNOW ON TOP OF ICE
FROST
ICE
SLUSH
STANDING WATER
WATER ON TOP OF COMPACTED SNOW
WET
WET ICE
WET SNOW
WET SNOW ON TOP OF COMPACTED SNOW
WET SNOW ON TOP OF ICE
DRY (only reported when there is no contaminant)

Note. — *When the conditions are not reported, this will be signified by the insertion of “NR” for the appropriate runway third(s).*

Item H — Width of runway to which the runway condition codes apply. Insert the width in metres if less than the published runway width.

3.3 SITUATIONAL AWARENESS SECTION

Note 1. — *Elements in the situational awareness section end with a full stop.*

Note 2. — *Elements in the situational awareness section for which no information exists, or where the conditional circumstances for publication are not fulfilled, are left out completely.*

Item I — Reduced runway length. Insert the applicable runway designator and available length in meters (example: RWY nn [L] or nn [C] or nn [R] REDUCED TO [n]nnn).

Note. — *This information is conditional when a NOTAM has been published with a new set of declared distances.*

Item J — drifting snow on the runway. When reported, insert “DRIFTING SNOW”.

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- Item K** — Loose sand on the runway. When loose sand is reported on the runway, insert the lower runway designator and with a space “LOOSE SAND” (RWY nn or RWY nn[L] or nn[C] or nn[R] LOOSE SAND).
- Item L** — Chemical treatment on the runway. When chemical treatment has been reported applied, insert the lower runway designator and with a space “CHEMICALLY TREATED” (RWY nn or RWY nn[L] or nn[C] or nn[R] CHEMICALLY TREATED).
- Item M** — Snow banks on the runway. When snow banks are reported present on the runway, insert the lower runway designator and with a space “SNOW BANK” and with a space left “L” or right “R” or both sides “LR”, followed by the distance in metres from centre line separated by a space FM CL (RWY nn or RWY nn[L] or nn[C] or nn[R] SNOW BANK Lnn or Rnn or LRnn FM CL).
- Item N** — Snow banks on a taxiway. When snow banks are present on a taxiway, insert the taxiway designator and with a space “SNOW BANK” (TWY [nn]n SNOW BANK).
- Item O** — Snow banks adjacent to the runway. When snow banks are reported present penetrating the height profile in the aerodrome snow plan, insert the lower runway designator and “ADJ SNOW BANKS” (RWY nn or RWY nn[L] or nn[C] or nn[R] ADJ SNOW BANKS).
- Item P** — Taxiway conditions. When taxiway conditions are reported as poor, insert the taxiway designator followed by a space “POOR” (TWY [n or nn] POOR or ALL TWYS POOR).
- Item R** — Apron conditions. When apron conditions are reported as poor, insert the apron designator followed by a space “POOR” (APRON [nnnn] POOR or ALL APRONS POOR).
- Item S** — Measured friction coefficient. Where reported, insert the measured friction coefficient and friction measuring device.

Item T — plain language remarks.



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