



Safe and Efficient Skies for all

Civil Aviation Authority of Sri Lanka

Manual on Global Reporting Format (GRF) Implementation

First Edition 2021



Manual on Global Reporting Format (GRF) Implementation

First Edition 2021

Control No 01

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**Record of Revisions**

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**List of Effective pages**

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1	22/09/2021	20	22/09/2021
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History of Revision

Revision Number	Source	Areas subjected to change	Effective date



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Foreword

The CAASL is the State's regulatory agency in charge of the responsibility of ensuring the compliance of international safety standards published by ICAO in discharging Air Navigation Services to international and Domestic Air traffic flow that takes place through the Colombo Flight Information Region(FIR) and the operation of Aerodromes within the territory of Sri Lanka.

ICAO through its Global Reporting Format (GRF) initiative, has implemented the methodology for a harmonized, unambiguous yet comprehensive runway surface condition reporting mechanism, tied to aircraft performance characteristics for the purpose of eliminating the reporting error component as a contributory factor for runway excursions. The global implementation date for International Aerodromes was been set to November 5th, 2020. With the subsequent Global Pandemic the implementation date was revised to 4th November 2021.

CAASL in its adoption of Annex11 as IS 025, Annex14 as IS 030 Annex 15 as IS 28 is in conformance to the Standards and Recommended practices associated with Global reporting format and has adhered to the Manuals published for the disciplines of ATS, Aerodromes and AIS as well as the ICAO circulars published for the guidance for the implementation of GRF.

The GRF methodology variously requires the involvement of ATC, AIS, Pilots and Aerodrome operators performing functions allocated on the process of executing the actions for the GRF. Therefore the ANS and Aerodromes sections of CAASL has collectively developed the SLCAP 2500 "Manual on GRF Implementation" for the implementation and continuous operation of the GRF methodology.

This document will serve as a reference guide for Air Navigation Service Provider (ANSP) and the Aerodrome operator to develop their own specific practices and procedures in the context

As an organization which set standards to the industry personnel, the CAASL has always been taking a professional approach and being exemplary in the discharging of its regulatory obligations and services. The guidance in this document is expected to aid the Air Navigation Services and Aerodromes Inspectorate of CAASL to discharge effective safety oversight of the ANSP and Aerodromes in the context of GRF.

Accordingly, this office expects all those professionals in the industry who are involved in the GRF reporting and those professionals involved on the safety oversight in that sphere would make an effective usage of this guidance Manual.

Capt. Themiya Abeywickrama,
Director General of Civil Aviation & CEO,
Civil Aviation Authority of Sri Lanka.
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Definitions and abbreviations

Aeronautical information service (AIS). A service established within the defined area of coverage responsible for the provision of aeronautical data and aeronautical information necessary for the safety, regularity and efficiency of air navigation.

Air-report. A report from an aircraft in flight prepared in conformity with requirements for position, and operational and/or meteorological reporting.

Air traffic service. A generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service).

Automatic terminal information service (ATIS). The automatic provision of current, routine information to arriving and departing aircraft throughout 24 hours or a specified portion thereof:

 Data link-automatic terminal information service (D-ATIS). The provision of ATIS via data link.

 Voice-automatic terminal information service (Voice-ATIS). The provision of ATIS by means of continuous and repetitive voice broadcasts.

Braking action. A term used by pilots to characterize the deceleration associated with the wheel braking effort and directional controllability of the aircraft.

Coefficient of friction. A dimensionless ratio of the friction force between two bodies to the normal force pressing these two bodies together.

Contaminant. A deposit (such as snow, slush, ice, standing water, mud, dust, sand, oil and rubber) on an aerodrome pavement, the effect of which is detrimental to the friction characteristics of the pavement surface.

Runway. A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

Runway condition assessment matrix (RCAM). A matrix allowing the assessment of the runway condition code, using associated procedures, from a set of observed runway surface condition(s) and pilot report of braking action.

Runway condition code (RWYCC). A number describing the runway surface condition to be used in the runway condition report.

Note. — The purpose of the runway condition code is to permit an operational aeroplane performance calculation by the flight crew. Procedures for the determination of the runway condition code are described in the PANS-Aerodromes (Doc 9981).

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Runway condition report (RCR). A comprehensive standardized report relating to runway surface conditions and its effect on the aeroplane landing and take-off performance.

Runway surface condition(s). A description of the condition(s) of the runway surface used in the runway condition report which establishes the basis for the determination of the runway condition code for aeroplane performance purposes.

Note 1.— The runway surface conditions used in the runway condition report establish the performance requirements between the aerodrome operator, aeroplane manufacturer and aeroplane operator.

Note 2.— Aircraft de-icing chemicals and other contaminants are also reported but are not included in the list of runway surface condition descriptors because their effect on runway surface friction characteristics and the runway condition code cannot be evaluated in a standardized manner.

Note 3. — Procedures on determining runway surface conditions are available in the PANS-Aerodromes (Doc 9981).

a) *Dry runway.* A runway is considered dry if its surface is free of visible moisture and not contaminated within the area intended to be used.

b) *Wet runway.* The runway surface is covered by any visible dampness or water up to and including 3 mm deep within the intended area of use.

c) *Slippery wet runway.* A wet runway where the surface friction characteristics of a significant portion of the runway have been determined to be degraded.

d) *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 one or more of the substances listed in the runway surface condition descriptors.

Note. — Procedures on determination of contaminant coverage on runway is available in the PANS - Aerodromes (Doc 9981).

e) *Runway surface condition descriptor.* A following element on the surface of the runway:

(i) *Standing water.* Water of depth greater than 3 mm. Note. — Running water of depth greater than 3 mm is reported as standing water by convention

Significant change. A change in the magnitude of a hazard, which leads to a change in the safe operation of the aircraft.



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.

Surface friction characteristics. The physical, functional and operational features or attributes of friction that relate to the surface properties of the pavement and can be distinguished from each other.

Note. — The friction coefficient is not a property of the pavement surface but a system response from the measuring system. Friction coefficient can be used to evaluate the surface properties of the pavement provided that the properties belonging to the measuring system are controlled and kept stable.

AIREP Air-report

AIS Aeronautical information services

ATIS Automatic terminal information service

ATS Air traffic service

LDA Landing distance available

MET Meteorological services

PANS Procedures for Air Navigation Services

RCAM Runway condition assessment matrix

RCR Runway condition report

RWYCC Runway condition code

TWY Taxiway

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Introduction

The new ICAO methodology for assessing and reporting runway surface conditions, commonly known as the Global Reporting Format (GRF), enables the harmonized assessment and reporting of runway surface conditions and a correspondingly improved flight crew assessment of take-off and landing performance.

The GRF includes an agreed set of criteria used in a consistent manner for runway surface condition assessment, unique runway condition code (RWYCC) linking the agreed set of criteria with the aircraft landing and takeoff performance, braking action experienced and eventually reported by flight crews; contaminant type and depth, and a standardized common terminology and phraseology for the description of runway surface conditions that can be used by aerodrome operator inspection personnel, air traffic controllers, aircraft operators and flight crew.

This SLCAP provides guidance for the Aerodrome operator, Air Traffic controllers and Aeronautical information Service personnel of the procedure to be followed in Reporting Runway contaminants in relation to the GRF and providing information to aircrew regarding the runway conditions.

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Procedure for reporting of runway surface condition as per Global Reporting Format (GRF)

No	Procedure	Responsible Unit
1	Air Traffic Control tower shall continuously monitor any changes in the vicinity that could potentially affect the runway surface contamination and hence the surface condition.	ATC
2	Having been satisfied that a sufficient runway surface condition change in the Runway surface condition has occurred, the Control tower shall determine whether a runway inspection is required to be carried – out to assess the runway surface condition.	ATC
3	When it is determined that a runway condition assessment with respect to GRF is required, the Control tower shall, without delay, summon the responsible officer of the aerodrome operator to conduct a Runway Inspection and facilitate him to complete the assessment effectively.	ATC
4	Responsible officer shall assess the runway surface condition, including contaminants for each third of the runway length and report the Runway Condition Code (RWYCC) along with a description of the runway surface based on the type, depth and coverage of contaminants via the Runway Condition Report (RCR) (refer Appendix A). The means of reporting to tower shall be defined in the Aerodrome Manual and the Operations Manual of ATS.	Airport Management/ Aerodrome operator
5	Aerodrome control tower shall evaluate the data received via RCR to determine whether any significant change in the runway surface condition has been reported in order to disseminate via ATIS broadcast or promulgating a SNOWTAM.	ATC and AIS



6	<p>A change in the runway surface condition used in the runway condition report is considered significant whenever there is any change in the RWYCC*;</p> <p>* Ref. Appendix B – Runway condition assessment matrix (RCAM) for the applicable Runway Condition code (RWYCC).</p> <p>A change in the RWYCC is considered when any of the conditions mentioned below are observed;</p> <p>(a) any change in contaminant type; e.g. water, standing water</p> <p>(b) any change in reportable contaminant coverage as shown below;</p> <table border="1" data-bbox="326 897 1068 1129"><thead><tr><th data-bbox="326 897 693 960">Assessed per cent</th><th data-bbox="693 897 1068 960">Reported per cent</th></tr></thead><tbody><tr><td data-bbox="326 960 693 1003">10 – 25</td><td data-bbox="693 960 1068 1003">25</td></tr><tr><td data-bbox="326 1003 693 1045">26 – 50</td><td data-bbox="693 1003 1068 1045">50</td></tr><tr><td data-bbox="326 1045 693 1087">51 – 75</td><td data-bbox="693 1045 1068 1087">75</td></tr><tr><td data-bbox="326 1087 693 1129">76 – 100</td><td data-bbox="693 1087 1068 1129">100</td></tr></tbody></table> <p>(c) any change in contaminant depth as shown below;</p> <table border="1" data-bbox="326 1298 1068 1562"><thead><tr><th data-bbox="326 1298 579 1446">Contaminant</th><th data-bbox="579 1298 816 1446">Valid values to be reported</th><th data-bbox="816 1298 1068 1446">Significant change</th></tr></thead><tbody><tr><td data-bbox="326 1446 579 1562">STANDING WATER*</td><td data-bbox="579 1446 816 1562">04mm, then assessed value</td><td data-bbox="816 1446 1068 1562">4 mm up to and including 15 mm</td></tr></tbody></table> <p>* 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).</p>	Assessed per cent	Reported per cent	10 – 25	25	26 – 50	50	51 – 75	75	76 – 100	100	Contaminant	Valid values to be reported	Significant change	STANDING WATER*	04mm, then assessed value	4 mm up to and including 15 mm	ATC and AIS
Assessed per cent	Reported per cent																	
10 – 25	25																	
26 – 50	50																	
51 – 75	75																	
76 – 100	100																	
Contaminant	Valid values to be reported	Significant change																
STANDING WATER*	04mm, then assessed value	4 mm up to and including 15 mm																



	<p>(d) any other information, for example a pilot report of runway braking action**</p> <p>** Whenever the runway braking action encountered during the landing roll is not as good as that reported by the Control Tower in the runway condition report (RCR), the Pilot – in – command shall notify the air traffic services (ATS) by means of a special air-report (AIREP) as soon as practicable (as required to submit an AIREP in Doc. 4444 Chapter 4.12.3.1(i)).</p>	
7	Assessing and reporting of the runway surface condition shall 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.	ATC, AIS & Aerodrome operator
8	Aerodrome Control Tower at all times shall retain and be familiar with the contents of the last issued Runway Condition Report (RCR).	ATC



9	<p><u>Dissemination of Information</u></p> <p>Air Traffic Controllers, upon receipt of the RCR by the Aerodrome Operator shall ensure the accuracy, relevancy, and timeliness of the contents of the report to the best of their knowledge and experience.</p> <p>Duty ATCO shall provide the information received via the RCR to end users:</p> <p class="list-item-l1">(a) When the runway is wholly or partly contaminated by standing water – via SNOWTAM and Voice communication/ ATIS broadcast*. * Ref. Appendix E for the details of ATIS broadcast.</p> <p class="list-item-l1">(b) When the runway is wet, not associated with the presence of standing water – via Voice communication/ATIS broadcast only (phraseology is mentioned below).</p> <p>Note - Appropriate means of communication among the Aerodrome Control Tower, Aerodrome operator (the originator of the runway condition reports through RCR) and the AIS/NOFs shall be established and published in the Manuals of operations. (Aerodrome Manual, Manual of Air Traffic Services, AIS Manual etc.)</p> <p>Phraseology (Doc. 4444 chapter 12.3.1.11)</p> <p>Note - Aerodrome Control Tower shall be available with the most current Runway Condition Report information for transmission to aircraft. This shall be passed to aircraft in the order of the direction of landing or take-off.</p> <p class="list-item-l1">a) [(location)] RUNWAY (number) SURFACE CONDITION [CODE (three digit number)] followed as necessary by: 1) ISSUED AT (date and time UTC); 2) DRY, STANDING WATER, or WET</p>	ATC AIS for promulgation of SNOWTAM
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	<p>3) DEPTH (depth of deposit) MILLIMETRES or NOT REPORTED;</p> <p>4) COVERAGE (number) PER CENT or NOT REPORTED;</p> <p>5) ESTIMATED SURFACE FRICTION (GOOD, or GOOD TO MEDIUM, or MEDIUM, or MEDIUM TO POOR, or POOR, or LESS THAN POOR);</p> <p>6) AVAILABLE WIDTH (number) METRES;</p> <p>7) LENGTH REDUCED TO (number) METRES;</p> <p>8) TAXIWAY (identification of taxiway) POOR;</p> <p>9) APRON (identification of apron) POOR;</p> <p>10) Plain language remarks:</p> <p>b) [(Location)] RUNWAY SURFACE CONDITION RUNWAY (number) NOT CURRENT;</p> <p>c) LANDING SURFACE (condition);</p> <p>d) BRAKING ACTION REPORTED BY (aircraft type) AT (time) GOOD (or GOOD TO MEDIUM, or MEDIUM, or MEDIUM TO POOR, or POOR);</p> <p>e) TAXIWAY (identification of taxiway) WET [or STANDING WATER,]</p> <p>f) TOWER OBSERVES (weather information);</p> <p>g) PILOT REPORTS (weather information).</p>	
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10	<u>Issuance of SNOWTAM</u> When the runway is wholly or partly contaminated by standing water, ATC shall transform the RCR sent by the aerodrome operator into SNOWTAM request form CAA/AS/008/02 (ref Appendix C) report and send to AIS for dissemination.	ATC
11	Aeronautical Information services (AIS) shall provide the information received (by the ATC) to end users via SNOWTAM.	AIS
12	<u>ATIS Broadcast</u> Control tower shall manually enter the most current RCR to the ATIS broadcast. The Duty Controller shall ensure that the Pilot has copied the current ATIS and any significant change to the reported ATIS shall be passed without delay for the Pilot to determine the necessary stopping distance of the aircraft, under prevailing conditions. (Ref. Appendix E).	ATC
13	Runway condition information transmitted to aircraft by voice may also contain additional information associated with weather observed and forecasted by the MET office even before it is available on ATIS, as well as information on braking action reports by previously landed aircraft.	ATC
14	Where visible conditions permit, the duty Controller may provide the flight crew his own immediate observations on the runway surface condition based on the rapidly changing weather conditions such as rainfall intensity etc. before it is promulgated via SNOWTAM.	ATC
15	During night operations the duty controller shall coordinate with the Met office at the respective Aerodrome to get the most updated weather information and forecast to determine the need to conduct an	ATC

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	assessment and upgrading/ downgrading process accordingly.	
16	<p><u>Downgrading and Upgrading the RWYCC</u></p> <p>(a) Downgrading and upgrading is an integral part of the runway assessment process. When the Aerodrome Controller assumes that the previous assignment of the RWYCC does not reflect the prevailing conditions accurately a downgrade or upgrade to the current RCR shall be made.</p> <p>(b) Factors to be considered in assessing the runway slipperiness for the DOWNGRADE/ UPGRADE process.</p> <ul style="list-style-type: none">i. Prevailing weather conditions (ex. Rainfall intensity)ii. Observations (source of information, the RCR)iii. Measurements (ex. Results from friction measurements etc.)iv. Experiencev. AIREPs* <p>* Pilot reports of runway braking action via AIREPs are critically important for reassessing or directly being taken into account in the downgrading process. Refer Appendix B/ RCAM/ Downgrade Assessment criteria/ Pilot report of runway braking action</p> <p>(c) When receiving AIREP by voice communications concerning braking action encountered that it is not as good as that reported, the Aerodrome Controller shall forward the information without delay to the successive landings until a fresh runway condition assessment is conducted for the purpose of downgrading the current RCR appropriately.</p>	ATC AIS for promulgation of SNOWTAM

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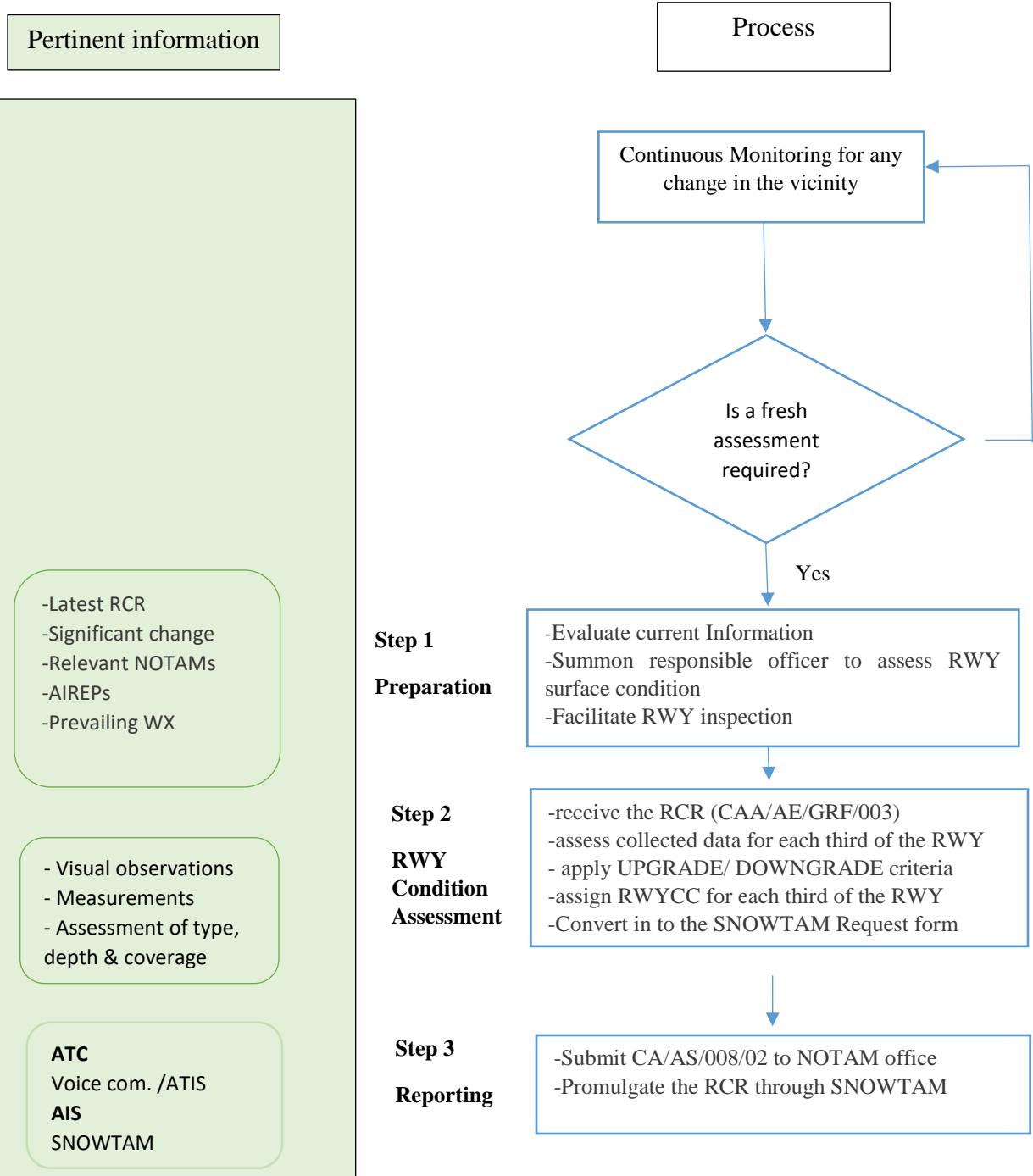


	<p>(d) When the water is drained off from the runway surface, but the RWYCC initially assigned does not reflect the real runway surface condition, Aerodrome Controller may take action to UPGRADE the current RCR.</p> <p>(e) Reporting of the runway surface condition should continue to reflect significant changes until the runway is no longer contaminated. RWYCC 6/6/6 for all runway thirds may be used to indicate that the runway is no longer wet.</p>	
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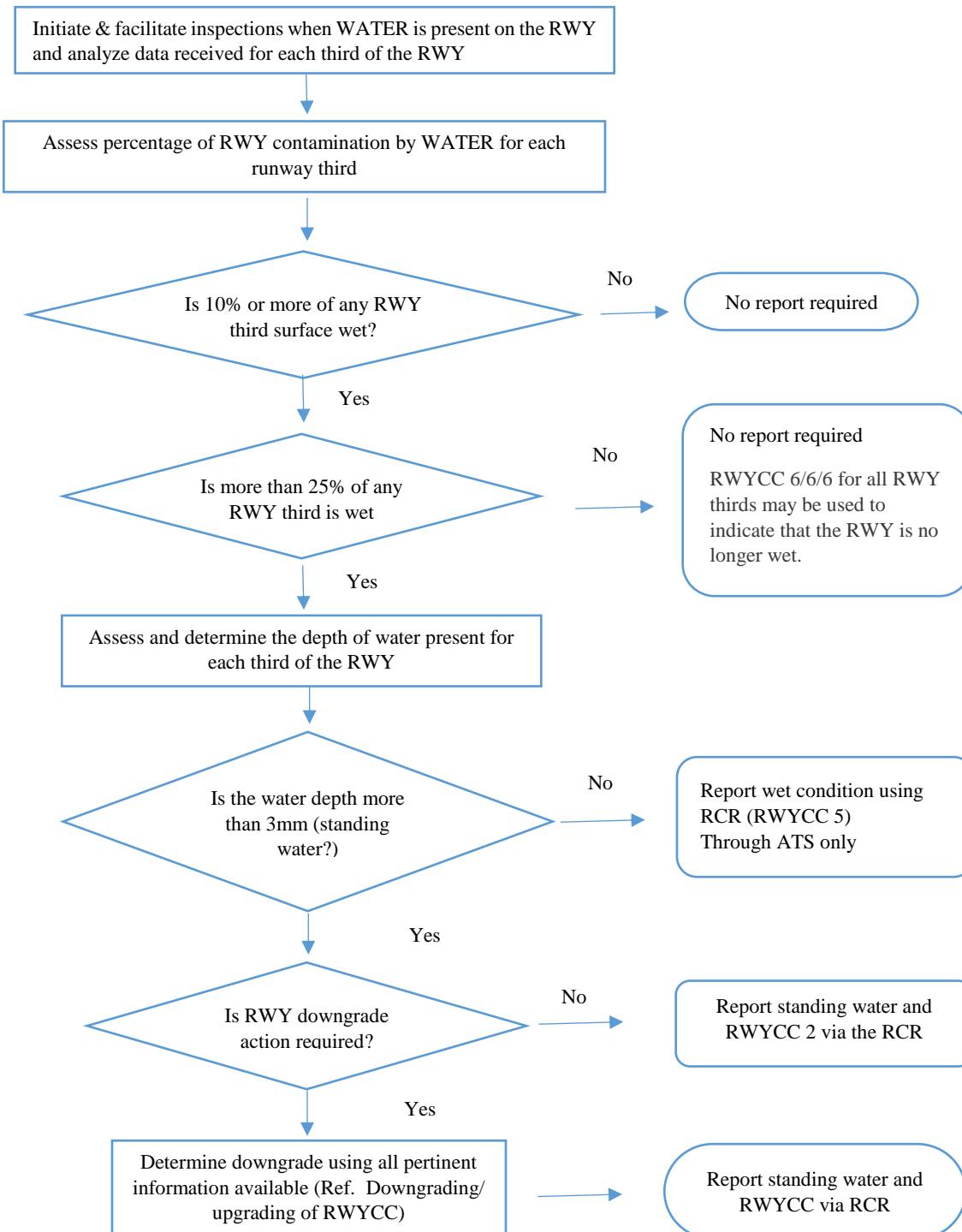


Summary of the process



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Evaluating the RCR received by the Aerodrome operator, assignment of correct RWYCC & upgrading/ downgrading process



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Appendix A – Runway Condition Report



CAA/AE/GRF/003

Civil Aviation Authority of Sri Lanka

RCR					
Aerodrome <input type="text"/> V <input type="text"/> C <input type="text"/>	Date & Time of Assessment <input type="text"/> M <input type="text"/> M <input type="text"/> Y <input type="text"/> Y <input type="text"/> G <input type="text"/> G <input type="text"/> g <input type="text"/> g	RWY <input type="text"/> <input type="text"/>	RWYCC <input type="text"/> / <input type="text"/> / <input type="text"/>	% Coverage <input type="text"/> / <input type="text"/> / <input type="text"/> / <input type="text"/>	
Depth in mm <input type="text"/> / <input type="text"/> / <input type="text"/> / <input type="text"/>	Contaminant Type (Observed on each RWY third, Starting from Threshold having the Lower RWY Designation Number) <input type="text"/> / <input type="text"/> / <input type="text"/>	Plain Language – Remarks		Reduced RWY width in m (if applicable) <input type="text"/>	
Name & designation of the authorized Officer			Signature of the authorized Officer and Contact Number		

**Runway Condition Report – Aeroplane performance calculation section**

The information to be included in this section consists of the following.

- (a) **Aerodrome**: The four – letter Aerodrome Location Indicator in accordance with Doc 7910.

Format: nnnn

Example: **VCBI**

- (b) **Date & time**: date and time (UTC) of the assessment conducted by the aerodrome operator.

Format: MMYYGGgg (month, date, hour and minutes)

Example: **09111357**

- (c) **RWY**: Lower runway designation number, a two character identifying the runway for which the assessment is carried out and reported.

Format: nn

Example: **04** (Lower runway designation number for Runway 04/22)

- (d) **RWYCC**: Runway condition code for each runway third, 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 Runway number.

Format: n/n/n

Example: **5/5/2** (Wet/Wet/Standing Water)

* A change in RWYCC from, say 5/5/2 to 5/5/3 is considered significant and requires a complete assessment taking into account all information available.

Note - 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**.

- (e) **% Coverage**: Per cent coverage contaminant for each runway third, 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.

Format: nn(n)/nn(n)/nn(n)

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Example: **25/25/100** (1st third 25% covered/2nd third 25% covered/3rd third 100% covered)

Note 1 - If one runway third is dry or covered with less than 10 per cent, it is not reported.

Example:

NR/50/100 if contaminant coverage is less than 10% in the first third

25/NR/100 if contaminant coverage is less than 10% in the middle third

25/50/NR if contaminant coverage is less than 10% in the last third

- (f) **Depth in loose contaminant:** Standing Water for each runway third: 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.

Format: [n]nn/[n]nn/[n]nn

Example: **04/06/12** [STANDING WATER]

(1st third 4mm depth/ 2nd third 6mm depth/ 3rd third 12mm depth)

Example of reporting depth of contaminant whenever there is a significant change

- (1) After the first assessment of runway condition, a **first runway condition report is generated.**

The initial report is:

5/5/5 100/100/100 NR/NR/NR WET/WET/WET

Note: a change in depth below 3 mm is not considered significant and no new RCR is required to be generated.

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

2/2/2 100/100/100 04/04/04 STANDING WATER/ STANDING WATER/STANDING WATER

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(3) If the precipitation reveals that the depth has increased to 7 mm. A new runway condition report is required because of the change in depth from the last runway condition report (second runway condition report). A third runway condition report is thus created as below:

2/2/2 100/100/100 07/07/07 STANDING WATER/ STANDING WATER/STANDING WATER

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.

(g) **Condition description for each runway third:**

Should be reported in capital letters using terms specified below.

DRY

STANDING WATER

WET

The condition type is reported by any of the above condition type descriptions for each runway third and separated by an oblique stroke “/”.

Format: nnnn/nggg/nggg

Example: **WET/ WET/ STANDING WATER**

(h) **Width of runway to which the RWYCCs apply if less than published width:** is the two-digit number representing the width of the cleared runway in metres (This information is optional).

Format: nn

Example: **30**

Note: If the cleared runway width is not symmetrical along the centre line, additional information should be given in the plain language remark part of the situational awareness section of the runway condition report.

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Runway condition report — Situational awareness section (to be filled in the plain language remarks of CAA/AE/GRF/003)

Note: All individual messages in the situational awareness section end with a full stop sign to distinguish the message from subsequent message(s).

(a) Reduced runway length

This information is conditional when a NOTAM has been published with a new set of declared distances affecting the LDA.

Format: RWY nn LDA REDUCED TO [n]nnn.

Example: **RWY 22 LDA REDUCED TO 3050.**

(b) Taxiway conditions

Note: This information is optional.

Format: TWY [n] POOR.

Example: **TWY E POOR.**

(c) Apron conditions

Note: This information is optional.

Format: APRON [n] POOR.

Example: **APRON ALPHA POOR.**

(d) Measured friction coefficient

Note: This information is optional.

Format: [.nn]

Example: **.44**

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Safe and Efficient Skies for all

(e) **Plain language remarks**

Note: This information is optional.

Format: Combination of allowable characters where use of full stop «.» marks the end of the message.

Allowable characters:

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

0 1 2 3 4 5 6 7 8 9

/ [oblique stroke] “.” [Period] “ ” [space]

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Appendix B

Runway Condition Assessment Matrix (RCAM)

Runway Condition Assessment Matrix (RCAM)			
Assessment criteria		Downgrade Assessment criteria	
Runway Condition Code (RCC)	Runway Surface Description	Aeroplane deceleration or directional control observation	Pilot report of runway 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) <i>Up to and including 3 mm depth:</i> 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
3	WET ("slippery wet" runway) DRY SNOW or WET SNOW (any depth) ON TOP OF COMPACTED SNOW More than 3 mm 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 3 mm 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

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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 1: **SLIPPERY WET** runway conditions are associated with response of RWYCC 3 in the RCR whenever such a runway surface is affected by any visible moisture and wet runway where the surface friction characteristics of a significant portion of the runway have been determined to be degraded.

Note 2: Only the Runway Surface Descriptions highlighted in **Bold & Italics** are applicable to be reported in Sri Lanka.

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Appendix C – SNOWTAM

GENERAL PROVISIONS OF SNOWTAM

- 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. (ICAO Doc. 10066, PANS-AIM).
- Metric units shall be used in SNOWTAM and the unit of measurement (e.g. mm, cm, m, etc.) should not be reported.

(Ex: 09/10/15 (item F) means that the depth of the contaminant in the first third of the runway is 9mm, in the second third 10mm and in the third third 15mm. Units of measurement are metric but are not reported in the message.)

- The maximum validity of SNOWTAM is 8 hours. (When no SNOWTAM is issued after 8 hours of a previous SNOWTAM for an aerodrome, the old SNOWTAM is expired and it is assumed that there is no more significant runway surface condition to be reported).
- New SNOWTAM shall be issued whenever a new runway condition report (RCR) is received (RWYCC 5 and 6 do not require issuing SNOWTAM) (Ref. CAA/AS/008/02 for the arrangement among the Control Tower, and AIS (NOTAM Office) for initiating, assessing, submitting and disseminating Runway Condition Report and corresponding SNOWTAM).
- A SNOWTAM cancels the previous SNOWTAM. When a new SNOWTAM is issued for a specific aerodrome that has another valid SNOWTAM, the new one automatically replaces the older SNOWTAM (no need to give reference to the previous SNOWTAM in the new SNOWTAM).
- With reference to the SNOWTAM template CAA/AS/008/002, the letters used to indicate items (A to T; third column of the SNOWTAM template) are only used for reference purpose and should not be included in the messages.
- The items A, B, C and, G are Mandatory items to be transmitted, the items E and F are Conditional, and Items H-T are optional.
(Ex: items B to H) below without the letters indicating items (separated by one space):

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SNOWTAM Example

01150915 04 5/2/2 100/50/75 NR/06/06 WET/STANDING WATER/STANDING WATER

- 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. VC = Sri Lanka (see 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;

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

MM = month, e.g. January = 01, December = 12 *YY* = day of the month 1

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.

(Ex. Abbreviated heading of SNOWTAM No. 005 from BIA, measurement/observation of 7 November at 0620 UTC: SWVC0005 VCBI 11070620)

- 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.
- The SNOWTAM serial number resets at the beginning of each calendar year (SNOWTAM 0001 on January 1 at 0000 UTC).
- Mandatory information in a SNOWTAM:
 - AERODROME LOCATION INDICATOR;
 - DATE AND TIME OF ASSESSMENT;
 - LOWER RUNWAY DESIGNATOR NUMBER;
 - RUNWAY CONDITION CODE FOR EACH RUNWAY THIRD; and
 - CONDITION DESCRIPTION FOR EACH RUNWAY THIRD (when runway condition code (RWYCC) is reported 1–5)

* When no information is to be reported, insert “NR” at its relevant position in the message to indicate to the user that no information exists (/NR/).

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- Example: a SNOWTAM with the minimum (mandatory) information

GG VCBIZTZ ...

111045 VCBIYNYX

SWVC0124 VCBI 01111035

(SNOWTAM 0124 VCBI 01111035 04 5/2/2 100/50/75 NR/06/06 WET/STANDING
WATER/STANDING WATER)

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Appendix D – SNOWTAM Format



CAA/AS/008/02

Civil Aviation Authority of Sri Lanka

Addressed to:	*DGCA/ Head of ANS - AASL/ OICAIS-BIA - AASL	Date:	
REQUEST FOR SNOWTAM ACTION			
<i>I shall be thankful if timely action is taken to promulgate the following RWY Surface Condition Data as a SNOWTAM.</i>			
Organization/Unit requesting the SNOWTAM action	Source Data/Information originally received from: (Name of Division and e-mail / TP/ Fax number)		
Date and timing of Filing		D D H H M M	
Abbreviated heading			
SWAA Serial Number	Location Indicator	*Date Time of Assessment	Optional Group
S W V C	V C	M M Y Y G G g g	B B B
SNOWTAM	The SNOWTAM serial number resets at the beginning of each calendar year (begins with SNOWTAM 0001 on January 1 at 0000 UTC).		
Aeroplane performance calculation section			
*Aerodrome Location Indicator; A)	*Time of completion of assessment in UTC ; B)		
V C	M M Y Y G G g g		
*Lower Runway Designator ; C)	*Runway (RWY) Condition Code (RWYCC) on each RWY Third ; D)	*Per Cent Coverage Contaminant For Each RWY Third ; E)	
	/ / /	/ / / /	
*Depth(mm) of Loose Contaminant for each RWY Third; F)	*Condition Description Over Total RWY Length ; G) (Width of RWY to which the RWY Condition Codes Apply, If Less than Published Width) ; H)
	/ /		
Situational awareness section			
Reduced RWY Length, If Less than Published Length (m) ; I)			
Taxiway conditions ; P)			
Apron Conditions ; R)			
Measured Friction coefficient ; S)			
Plain Language – Remarks ; T)			
*Signature of the authorized Officer and Contact Number	*Name & designation of the authorized Officer		

* Mandatory fields

Words in brackets () not to be transmitted.



SNOWTAM Form Description

GENERAL:

SWAA Serial Number – to be filled by AIS

Location Indicator - Four letter Aerodrome location indicator of the aerodrome, for which the SNOWTAM is issued. The aerodrome location indicators are listed in the ICAO DOC 7910 (Location Indicators).

Date and Time of Assessment – Date and Time of assessment of the runway surface condition (eight-figure date/time group giving time of observation as month, day, and hour and minute in UTC)

Optional Group – for correction, in the case of an error, to a SNOWTAM previously disseminated with the same serial number (COR)

SNOWTAM Serial Number – to be filled by AIS

SECTION 1: AEROPLANE PERFORMANCE CALCULATION SECTION

Item A — Aerodrome location indicator (four-letter location indicator) of the aerodrome, for which the SNOWTAM is issued. The aerodrome location indicators are listed in the ICAO DOC 7910 (Location Indicators).

Example: VCB1

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

Example: 12040638

12 = December; 04 = Day 4 (4th); 0638 (06 hours and 38minutes)

Item C — Lower runway designator number (nn)

Note.1 – only one runway designator is inserted for each runway and always the lower number.

Example: 04 for RWY 04/22

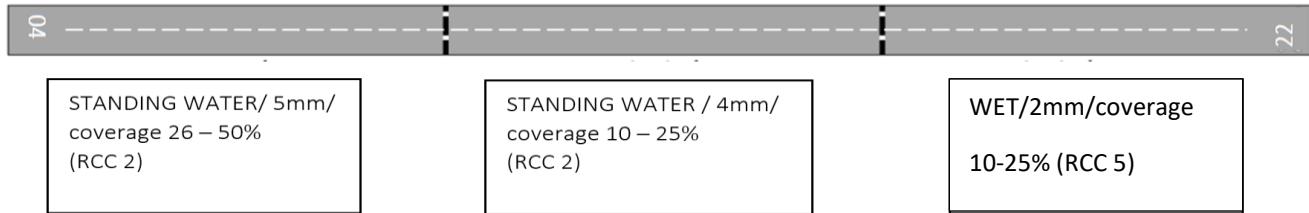
Item D — Runway condition code for each runway third. Only one digit (0, 1, 2, 3, 4, 5 or 6) is inserted for each runway third, separated by an oblique stroke (n/n/n). Runway Condition Code is determined during the assessment of the runway surface condition, in accordance with the

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provisions of the PANS- Aerodrome and the Runway Condition Assessment Matrix (RCAM, Ref. Appendix B).

Example: 2/2/5: runway condition code for the first third of runway 04 is 2, for the second third 2 and for the third third is 5



Item E — Percent coverage is reported as NR (less than 10% or DRY), 25 (10-25 %), 50 (26-50 %), 75 (51-75 %) or 100 (76-100 %) for each runway third, separated by an oblique stroke ([n]nn/[n]nn/[n]nn).

*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.

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

***When the runway condition is “DRY” or the coverage is less than 10%, item E shall be reported by inserting “NR”.

**** When no information is to be reported, “NR” shall be inserted at its relevant position in the message to indicate to the user that no information exists (/NR/).

Example: 50/25/NR: percentage of coverage at the first runway third of RWY 04 is 50 % (between 26 to 50%), at the second part of the runway is 25 % (between 10 to 25 %) and the coverage is less than 10 % at the third part of the runway.

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). Depth should be reported in 2 or (i.e. 05 for 5mm, 15 for 15mm) and the units of measurement (mm) are not reported/inserted.

** This information is only provided for the following contamination types:
standing water, values to be reported when depth is 04mm or greater, then assessed value.*

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

**** NR also includes the situations when the depth of the contaminant is less than the minimum values to be reported (as indicated above) or that part of runway is dry, etc.*

*****For contaminants other than STANDING WATER the depth is not reported. The position of this type of information in the information string is then identified by /NR/.*

Example: 06/05/04: depth of the contaminant in the first part of runway is 6mm, in the second part 5 mm and in the third part 4mm.

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

STANDING WATER

WET

DRY (only reported when there is no contaminant)

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

Example: WET/ WET /STANDING WATER: condition description is “Wet” for the first and the second thirds and “Sanding Water” for the third third of runway.

Item H — Width of runway to which the runway condition codes apply. Insert the width in meters (without units of measurement), if it is less than the published runway width.

Example: 35: published width of RWY 04/22 is 45m and the RCR applies to 35m of it.



Appendix E – Automatic Terminal Information Service (ATIS)

In addition to normal operational and weather information broadcasted on ATIS, the following information about the runway surface condition shall be transmitted whenever the runway is not dry (RWYCC 6).

- a. Operational Runway in use at the time of the issuance;
- b. RWYCC for operational RWY for each third in the operational direction;
- c. Condition description, coverage and depth (depth for STANDING WATER only);
- d. Width of the operational RWY to which RWYCC apply if less than published;
- e. Reduced length if less than published;
- f. Any other remarkable information in short plain language.

RCR - 04 5/2/2 100/50/75 NR/06/06 WET/STANDING WATER/STANDING WATER

ATIS INFORMATION B

AT 0230

ILS APPROACH

RUNWAY IN USE 22

TRANSITION LEVEL FL130

METAR VCBI AT 0210

WIND 220 DEGREES 10 KNOTS VARIABLE BETWEEN 180 AND 350 DEGREES

VISIBILITY 10 KILOMETERS OR MORE CLOUDS SCATTERED AT 3000 FEET

TEMPERATURE 34 DEW POINT 25 QNH 1013 NOSIG

RUNWAY 22 CONDITION REPORT AT 0215

RUNWAY CONDITION CODES 2 2 5

FIRST PART 75 PERCENT 6mm STANDING WATER

SECOND PART 50 PERCENT 6mm STANDING WATER

THIRD PART 100 PERCENT WET

Note: The RCR reports runway thirds commencing from Runway 04, but the ATIS has to report from the direction of the runway-in-use

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Appendix F – References

1. Implementing Standards 30 (IS 30) Aerodrome Standards in Sri Lanka.
2. Implementing Standards 28 (IS 28) Compliance to Annex 15 Aeronautical Information Services.
3. Implementing Standards 25 (IS 25) Compliance to Annex 11 – Air Traffic Services.
4. PANS - ATM, Doc. 4444 - Procedures for Air Navigation Services - Air Traffic Management.
5. PANS - AIM, Doc. 10066 -Procedures for Air Navigation Services - Aeronautical Information Management.
6. PANS, Doc 9981- PANS Aerodromes.
7. ICAO Circular 355 – Assessment, Measurement, and Reporting of Runway Surface Conditions.

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