

United Kingdom Overseas Territories Aviation Circular

**OTAC 139-30
21-12
39-19
91-14
119-17
121-24
125-20
135-23**

Global Reporting Format

**Issue 1.00
3 December 2021**

Effective on issue

GENERAL

Overseas Territories Aviation Circulars are issued to provide advice, guidance and information on standards, practices and procedures necessary to support Overseas Territory Aviation Requirements. They are not in themselves law but may amplify a provision of the Air Navigation (Overseas Territories) Order or provide practical guidance on meeting a requirement contained in the Overseas Territories Aviation Requirements.

PURPOSE

This Overseas Territories Aviation Circular provides guidance on Global Reporting Format

RELATED REQUIREMENTS

This Circular relates to OTAR Part 139, 21, 39, 91, 119, 121, 125, and 135.

CHANGE INFORMATION

First issue.

ENQUIRIES

Enquiries regarding the content of this Circular should be addressed to Air Safety Support International at the address on the ASSI website www.airsafety.aero or to the appropriate Overseas Territory Aviation Authority.

CONTENTS

1. INTRODUCTION3
2. DEFINITIONS.....3
3. GLOBAL REPORTING SYSTEM AND FORMAT FOR ASSESSING AND REPORTING
RUNWAY SURFACE CONDITIONS.....3
4. SUMMARY4
5. APPENDICES5
6. REFERENCES9

1. Introduction

- 1.1 OTAR Part 139 requires Aerodrome Operators to comply with ICAO Annex 14 Standards and Recommended Practices including Runway Surface Condition Assessment and reporting known also as Global Reporting Format (GRF).
- 1.2 ICAO Doc 9881 and Circular 355 include additional information on Global Reporting Format.
- 1.3 This OTAC provides general understanding of the Global Reporting Format.

2. Definitions

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.

Friction. A resistive force along the line of relative motion between two surfaces in contact.

Friction characteristics. The physical, functional, and operational features or attributes of friction arising from a dynamic system.

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.

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.

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.

3. Global Reporting System and Format for Assessing and Reporting Runway Surface Conditions

- 3.1. The Global Reporting System involves aerodrome stakeholders working together to assess runway conditions and presenting runway condition information in a standard format which can be used by aircraft operators to determine aeroplane take-off and landing performance, resulting in a global reduction in runway excursion incidents/accidents.

- 3.2. The methodology for assessing and reporting runway surface conditions is centred around Runway Condition Report (RCR). The RCR is a comprehensive standardised report relating to runway surface condition(s) and its effect on the aeroplane landing and take-off performance. The RCR has been designed to report runway surface condition in a standardised manner. The RCR shall be promulgated via ATC using standard radio telephony and ATIS if applicable, and by AIS who will publish the RCR via SNOWTAM as defined in PANS-AIM, Doc 10066.

Note: The SNOWTAM format provides aerodromes with a method for reporting the surface condition of any portion of the movement area.

- 3.3. When the aerodrome operator submits a new runway condition report (RCR), a new SNOWTAM is generated. SNOWTAM has an 8-hour maximum validity period.
- 3.4. The reporting system requires input in the form of a Runway Condition Code (RWYCC) which is derived from the Runway Condition Assessment Matrix (RCAM). The RCAM supports the classification of runway surface condition according to their effect on aeroplane braking performance using a set of criteria identified and quantified based on the best industry knowledge. The RWYCC can be downgraded or upgraded using procedures detailed in PANS-Aerodromes, Doc 9981. Each aerodrome should rely on local expertise and knowledge of the physical environment when applying the upgrade or downgrade criteria.
- 3.5. To ensure timely and accurate information is provided to all users of the GRF aerodrome operators should procure the appropriate equipment, establish procedures, and ensure that personnel responsible for the system are trained and competent.

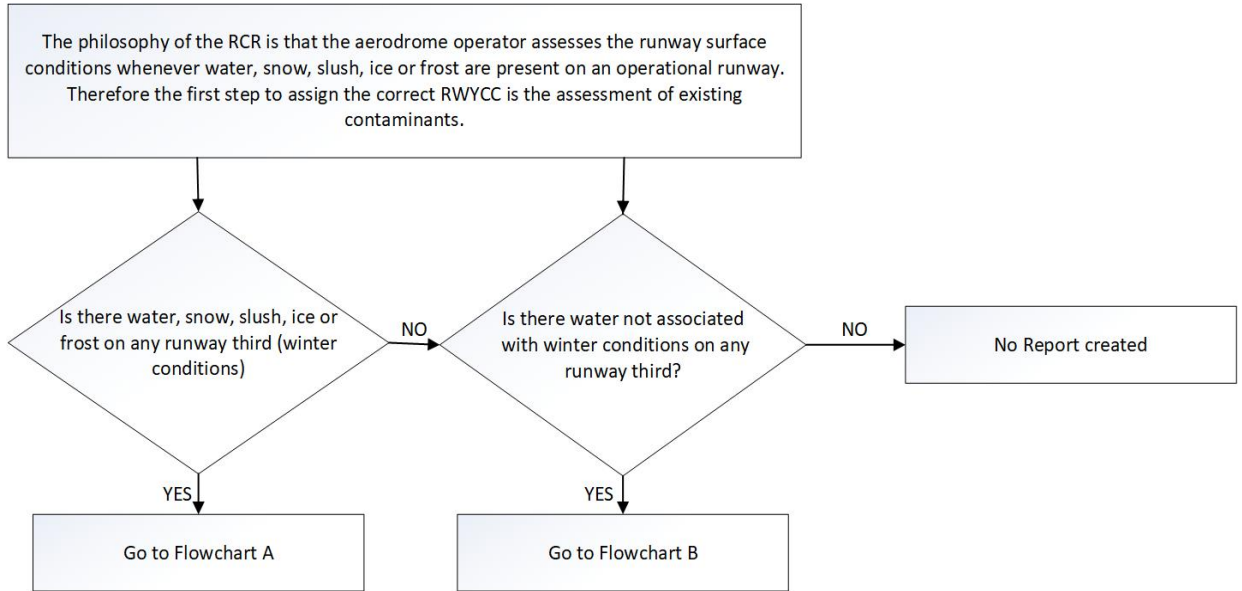
4. Summary

Assessing and reporting the condition of the movement area and related facilities is necessary to provide the flight crew with the information needed for safe operation of the aeroplane. The Global Reporting Format for assessing and reporting runway surface conditions is designed to report the condition of any given movement area in a standardised format so that flight crew can accurately determine aeroplane take-off and landing performance and safely manoeuvre around the aerodrome, resulting in a global reduction in runway excursion incidents/accidents. The information contained in this document should be used as a guide to assist with the assessing and reporting runway and movement area surface conditions.

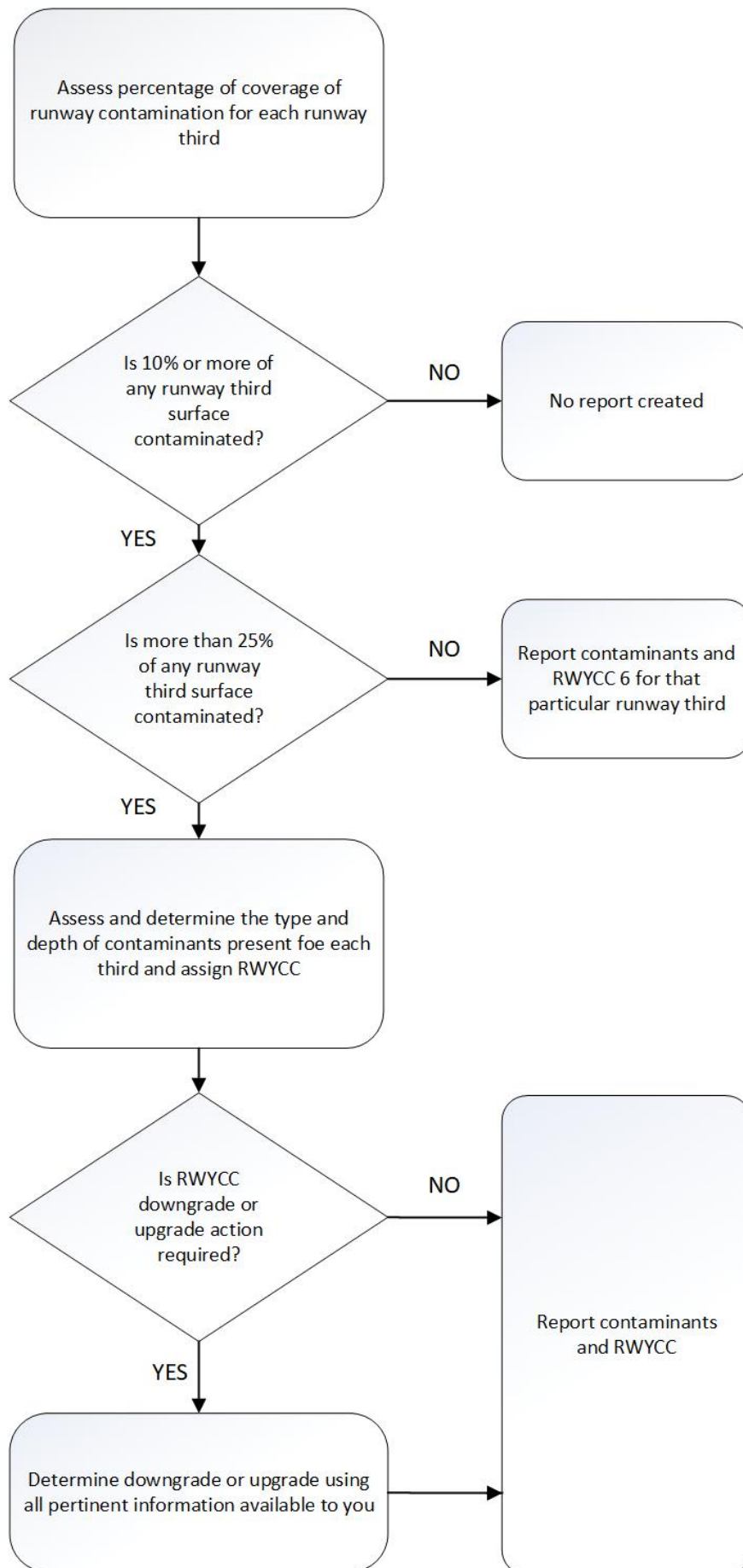
5. Appendices

5.1 The basic RCAM flowchart process for States exposed and not exposed to ice, snow, or frost:

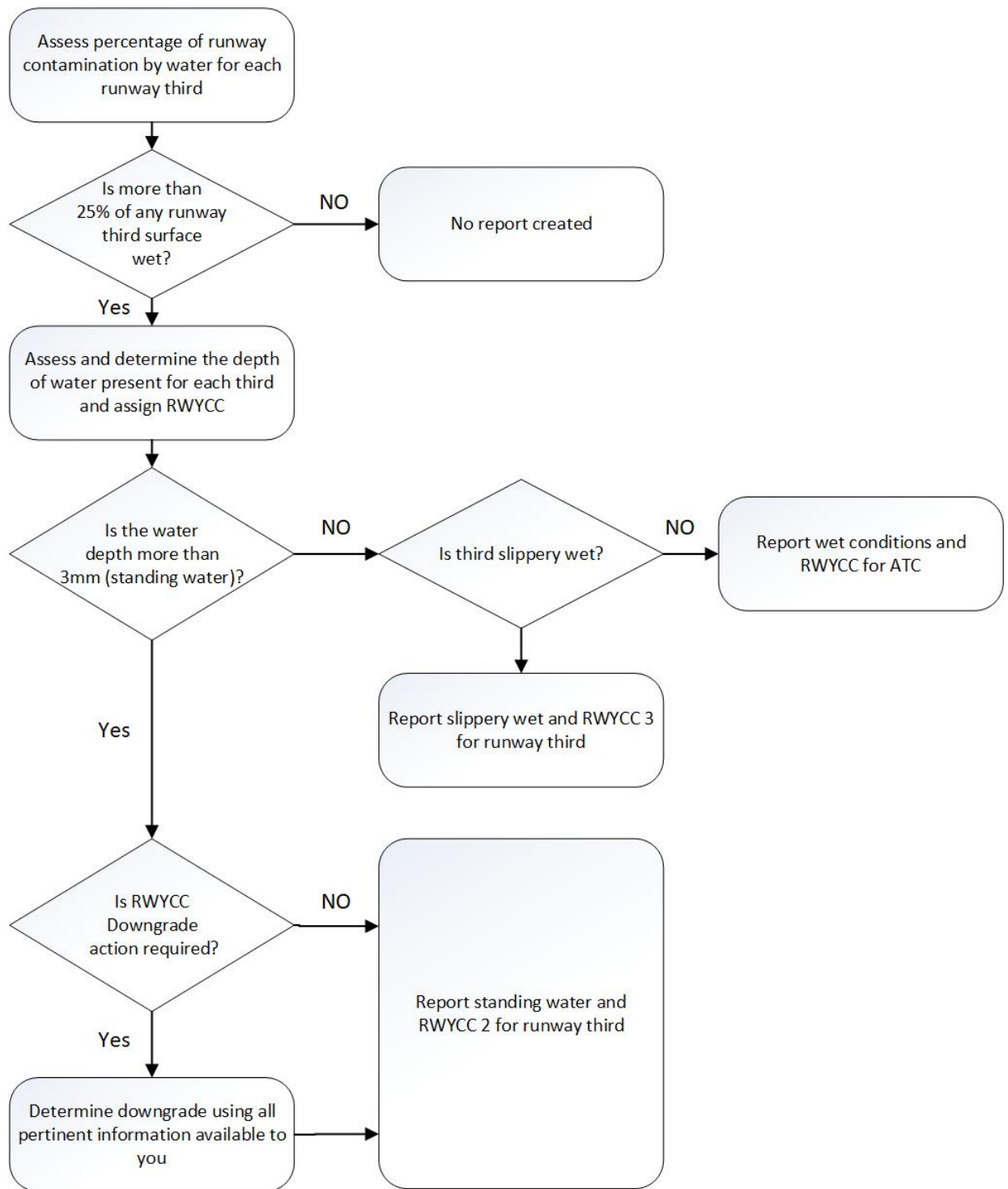
The flowchart begins with an assessment of each runway third and its contaminants, and it is divided into two scenarios: Flowchart A (winter season) and Flowchart B (summer season).



5.2. Flowchart A (winter season)



5.3 Flowchart B (summer season)



5.4 Runway Condition Assessment Matrix (RCAM)

Runway Condition Assessment Matrix (RCAM)			
Assessment criteria		Downgrade assessment criteria	
Runway condition code	Runway surface description	Aeroplane deceleration or directional control observation	Pilot report of runway braking action
6	<ul style="list-style-type: none"> • DRY 	-----	-----
5	<ul style="list-style-type: none"> • FROST • WET (The runway surface is covered by any visible dampness or water up to and including 3 mm depth) <p>Up to and including 3 mm depth:</p> <ul style="list-style-type: none"> • SLUSH • DRY SNOW • WET SNOW 	Braking deceleration is normal for the wheel braking effort applied AND directional control is normal.	GOOD
4	<p>-15°C and Lower outside air temperature:</p> <ul style="list-style-type: none"> • COMPACTED SNOW 	Braking deceleration OR directional control is between Good and Medium.	GOOD TO MEDIUM
3	<ul style="list-style-type: none"> • WET (“slippery wet” runway) • DRY SNOW or WET SNOW (any depth) ON TOP OF COMPACTED SNOW <p>More than 3 mm depth:</p> <ul style="list-style-type: none"> • DRY SNOW • WET SNOW <p>Higher than -15°C outside air temperature¹:</p> <ul style="list-style-type: none"> • COMPACTED SNOW 	Braking deceleration is noticeably reduced for the wheel braking effort applied OR directional control is noticeably reduced.	MEDIUM
2	<p>More than 3 mm depth:</p> <ul style="list-style-type: none"> • STANDING WATER • SLUSH 	Braking deceleration OR directional control is between Medium and Poor	MEDIUM TO POOR
1	<ul style="list-style-type: none"> • ICE 	Braking deceleration is significantly reduced for the wheel braking effort applied OR directional control is significantly reduced	POOR
0	<ul style="list-style-type: none"> • 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

¹ Runway surface temperature should preferably be used where available.

6. References

ICAO Annex 14 vol. I — Aerodrome Design and Operations
ICAO Annex 3 — Meteorological Service for International Air Navigation
ICAO Annex 6 — Operation of Aircraft, Part I — International Commercial Air Transport
— Aeroplanes and Part II — International General Aviation — Aeroplanes
ICAO Annex 8 — Airworthiness of Aircraft
ICAO Annex 15 — Aeronautical Information Services
ICAO Doc 4444 — PANS-ATM
ICAO Doc 9981 — PANS — Aerodromes,
ICAO Doc 10064 Aeroplane Performance Manual
ICAO Doc 10066 — PANS - AIM
ICAO Circular 355 - Assessment, Measurement and Reporting of Runway Surface
Conditions
EUR Doc 041 – ICAO Guidance on the Issuance of SNOWTAM
OTAR Part 139 — Certification of Aerodromes