



International Civil Aviation Organization

ICAO The Ninth Meeting of the APANPIRG ATM Sub-Group (ATM/SG/9)

Video Teleconference, 01 – 05 November 2021

Agenda Item 5: ATM Systems (Modernisation, Seamless ATM, CNS, ATFM)

AMENDMENTS TO ANNEXES AND PANS RELATING TO THE GLOBAL REPORTING FORMAT FOR RUNWAY SURFACE CONDITIONS

(Presented by the Secretariat)

SUMMARY

This paper reminds the meeting of the applicability, from 04 November 2021, of ICAO provisions in various Annexes and PANS for the reporting of runway surface conditions using the Global Reporting Format (GRF), SNOWTAM and revised ATC phraseology.

1. INTRODUCTION

1.1 In 2016 All ICAO member States were informed through State Letters of the adoption of Standards and Recommended Practices (SARPS) and the approval of Procedures for Air Navigation Services (PANS) for the implementation of the new Global Reporting Format (GRF) for reporting runway surface conditions, and associated changes to ATC and AIS procedures, applicable from 05 November 2020.

1.2 ICAO State Letter 2020/073 dated 30 July 2020, informed States of the adoption of amendments to various Annexes, and the approval of amendments to various PANS.

2. DISCUSSION

Amendment 42 to Annex 15, Amendment 10 to PANS-ATM and Amendment 2 to PANS-AIM

2.1 Amendment 42 to Annex 15 *Aeronautical Information Services*, Amendment 10 to ICAO Doc 4444 *PANS-Air Traffic Management (PANS-ATM)* and Amendment 2 to ICAO Doc 10066 *PANS-Aeronautical Information Management (PANS-AIM)*, approved on 19 June 2020 and applicable from 04 November 2021, were among a number of amendments to relevant Annexes and PANS postponing the applicability date of provisions related to the enhanced global reporting format (GRF) for assessing and reporting runway surface conditions:

- *Annex 3 Meteorological Service for International Air Navigation;*
- *Annex 6 Operation of Aircraft Parts I and II;*
- *Annex 8 Airworthiness of Aircraft;*
- *Annex 14 Aerodromes Volume I;*
- *Annex 15 Aeronautical Information Service;*
- *Doc 4444 PANS-ATM (Amendment 7B);*

- *Doc 9981 PANS-Aerodromes*; and
- *Doc 10066 PANS-Aeronautical Information Management (AIM)*.

2.2 The text of Amendments to Annex 15, PANS-ATM and PANS-AIM is provided in the extract from the State Letter in **Attachment A**. The meeting is invited to note the amendment to the applicability of relevant definitions, and provisions for essential information on aerodrome conditions, ATC phraseology, and pilot reports of braking action related to the assessment and reporting of runway surface conditions:

- *as of 4 November 2021* replacing *as of 5 November 2020* (multiple cases);
- *until 3 November 2021* replacing *until 4 November 2020* (multiple cases).

Guidance Material and other Information Sources

2.3 ICAO guidance is provided in Circular 355 – *Assessment, Measurement and Reporting of Runway Surface Conditions*.

2.4 ICAO established a dedicated web resource on GRF, including links to webinars, seminars and symposiums discussing the GRF, SNOWTAM, and ATC procedures:

<https://www.icao.int/safety/Pages/GRF.aspx>

2.5 The GRF is further discussed in ATM/SG/9 WP/33 – *AOP Subgroup Outcomes*.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matters as appropriate.

.....

ANNEX 15 — AERONAUTICAL INFORMATION SERVICES

...

CHAPTER 1. GENERAL

...

1.1 Definitions

...

SNOWTAM.[†] A special series NOTAM notifying the presence or removal of hazardous conditions due to snow, ice, slush or standing water associated with snow, slush and ice on the movement area, by means of a specific format.

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 water associated with snow, slush, ice or frost on the movement area.

† Applicable until ~~4~~ 3 November ~~2020~~ 2021.

†† Applicable as of ~~5~~ 4 November ~~2020~~ 2021.

ATTACHMENT H to State letter AN 10/1.1, AN 11/1.3.33, AN 11/6.3.32, AN 3/5.13, AN 4/1.2.29, AN 2/2.7, AN 13/2.1, AN 4/27 and AN 2/33-20/73

**AMENDMENTS TO THE
PANS-ATM (DOC 4444); PANS-AERODROMES (DOC 9981);
AND PANS-AIM (DOC 10066)**

NOTES ON THE PRESENTATION OF THE AMENDMENTS

The text of the amendment is arranged to show deleted text with a line through it and new text highlighted with grey shading, as shown below:

~~Text to be deleted is shown with a line through it.~~

text to be deleted

New text to be inserted is highlighted with grey shading.

new text to be inserted

~~Text to be deleted is shown with a line through it~~
followed by the replacement text which is highlighted
with grey shading.

new text to replace existing text

H-2

**TEXT OF AMENDMENTS TO THE
INTERNATIONAL STANDARDS
AND RECOMMENDED PRACTICES
TO THE CONVENTION ON INTERNATIONAL CIVIL AVIATION
TO THE PANS-ATM (DOC 4444), PANS-AERODROMES (DOC 9981)
AND PANS-AIM (DOC 10066)**

***PROCEDURES FOR AIR NAVIGATION SERVICES —
AIR TRAFFIC MANAGEMENT (PANS-ATM, DOC 4444)***

...

Chapter 1

DEFINITIONS

...

Situation display. An electronic display depicting the position and movement of aircraft and other information as required.

Slush.[†] Water-saturated snow which with a heel-and-toe slap-down motion against the ground will be displaced with a splatter; specific gravity: 0.5 up to 0.8.

Note.— Combinations of ice, snow and/or standing water may, especially when rain, rain and snow, or snow is falling, produce substances with specific gravities in excess of 0.8. These substances, due to their high water/ice content, will have a transparent rather than a cloudy appearance and, at the higher specific gravities, will be readily distinguishable from slush.

Snow (on the ground).[†]

- a) *Dry snow.* Snow which can be blown if loose or, if compacted by hand, will fall apart upon release; specific gravity: up to but not including 0.35.
- b) *Wet snow.* Snow which, if compacted by hand, will stick together and tend to or form a snowball; specific gravity: 0.35 up to but not including 0.5.
- c) *Compacted snow.* Snow which has been compressed into a solid mass that resists further compression and will hold together or break up into lumps if picked up; specific gravity: 0.5 and over.

Special VFR flight. A VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC.

...

4.12 REPORTING OF OPERATIONAL AND

[†] Applicable until 4-3 November 2020-2021.

H-3

METEOROLOGICAL INFORMATION

...

4.12.3 Contents of special air-reports

4.12.3.1 Special air-reports shall be made by all aircraft whenever the following conditions are encountered or observed:

- a) moderate or severe turbulence; or
- b) moderate or severe icing; or
- c) severe mountain wave; or
- d) thunderstorms, without hail that are obscured, embedded, widespread or in squall lines; or
- e) thunderstorms, with hail that are obscured, embedded, widespread or in squall lines; or
- f) heavy duststorm or heavy sandstorm; or
- g) volcanic ash cloud; or
- h) pre-eruption volcanic activity or a volcanic eruption; or
- i) As of 5-4 November 2020 2021, runway braking action encountered is not as good as reported.

Note.— Pre-eruption volcanic activity in this context means unusual and/or increasing volcanic activity which could presage a volcanic eruption.

...

4.12.7 Forwarding of braking action information

(Applicable as of 5-4 November 2020 2021)

When receiving special air-reports by voice communications concerning braking action encountered that is not as good as that reported, air traffic service units shall forward them without delay to the appropriate aerodrome operator.

...

H-4

Chapter 7

PROCEDURES FOR AERODROME CONTROL SERVICE

...

7.5 ESSENTIAL INFORMATION ON AERODROME CONDITIONS

...

7.5.2 Essential information on aerodrome conditions shall include information relating to the following:

- a) construction or maintenance work on, or immediately adjacent to the movement area;
- b) rough or broken surfaces on a runway, a taxiway or an apron, whether marked or not;
- c) snow, slush or ice on a runway, a taxiway or an apron [*applicable until 4³ November 2020-2021*];
- c) water, snow, slush, ice or frost on a runway, a taxiway or an apron [*applicable as of 5⁴ November 2020 2021*];
- d) water on a runway, a taxiway or an apron [*applicable until 4³ November 2020-2021*];
- d) anti-icing or de-icing liquid chemicals or other contaminant on a runway, taxiway or apron [*applicable as of 5⁴ November 2020 2021*];
- e) snow banks or drifts adjacent to a runway, a taxiway or an apron;
- f) other temporary hazards, including parked aircraft and birds on the ground or in the air;
- g) failure or irregular operation of part or all of the aerodrome lighting system;
- h) any other pertinent information.

Note.— Up-to-date information on the conditions on aprons may not always be available to the aerodrome control tower. The responsibility of the aerodrome control tower in relation to aprons is, with respect to the provisions of 7.5.1 and 7.5.2, limited to the transmission to aircraft of the information which is provided to it by the authority responsible for the aprons.

...

H-5

Chapter 11

AIR TRAFFIC SERVICES MESSAGES

...

11.4.3.4 MESSAGES CONTAINING INFORMATION ON AERODROME CONDITIONS

Note.— Provisions regarding the issuance of information on aerodrome conditions are contained in Chapter 7, 7.5.

11.4.3.4.1 Whenever information is provided on aerodrome conditions, this shall be done in a clear and concise manner so as to facilitate appreciation by the pilot of the situation described. It shall be issued whenever deemed necessary by the controller on duty in the interest of safety, or when requested by an aircraft. If the information is provided on the initiative of the controller, it shall be transmitted to each aircraft concerned in sufficient time to enable the pilot to make proper use of the information.

11.4.3.4.2 Until ~~4-3~~ November ~~2020-2021~~, information that water is present on a runway shall be transmitted to each aircraft concerned, on the initiative of the controller, using the following terms:

DAMP — the surface shows a change of colour due to moisture.

WET — the surface is soaked but there is no standing water.

STANDING WATER — for aeroplane performance purposes, a runway where more than 25 per cent of the runway surface area (whether in isolated areas or not) within the required length and width being used is covered by water more than 3 mm deep.

11.4.3.4.2 As of ~~5-4~~ November ~~2020~~ ~~2021~~, whenever information is provided concerning runway surface conditions that may adversely affect aircraft braking action, the following terms shall be used, as necessary:

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

H-6

WET ICE

WET SNOW

WET SNOW ON TOP OF COMPACTED SNOW

WET SNOW ON TOP OF ICE

11.4.3.4.3 As of ~~5-4~~ November ~~2020~~ 2021, appropriate ATS units shall have available for transmission to aircraft, upon request, the Runway Condition Report information. This shall be passed to aircraft in the order of the direction of landing or take-off.

...

Chapter 12

PHRASEOLOGIES

...

12.3 ATC PHRASEOLOGIES

12.3.1 General

CIRCUMSTANCES

Phraseologies

...

12.3.1.11 AERODROME INFORMATION
(APPLICABLE UNTIL
~~4-3~~ November ~~2020~~ 2021)

- | |
|--|
| a) [(location)] RUNWAY SURFACE CONDITION RUNWAY (number) (condition); |
| b) [(location)] RUNWAY SURFACE CONDITION RUNWAY (number) NOT CURRENT; |
| c) LANDING SURFACE (condition); |
| d) CAUTION CONSTRUCTION WORK (location); |
| e) CAUTION (specify reasons) RIGHT (or LEFT), (or BOTH SIDES) OF RUNWAY [number]; |
| f) CAUTION WORK IN PROGRESS (or OBSTRUCTION) (position and any necessary advice); |
| g) RUNWAY REPORT AT (observation time) RUNWAY (number) (type of precipitant) UP TO (depth of deposit) MILLIMETRES. ESTIMATED SURFACE FRICTION GOOD (or MEDIUM TO GOOD, or MEDIUM, or MEDIUM TO POOR, or POOR); |

H-7

12.3.1.11 AERODROME INFORMATION
(APPLICABLE AS OF
5-4 NOVEMBER 2020 2021)

Note 1.— See 11.4.3.4.4 for requirements for passing RCR to pilots.

Note 2.— This information is provided for runway thirds or the full runway, as applicable.

- h) BRAKING ACTION REPORTED BY (*aircraft type*) AT (*time*) GOOD (*or* MEDIUM to GOOD, *or* MEDIUM, *or* MEDIUM to POOR, *or* POOR);
 - i) RUNWAY (*or* TAXIWAY) (*number*) WET [*or* STANDING WATER, *or* SNOW REMOVED (*length and width as applicable*), *or* TREATED, *or* COVERED WITH PATCHES OF DRY SNOW (*or* WET SNOW, *or* COMPACTED SNOW, *or* SLUSH, *or* FROZEN SLUSH, *or* ICE, *or* WET ICE, *or* ICE UNDERNEATH, *or* ICE AND SNOW, *or* SNOWDRIFTS, *or* FROZEN RUTS AND RIDGES)];
 - j) TOWER OBSERVES (*weather information*);
 - k) PILOT REPORTS (*weather information*).
-
- a) [(*location*)] RUNWAY (*number*) SURFACE CONDITION [CODE (*three digit number*)] followed as necessary by:
 - 1) ISSUED AT (*date and time UTC*);
 - 2) DRY, *or* WET ICE, *or* WATER ON TOP OF COMPACTED SNOW, *or* DRY SNOW, *or* DRY SNOW ON TOP OF ICE, *or* WET SNOW ON TOP OF ICE, *or* ICE, *or* SLUSH, *or* STANDING WATER, *or* COMPACTED SNOW, *or* WET SNOW, *or* DRY SNOW ON TOP OF COMPACTED SNOW, *or* WET SNOW ON TOP OF COMPACTED SNOW, *or* WET, *or* FROST;
 - 3) DEPTH ((*depth of deposit*) MILLIMETRES *or* NOT REPORTED);

H-8

- 4) COVERAGE ((number) PER CENT or NOT REPORTED);
- 5) ESTIMATED SURFACE FRICTION (GOOD, or GOOD TO MEDIUM, or MEDIUM, or MEDIUM TO POOR, or POOR, or LESS THAN POOR);
- 6) AVAILABLE WIDTH (number) METRES;
- 7) LENGTH REDUCED TO (number) METRES;
- 8) DRIFTING SNOW;
- 9) LOOSE SAND;
- 10) CHEMICALLY TREATED;
- 11) SNOWBANK (number) METRES [LEFT, or RIGHT, or LEFT AND RIGHT] [OF or FROM] CENTRELINE;
- 12) TAXIWAY (identification of taxiway) SNOWBANK (number) METRES [LEFT, or RIGHT, or LEFT AND RIGHT] [OF or FROM] CENTRELINE;
- 13) ADJACENT SNOWBANKS;
- 14) TAXIWAY (identification of taxiway) POOR;
- 15) APRON (identification of apron) POOR;
- 16) Plain language remarks;
- b) [*(location)*] RUNWAY SURFACE CONDITION RUNWAY (*number*) NOT CURRENT;
- c) LANDING SURFACE (*condition*);
- d) CAUTION CONSTRUCTION WORK (*location*);
- e) CAUTION (*specify reasons*) RIGHT (*or* LEFT), (*or* BOTH SIDES) OF RUNWAY [*(number)*];
- f) CAUTION WORK IN PROGRESS (*or* OBSTRUCTION) (*position and any necessary advice*);

H-9

- g) BRAKING ACTION REPORTED BY (*aircraft type*) AT (*time*) GOOD (*or* GOOD TO MEDIUM, *or* MEDIUM, *or* MEDIUM TO POOR, *or* POOR);
- h) TAXIWAY (*identification of taxiway*) WET [*or* STANDING WATER, *or* SNOW REMOVED (*length and width as applicable*), *or* CHEMICALLY TREATED, *or* COVERED WITH PATCHES OF DRY SNOW (*or* WET SNOW, *or* COMPACTED SNOW, *or* SLUSH, *or* FROZEN SLUSH, *or* ICE, *or* WET ICE, *or* ICE UNDERNEATH, *or* ICE AND SNOW, *or* SNOWDRIFTS, *or* FROZEN RUTS AND RIDGES *or* LOOSE SAND)];
- i) TOWER OBSERVES (*weather information*);
- j) PILOT REPORTS (*weather information*).

...

Appendix 1

**INSTRUCTIONS FOR AIR-REPORTING
BY VOICE COMMUNICATIONS**

1. Reporting instructions

...

MODEL AIREP SPECIAL

| ITEM | PARAMETER | TRANSMIT IN TELEPHONY as appropriate |
|------|-----------|--------------------------------------|
|------|-----------|--------------------------------------|

...

| | | |
|-----------|---|---|
| Section 3 | <p>9</p> <p>Phenomenon encountered or observed, prompting a special air-report:</p> <ul style="list-style-type: none"> • Moderate turbulence • Severe turbulence • Moderate icing • Severe icing • Severe mountainwave • Thunderstorms without hail • Thunderstorms with hail • Heavy dust/sandstorm • Volcanic ash cloud • Pre-eruption volcanic activity or volcanic eruption <p><i>Applicable as of 5-4 November 2020 2021</i></p> <p>Runway braking action</p> <ul style="list-style-type: none"> • Good • Good to Medium | <p>TURBULENCE MODERATE TURBULENCE SEVERE ICING MODERATE ICING SEVERE MOUNTAINWAVE SEVERE THUNDERSTORMS THUNDERSTORMS WITH HAIL DUSTSTORM <i>or</i> SANDSTORM HEAVY VOLCANIC ASH CLOUD PRE-ERUPTION VOLCANIC ACTIVITY <i>or</i> VOLCANIC ERUPTION</p> <p><i>Applicable as of 5-4 November 2020 2021</i></p> <p>GOOD GOOD TO MEDIUM</p> |
|-----------|---|---|

H-10

| | | |
|--|--|--|
| | <ul style="list-style-type: none"> • Medium • Medium to Poor • Poor • Less than Poor | <p>MEDIUM MEDIUM TO POOR POOR LESS THAN POOR</p> |
|--|--|--|

...

Section 3

Item 9 — PHENOMENON PROMPTING A SPECIAL AIR-REPORT. Report one of the following phenomena encountered or observed:

...

- Good braking action as “BRAKING ACTION GOOD”
[applicable as of 5-4 November 2020 2021]
- Good to medium braking action as “BRAKING ACTION GOOD TO MEDIUM”
[applicable as of 5-4 November 2020 2021]
- Medium braking action as “BRAKING ACTION MEDIUM”
[applicable as of 5-4 November 2020 2021]
- Medium to poor braking action as “BRAKING ACTION MEDIUM TO POOR”
[applicable as of 5-4 November 2020 2021]
- Poor braking action as “BRAKING ACTION POOR”
[applicable as of 5-4 November 2020 2021]
- Less than poor braking action as “BRAKING ACTION LESS THAN POOR”
[applicable as of 5-4 November 2020 2021]

The following specifications apply: *[applicable as of 5-4 November 2020 2021]*

Good — Braking deceleration is normal for the wheel braking effort applied and directional control is normal.

Good to medium — Braking deceleration or directional control is between Good and Medium.

Medium — Braking deceleration is noticeably reduced for the wheel braking effort applied or directional control is noticeably reduced.

Medium to poor — Braking deceleration or directional control is between Medium and Poor.

Poor — Braking deceleration is significantly reduced for the wheel braking effort applied or directional control is significantly reduced.

Less than poor — Braking deceleration is minimal to non-existent for the wheel braking effort applied or directional control is uncertain.

...

H-11

***PROCEDURES FOR AIR NAVIGATION SERVICES —
AERODROMES (PANS-AERODROMES, DOC 9981)***

...

TABLE OF CONTENTS

...

PART II — AERODROME OPERATIONAL MANAGEMENT

| | |
|--|-------------------|
| Chapter 2. Reporting format using standard runway condition report (RCR) (applicable on 5-4 November 2020-2021) | II-2-1 |
| 2.1 Runway surface condition assessment and reporting | II-2-1 |
| 2.2 Aerodrome movement area maintenance | II-2-12 |
| Attachment to Chapter 2 Methods of assessing runway surface condition (applicable on 5-4 November 2020-2021) | II-2-Att-1 |

...

...

PART II – AERODROME OPERATIONAL MANAGEMENT

Chapter 2

(applicable on 5-4 November 2020-2021)

**REPORTING FORMAT USING
STANDARD RUNWAY CONDITION REPORT (RCR)**

**2.1 RUNWAY SURFACE CONDITION
ASSESSMENT AND REPORTING**

2.1.1 General

...

2.1.1.1 Assessing and reporting the condition of the movement area and related facilities is necessary in order to provide the flight crew with the information needed for safe operation of the aeroplane. The runway condition report (RCR) is used for reporting assessed information.

2.1.1.2 On a global level, movement areas are exposed to a multitude of climatic conditions and consequently a significant difference in the condition to be reported. The RCR describes a basic structure applicable for all these climatic variations. Assessing runway surface conditions rely on a great variety of techniques and no single solution can apply to every situation.

H-12

...

Attachment to Chapter 2
(applicable on 5-4 November 2020-2021)

METHODS OF ASSESSING RUNWAY SURFACE CONDITION

...

H-13

***PROCEDURES FOR AIR NAVIGATION SERVICES —
AERONAUTICAL INFORMATION MANAGEMENT
(PANS-AIM, DOC 10066)***

...

Chapter 1

DEFINITIONS

...

Route stage. A route or portion of a route flown without an intermediate landing.

SNOWTAM.[†] A special series NOTAM notifying the presence or removal of hazardous conditions due to snow, ice, slush or standing water associated with snow, slush and ice on the movement area, by means of a specific format.

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 water associated with snow, slush, ice or frost on the movement area.

...

5.2.2.2 The snow plan issued under AD 1.2.2 of the AIP shall be supplemented by seasonal information, to be issued well in advance of the beginning of each winter (not less than one month before the normal onset of winter conditions) and shall contain information such as that listed below:

- a) until 4-3 November 2020-2021, a list of aerodromes/heliports where snow clearance is expected to be performed during the coming winter:
- a) as of 5-4 November 2020-2021, a list of aerodromes/heliports where snow, slush, ice or frost clearance is expected to be performed during the coming winter:

...

5.2.5.1.3 All NOTAM shall be issued in the English language.

Note.— If necessary for domestic users, NOTAM may additionally be issued in a national language.

[†] Applicable until 4-3 November 2020-2021.
^{††} Applicable as of 5-4 November 2020-2021.

H-14

5.2.5.1.4 Until 4-3 November 2020-2021, information concerning snow, slush, ice and standing water on aerodrome/heliport pavements shall, when reported by means of a SNOWTAM, contain the information in the order shown in the SNOWTAM Format in Appendix 4.

5.2.5.1.4 As of 5-4 November 2020-2021, information concerning snow, slush, ice, frost, standing water, or water associated with snow, slush, ice or frost on the movement area shall be disseminated by means of a SNOWTAM, and shall contain the information in the order shown in the SNOWTAM Format in Appendix 4.

Note.— The origin and order of the information is a result of assessment processes and procedures prescribed in the PANS-Aerodromes (Doc 9981).

...

Appendix 4

SNOWTAM FORMAT

(see Chapter 5, 5.2.5.1.4)

(applicable until 4-3 November 2020-2021)

| | | | | | | | | | | | | | | | | |
|---|---------------------------|---|-------------|---|--|--------------------------|--|--|--------------------------|--|----------------|----|----|------------------|--|------|
| (COM heading) | (PRIORITY INDICATOR) | | (ADDRESSES) | | | | | | | | | | <≡ | | | |
| | (DATE AND TIME OF FILING) | | | | | (ORIGINATOR'S INDICATOR) | | | | | <≡ | | | | | |
| (Abbreviated heading) | (SWAA* SERIAL NUMBER) | | | | | (LOCATION INDICATOR) | | | DATE-TIME OF OBSERVATION | | | | | (OPTIONAL GROUP) | | <<≡(|
| | S | W | * | * | | | | | | | | | | | | |
| SNOWTAM | (Serial number) | | | | | <≡ | | | | | | | | | | |
| (AERODROME LOCATION INDICATOR) | | | | | | | | | | | A) | <≡ | | | | |
| (DATE-TIME OF OBSERVATION (<i>Time of completion of measurement in UTC</i>)) | | | | | | | | | | | B) | → | | | | |
| (RUNWAY DESIGNATOR) | | | | | | | | | | | C) | → | | | | |
| (CLEARED RUNWAY LENGTH, IF LESS THAN PUBLISHED LENGTH (<i>m</i>)) | | | | | | | | | | | D) | → | | | | |
| (CLEARED RUNWAY WIDTH, IF LESS THAN PUBLISHED WIDTH (<i>m</i> ; if offset left or right of centre line add "L" or "R")) | | | | | | | | | | | E) | → | | | | |
| (DEPOSITS OVER TOTAL RUNWAY LENGTH (<i>Observed on each third of the runway, starting from threshold having the lower runway designation number</i>) NIL — CLEAR AND DRY 1 — DAMP 2 — WET 3 — RIME OR FROST COVERED (<i>depth normally less than 1 mm</i>) 4 — DRY SNOW 5 — WET SNOW 6 — SLUSH 7 — ICE 8 — COMPACTED OR ROLLED SNOW 9 — FROZEN RUTS OR RIDGES) | | | | | | | | | | | F) .../.../... | → | | | | |
| (MEAN DEPTH (<i>mm</i>) FOR EACH THIRD OF TOTAL RUNWAY LENGTH) | | | | | | | | | | | G) .../.../... | → | | | | |
| (ESTIMATED SURFACE FRICTION ON EACH THIRD OF RUNWAY) ESTIMATED SURFACE FRICTION GOOD — 5 MEDIUM/GOOD — 4 MEDIUM — 3 MEDIUM/POOR — 2 POOR — 1 (<i>The intermediate values of "MEDIUM/GOOD" and "MEDIUM/POOR" provide for more precise information in the estimate when conditions are found to be between medium and either good or poor.</i>) | | | | | | | | | | | H) .../.../... | → | | | | |
| (CRITICAL SNOWBANKS (<i>If present, insert height (cm)/distance from the edge of runway (m) followed by "L", "R" or "LR" if applicable</i>)) | | | | | | | | | | | J) | → | | | | |
| (RUNWAY LIGHTS (<i>If obscured, insert "YES" followed by "L", "R" or both "LR" if applicable</i>)) | | | | | | | | | | | K) | → | | | | |

H-15

| | | |
|---|----|------|
| (FURTHER CLEARANCE <i>(If planned, insert length (m)/width (m) to be cleared or if to full dimensions, insert "TOTAL")</i>) | L) | → |
| (FURTHER CLEARANCE EXPECTED TO BE COMPLETED BY . . . (UTC)) | M) | → |
| (TAXIWAY <i>(If no appropriate taxiway is available, insert "NO")</i>) | N) | → |
| (TAXIWAY SNOWBANKS <i>(If higher than 60 cm, insert "YES" followed by the lateral distance apart, m)</i>) | P) | <≡ |
| (APRON <i>(If unusable insert "NO")</i>) | R) | → |
| (NEXT PLANNED OBSERVATION/MEASUREMENT IS FOR) <i>(month/day/hour in UTC)</i> | S) | → |
| (PLAIN-LANGUAGE REMARKS <i>(Including contaminant coverage and other operationally significant information, e.g. sanding, de-icing, chemicals)</i>) | T) |) <≡ |
| NOTES: 1. *Enter ICAO nationality letters as given in ICAO Doc 7910, Part 2. 2. Information on other runways, repeat from B to P. 3. Words in brackets () not to be transmitted. | | |

SIGNATURE OF ORIGINATOR *(not for transmission)*

INSTRUCTIONS FOR THE COMPLETION OF THE SNOWTAM FORMAT

1. *General*

- a) When reporting on more than one runway, repeat Items B to P inclusive.
- b) Items together with their indicator shall be dropped completely, where no information is to be included.
- 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. The following changes relating to runway conditions are considered as significant:
 - 1) a change in the coefficient of friction of about 0.05;
 - 2) changes in depth of deposit greater than the following: 20 mm for dry snow, 10 mm for wet snow, 3 mm for slush;
 - 3) a change in the available length or width of a runway of 10 per cent or more;
 - 4) any change in the type of deposit or extent of coverage which requires reclassification in Items F or T of the SNOWTAM;
 - 5) when critical snow banks exist on one or both sides of the runway, any change in the height or distance from centre line;
 - 6) any change in the conspicuity of runway lighting caused by obscuring of the lights;
 - 7) any other conditions known to be significant according to experience or local circumstances.

e) The abbreviated heading "TTAAiiii CCCC MMYGGgg (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;

H-16

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 to 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.— When reporting on more than one runway and individual dates/times of observation/measurement are indicated by repeated Item B, the latest date/time of observation/measuring is inserted in the abbreviated heading (MMYYGGgg).

Example: Abbreviated heading of SNOWTAM No. 149 from Zurich, measurement/observation of 7 November at 0620 UTC:

SWLS0149 LSZH 11070620

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

- f) 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.
 - g) For readability purposes for the SNOWTAM message, include a line feed after the SNOWTAM serial number, after Item A, after the last item referring to the runway (e.g. Item P) and after Item S.
2. *Item A* — Aerodrome location indicator (four-letter location indicator).
 3. *Item B* — Eight-figure date/time group — giving time of observation as month, day, hour and minute in UTC; this item shall always be completed.
 4. *Item C* — Lower runway designator number.
 5. *Item D* — Cleared runway length in metres, if less than published length (see Item T on reporting on part of runway not cleared).
 6. *Item E* — Cleared runway width in metres, if less than published width; if offset left or right of centre line, add (without space) “L” or “R”, as viewed from the threshold having the lower runway designation number.

H-17

7. *Item F* — Deposit over total runway length as explained in SNOWTAM Format. Suitable combinations of these numbers may be used to indicate varying conditions over runway segments. If more than one deposit is present on the same portion of the runway, they should be reported in sequence from the top (closest to the sky) to the bottom (closest to the runway). Drifts, depths of deposit appreciably greater than the average values or other significant characteristics of the deposits may be reported under Item T in plain language. The values for each third of the runway shall be separated by an oblique stroke (/), without space between the deposit values and the oblique stroke, for example: 47/47/47.

Note.— *Definitions for the various types of snow are given at the end of this appendix.*

8. *Item G* — Mean depth in millimetres deposit for each third of total runway length, or “XX” if not measurable or operationally not significant; the assessment to be made to an accuracy of 20 mm for dry snow, 10 mm for wet snow and 3 mm for slush. The values for each third of the runway shall be separated by an oblique stroke (/), without space between the values and the oblique stroke, for example: 20/20/20.
9. *Item H* — Estimated surface friction on each third of the runway (single digit) in the order from the threshold having the lower runway designation number.

Friction measurement devices can be used as part of the overall runway surface assessment. Some States may have developed procedures for runway surface assessment which may include the use of information obtained from friction measuring devices and the reporting of quantitative values. In such cases, these procedures should be published in the Aeronautical Information Publication (AIP) and the reporting made in Item (T) of the SNOWTAM format.

The values for each third of the runway are separated by an oblique stroke (/), without space between the values and the oblique stroke-, for example: 5/5/5.

10. *Item J* — Critical snow banks. If present insert height in centimetres and distance from edge of runway in metres, followed (without space) by left (“L”) or right (“R”) side or both sides (“LR”), as viewed from the threshold having the lower runway designation number.
11. *Item K* — If runway lights are obscured, insert “YES” followed (without space) by “L”, “R” or both “LR”, as viewed from the threshold having the lower runway designation number.
12. *Item L* — When further clearance will be undertaken, enter length and width of runway or “TOTAL” if runway will be cleared to full dimensions.
13. *Item M* — Enter the anticipated time of completion in UTC.
14. *Item N* — The code (and combination of codes) for Item F may be used to describe taxiway conditions; enter “NO” if no taxiways serving the associated runway are available.
15. *Item P* — If snow banks are higher than 60 cm, enter “YES” followed by the lateral distance parting the snow banks (the distance between) in metres.
16. *Item R* — The code (and combination of codes) for Item F may be used to describe apron conditions; enter “NO” if the apron is unusable.
17. *Item S* — Enter the anticipated time of next observation/measurement in UTC.

H-18

18. *Item T* — Describe in plain language any operationally significant information but always report on length of uncleared runway (Item D) and extent of runway contamination (Item F) for each third of the runway (if appropriate) in accordance with the following scale:

RWY CONTAMINATION 10 PER CENT — if 10% or less of runway contaminated
RWY CONTAMINATION 25 PER CENT — if 11–25% of runway contaminated
RWY CONTAMINATION 50 PER CENT — if 26–50% of runway contaminated
RWY CONTAMINATION 100 PER CENT — if 51–100% of runway contaminated.

EXAMPLE OF COMPLETED SNOWTAM FORMAT

GG EHAMZQZX EDDFZQZX EKCHZQZX
070645 LSZHNYX
SWLS0149 LSZH 11070700
(SNOWTAM 0149
A) LSZH
B) 11070620 C) 02 D)...P)
B) 11070600 C) 09 D)...P)
B) 11070700 C) 12 D)...P)
R) NO S) 11070920
T) DEICING

Note.— See the Aeronautical Information Services Manual (Doc 8126) for additional SNOWTAM examples incorporating different runway conditions.

Definitions of the various types of snow

Slush. Water-saturated snow which with a heel-and-toe slap-down motion against the ground will be displaced with a splatter; specific gravity: 0.5 up to 0.8.

Note.— Combinations of ice, snow and/or standing water may, especially when rain, rain and snow, or snow is falling, produce substances with specific gravities in excess of 0.8. These substances, due to their high water/ice content, will have a transparent rather than a cloudy appearance and, at the higher specific gravities, will be readily distinguishable from slush.

Snow (on the ground).

- a) *Dry snow.* Snow which can be blown if loose or, if compacted by hand, will fall apart again upon release; specific gravity: up to but not including 0.35.
- b) *Wet snow.* Snow which, if compacted by hand, will stick together and tend to or form a snowball; specific gravity: 0.35 up to but not including 0.5.
- c) *Compacted snow.* Snow which has been compressed into a solid mass that resists further compression and will hold together or break up into lumps if picked up; specific gravity: 0.5 and over.

H-20

INSTRUCTIONS FOR THE COMPLETION OF THE SNOWTAM FORMAT

Note.— Origin of data, assessment process and the procedures linked to the surface conditions reporting system are prescribed in the Procedures for Air Navigation Services — Aerodromes (PANS-Aerodromes, Doc 9981).

1. *General*

- a) When reporting on more than one runway, repeat Items B to H (airplane 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 MMYGGgg (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.— When reporting on more than one runway and individual dates/times of observation/assessment are indicated by repeated Item B, the latest date/time of observation/assessment is inserted in the abbreviated heading (MMYYGGgg).

Example: Abbreviated heading of SNOWTAM No. 149 from Zurich, measurement/observation of 7 November at 0620 UTC:

SWLS0149 LSZH 11070620

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

H-21

- 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)

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 millimetres 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:*

H-22

- *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. *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]nn).

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”.

H-23

- 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.

Note.— This will only be reported for States that have an established programme of runway friction measurement using a State-approved friction measuring device.

- Item T* — Plain language remarks.

EXAMPLE OF COMPLETED SNOWTAM FORMAT

Example SNOWTAM 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 SNOWTAM 2

GG EADBZQZX EADNZQZX EADSZQZX
170140 EADDYNYX

H-24

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 SNOWTAM 3

GG EADBZQZX EADNZQZX EADSZQZX
170229 EADDYNYX
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 SNOW BANK R20 FM CL. RWY 09R ADJ SNOW BANKS. TWY B POOR. APRON
NORTH POOR)

Example SNOWTAM 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 35

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

— END —