GLOBAL REPORTING FORMAT FOR RUNWAY SURFACE CONDITIONS

NOTE: The ICAO implementation date is 4th November 21, however EASA and Canada applicability date is 12th August 21 and Iceland will implement it on 1st of October 21.

GENERAL

New ICAO procedures for assessing and reporting runway surface conditions, commonly known as the Global Reporting Format (GRF), will be implemented. These procedures aim at harmonising internationally the methodology for assessing runway conditions, the reporting channels as well as the operational use for determining the required take-off and landing distances. The assessment and reporting of the condition of the movement areas and the associated installations are generally required to provide pilots with the necessary information for the safe and efficient operation of their aircraft. In future, the current runway conditions will, as required, be disseminated as a Runway Condition Report (RCR) via ATIS and radiotelephony as well as by means of SNOWTAM, if applicable. The new procedures are relevant to aerodrome operators, air traffic services and aircraft operators.

DESCRIPTION OF PROCEDURES

The GRF methodology implies the following:

– New terms and definitions: runway condition assessment matrix (RCAM), runway condition code (RWYCC), runway condition report (RCR).

– For the RCR, the following elements will be transmitted in the GRF:

  • runway condition code (RWYCC),

  • type of runway contamination,

  • depth, and coverage

  for each third of the runway, in the order from the threshold having the lower runway designation number.

– A new definition of SNOWTAM, which now also includes hazards due to (standing > 3 mm) water on the movement areas. This means that it may be necessary to publish a SNOWTAM message not only in the winter season. There will be a new SNOWTAM form and a new SNOWTAM message.

– Determination of the runway condition by means of the RWYCC, which is derived from the RCAM, including the downgrading and upgrading criteria.

– The maximum validity of a SNOWTAM was changed to 8 hours. After these 8 hours, a new SNOWTAM shall be issued until a message describing the surface condition as WET or DRY can be issued.

Description of the procedural steps

a. The aerodrome operator shall assess the runway condition for each third of the runway and create an RCR. This report contains the RWYCC and further information characterising the

runway condition (depth, type and coverage of contamination). The RWYCC is derived from the RCAM.

b. The RCR will be transmitted to the relevant local air traffic service (ATS) provider. ATS shall disseminate the information via ATIS, D-ATIS or radiotelephony, as appropriate. SNOWTAM will be disseminated on the basis of this information and in accordance with ICAO regulations.

c. Aircraft operators will use the information received for aircraft performance calculations and to determine the required take-off and landing distances. Whenever the runway condition encountered is not as good as currently reported, the pilot shall inform ATS by transmitting an air-report (AIREP).

d. ATS shall forward AIREPs received to the aerodrome operator who will then reassess the runway condition and initiate a downgrade of the RWYCC, if necessary.

RUNWAY CONDITION ASSESSMENT MATRIX (RCAM)

Assessment criteria		Downgrade assessment criteria	
Runway condition code (RWYCC)	**Runway surface description**	**Aircraft deceleration or directional control observation**	**Special air-report of RWY braking action**
6	– DRY	–	–
5	– FROST – WET (The runway surface is covered by any visible dampness or water up to and including 3 mm depth) **Up to and including 3 mm depth:** – SLUSH – DRY SNOW – WET SNOW	Braking deceleration is normal for the wheel braking effort applied and directional control is normal.	GOOD
4	**-15°C and lower outside air temperature:** – COMPACTED SNOW	Braking deceleration or directional control is between Good and Medium.	GOOD to MEDIUM

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Assessment criteria		Downgrade assessment criteria	
Runway condition code (RWYCC)	**Runway surface description**	**Aircraft deceleration or directional control observation**	**Special air-report of RWY braking action**
3	– WET (“slippery wet” runway) – DRY SNOW or WET SNOW (any depth) ON TOP OF COMPACTED SNOW **More than 3mm depth:** – DRY SNOW – WET SNOW **Higher than -15°C outside air temperature:** – COMPACTED SNOW	Braking deceleration is noticeably reduced for the wheel braking effort applied or directional control is noticeably reduced.	MEDIUM
2	**More than 3mm depth of water or slush:** – STANDING WATER – SLUSH	Braking deceleration or directional control is between Medium and Poor.	MEDIUM to POOR
1	– ICE	Braking deceleration is significantly reduced for the wheel braking effort applied or directional control is significantly reduced.	POOR
0	– WET ICE – WATER ON TOP OF COMPACTED SNOW – DRY SNOW or WET SNOW ON TOP OF ICE	Braking deceleration is minimal to non-existent for the wheel braking effort applied or directional control is uncertain.	Less than POOR

NOTE: States that follow EASA Regulations additionally use SPECIALLY PREPARED WINTER RUNWAY for runway condition code 4 and the descriptor WET for runway condition code 3 is replaced by SLIPPERY WET.

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SNOWTAM

Validity

The maximum validity period of SNOWTAM is reduced from 24 hours to 8 hours. If a SNOWTAM has not been replaced within this period, it will be invalidated automatically.

Format

SNOWTAM are issued in accordance with the new SNOWTAM format, as shown below.

Inclusion of the different Items is either mandatory (M), conditional (C) or optional (O) as indicated.

When reporting on more than one runway, the Items B to H are repeated for each runway.

NOTE: The letters used to indicate the SNOWTAM Items are only used for reference purposes and will not be included in the SNOWTAM messages.

Content

Item A	The 4-letter ICAO location indicator of the aerodrome.
Item B	Date and time of the assessment (8-figure date/time group giving time of observation as month, day, hours and minutes in UTC).
Item C	The lower runway designator number.
Item D	RWYCC. One digit (from 0 to 6) is inserted for each runway third, separated by oblique strokes.
Item E	Extent of runway contamination in percent for each runway third, separated by oblique strokes. *NOTE 1: This information is only provided when the RWYCC for each runway third (Item D) has been reported 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 is indicated by the insertion of "NR" for the relevant runway third.*
Item F	Depth of loose contaminant in millimetres for each runway third, separated by oblique strokes. *NOTE 1: This information is only provided for the following contamination types: standing water, slush, wet or dry snow.* *NOTE 2: mm (4mm for standing water) is the reported value if the assessed value is 3mm (4mm for standing water) or less. Otherwise, the assessed value will be reported.* *NOTE 3: When the conditions are not reported, this is indicated by the insertion of "NR" for the relevant runway third.*

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Item G	Condition description for each runway third, separated by oblique strokes. Any of the following conditions can be used: – COMPACTED SNOW – DRY SNOW – DRY SNOW ON TOP OF COMPACTED SNOW – DRY SNOW ON TOP OF ICE – FROST – ICE – SLIPPERY WET – SLUSH – SPECIALLY PREPARED WINTER RUNWAY – 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 *NOTE 1: "DRY" will only be reported if there is no contaminant.* *NOTE 2: When the conditions are not reported, this is indicated by the insertion of "NR" for the relevant runway third.*
Item H	Width of runway in meters to which the RWYCC apply, if less than the published runway width.
Item I	Reduced runway length in meters ("RWY nn REDUCED TO nnnn.").
Item J	Drifting snow on the runway ("RWY nn DRIFTING SNOW.").
Item K	Loose sand on the runway ("RWY nn LOOSE SAND.").
Item L	Chemical treatment on the runway ("RWY nn CHEMICALLY TREATED.").
Item M	Snow banks on the runway, with an indication of the distance in metres left, right or both from the centerline ("RWY nn SNOW BANK Lnn FM CL." or "RWY nn SNOW BANK Rnn FM CL." or "RWY nn SNOW BANK LRnn FM CL.").

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Item N	Snow banks on a taxiway (“TWY nn SNOW BANK.”).
Item O	Snow banks adjacent to the runway that penetrate the height profile in the aerodrome snow plan (“RWY nn ADJ SNOW BANKS.”).
Item P	Taxiway conditions reported as poor (“TWY nn POOR.” or “ALL TWYS POOR.”).
Item R	Apron conditions reported as poor (“APRON nnn POOR.” or “ALL APRONS POOR.”).
Item S	Measured friction coefficient. States that follow EASA Regulations do not report measured friction coefficient. ‘NR’ is inserted for Item S instead.
Item T	Plain language remarks.

Examples

Example 1:

GG EADBZQZX EADNZQZX EADSZQZX

170100 EADDYNYX

SWEA0149 EADD 02170055

SNOWTAM 0149

EADD

02170055 09L 5/5/5 100/100/100 NR/NR/03 WET/WET/WET SNOW)

Example 2:

GG EADBZQZX EADNZQZX EADSZQZX

170140 EADDYNYX

SWEA0150 EADD 02170135

(SNOWTAM 0150

EADD

02170055 09L 5/5/5 100/100/100 NR/NR/03 WET/WET/WET SNOW

02170135 09R 5/2/2 100/50/75 NR/06/06 WET/SLUSH/SLUSH)

Example 3:

GG EADBZQZX EADNZQZX EADSZQZX

170229 EADDYNYX

Example 3: (continued)

SWEA0151 EADD 02170225

(SNOWTAM 0151

EADD

02170055 09L 5/5/5 100/100/100 NR/NR/03 WET/WET/WET SNOW

02170135 09R 5/2/2 100/50/75 NR/06/06 WET/SLUSH/SLUSH

02170225 09C 2/3/3 75/100/100 06/12/12 SLUSH/WET SNOW/WET SNOW

RWY 09L SNOWBANK R20 FM CL. RWY 09R ADJ SNOWBANKS. TWY B POOR. APRON NORTH POOR)

Example 4:

GG EADBZQZX EADNZQZX EADSZQZX

170350 EADDYNYX

SWEA0152 EADD 02170345

(SNOWTAM 0152

EADD

02170345 09L 5/5/5 100/100/100 NR/NR/03 WET/WET/SLUSH

02170134 09R 5/2/2 100/50/75 NR/06/06 WET/SLUSH/SLUSH

02170225 09C 2/3/3 75/100/100 06/12/12 SLUSH/WET SNOW/WET SNOW DRIFTING SNOW

RWY 09L LOOSE SAND. RWY 09R CHEMICALLY TREATED. RWY 09C CHEMICALLY TREATED.)

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SNOWTAM Format

(COM heading)	(Priority indicator	(Addresses)		<≡
	(Date and time of filing)	(Originator's indicator)		<≡
(Abbreviated heading)	(SWAA* SERIAL NUMBER) S W * *	(LOCATION INDICATORS)	DATE-TIME OF ASSESSMENT	(OPTIONAL GROUP) <≡(
SNOWTAM →	(Serial number) <≡			

Aeroplane performance calculation section			
(AERODROME LOCATION INDICATORS)	M	A)	<≡
(DATE/TIME OF ASSESSMENT *(Time of completion of assessment in UTC)*)	M	B)	→
(LOWER RUNWAY DESIGNATION NUMBER)	M	C)	→
(RUNWAY CONDITION CODE (RWYCC) ON EACH RUNWAY THIRD) (From Runway Condition Assessment Matrix (RCAM) 0, 1, 2, 3, 4, 5 or 6)	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 (Observed on each runway third, starting from threshold having the lower runway designation number) COMPACTED SNOW DRY DRY SNOW DRY SNOW ON TOP OF COMPACTED SNOW DRY SNOW ON TOP OF ICE FROST ICE SLIPPERY WET SLUSH SPECIALLY PREPARED WINTER RUNWAY 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	M	G)	// →
(WIDTH OF RUNWAY TO WHICH THE RUNWAY CONDITIONS CODES APPLY, IF LESS THAN THE PUBLISHED WIDTH)	O	H)	<≡≡
Situational awareness section			
(REDUCED RUNWAY LENGTH, IF LESS THAN THE PUBLISHED LENGTH (m))	O	I)	→
(DRIFTING SNOW ON THE RUNWAY)	O	J)	→
(LOOSE SAND ON THE RUNWAY)	O	K)	→
(CHEMICAL TREATMENT ON RUNWAY)	O	L)	→
(SNOWBANKS ON THE RUNWAY) (If present, distance from runway centreline (m) followed by 'L', 'R' or 'LR' as applicable))	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 *Instructions for the completion of the SNOWTAM format, paragraph 1, item b).*

SIGNATURE OF ORIGINATOR *(not for transmission)*