
PRISCA NKOLO
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COURSE
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Session 6 – Using RCAM to report

- End- Objectives

At the end of the session, the participants should be able to :

- Use the Runway Condition Report (RCR) to report
- Determine when and how to report

Outline

- Runway Condition Report (RCR)
- When and how to report?

Runway Condition Report (RCR)

- **What is RCR?**
  - Standardized report relating to runway surface conditions and its effect on the aeroplane landing and take-off performance
  - RCR includes 2 sections:
    - ✓ Aerodrome performance calculation section
    - ✓ Situational awareness section

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Aerodrome performance Calculation section

Aerodrome location indicator

This information is mandatory.
ICAO location indicator
Format: nnnn
Example : DGAA

Source of information

- ICAO Doc 9170- Location indicators
- UTC time

Date and time of assessment

This information is mandatory.
UTC date &tie when the assessment was performed
Format: MMDDhhmm
Example : 09111357

Lower runway designation number

This information is mandatory.
Number identifying the runway for which the assessment is carried out and reported
Format: nn or nn[L] or nn[C] or nn[R]
Example : 09 ; 09L

Source of information

- Actual runway
- Assessment based upon RCAM and associated procedures

RWYCC for each runway third

This information is mandatory.
Runway condition code assessed for each runway third
Format: n/n/n
Example : 5/5/2

Aerodrome performance calculation section contains information relevant for aeroplane performance.That information is needed for:

- Flight planning
- Cockpit preparation for departure
- Cruise and approach preparation

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Aerodrome performance Calculation section

Percent coverage contaminant

This information is Conditional.
Not reported for one runway third if it is dry or covered with less than 10%
Format: nnn/nnn/nnn
Example : 25/50/100 ; NR/NR/100
NR= No records

Source of information

- Visual observation for each runway third
- Visual observation for each runway third confirmed by measurements when appropriate(depth)

Depth of contaminant(in mm)

This information is Conditional.
Reported only for STANDING WATER, Dry snow, Wet snow, and slush -
Format: nnn/nnn/nnn
Example : 04/06/12 Standing water

Condition description for each third

This information is mandatory.
To be reported in capital letters using standardized terminology
Format: STANDING WATER ; WET
Example : STANDING WATER/WET/STANDING WATER

Source of information

- Visual observation for each runway third
- Visual observation while at the runway and/or information from local procedures

Width of operating RWY (in m)

This information is Optional.
To be reported only if the operational width of the runway is less than what is published
Format: nn
Example : 30

Aerodrome performance calculation section contains information relevant for aeroplane performance.That information is needed for:

- Flight planning
- Cockpit preparation for departure
- Cruise and approach preparation

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Situational awareness section

Reduced runway length(in m)

This information is Conditional.
Reported when a NOTAM has been published with a new set of declared distances
Format: Standardized fixed text
RWY nn[] LDA REDUCED TO nnnn
Example : RWY 02R REDUCED TO 1450.

Source of information

- NOTAM
- Visual conditions, AIREP, reports by other aerodrome personnel, etc.

Taxiway conditions

This information is Optional.
Format: TWY [nnn] POOR
Example : TWY B POOR.

Apron conditions

This information is Optional.
Format: APRON [nnn] POOR
Example : APRON NORTH POOR.

Source of information

- Visual conditions, AIREP, reports by other aerodrome personnel, etc.
- Any additional operational significant information to be reported

Plain language remarks

This information is Optional.
Using only allowable capital letters
Allowable characters:
A B C D E F G H I J K L M N O P Q R S T U V X Y Z
0 1 2 3 4 5 6 7 8 9
/ ; “ ” (Space);” . ”(period)

All individual messages to end with a full stop sign.
Situational awareness section contains information relevant for situational awareness. That information is needed for:

- Flight planning
- Cockpit preparation for departure
- Cruise and approach preparation
- Descend
- Approach
- Taxi-in

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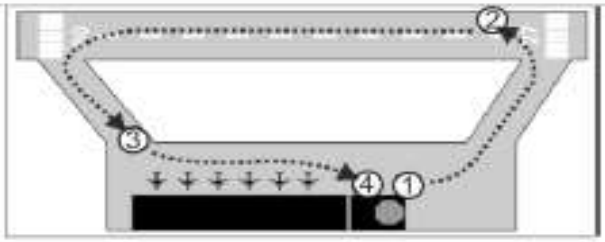
PROGRESS TESTS

When and How to report?

- **An14, Vol I , 2.9.1 requires :**
  - Information on the condition of the movement area and the operational status of related facilities shall be provided to appropriate AIS and similar information of operational significance to the ATS units to enable those units to provide the necessary information to arriving and departing aircrafts.
  - Information shall be kept up-to-date and changes in condition reported without delays.

Generic assessment process to generate RCR



New report necessary?
Any significant operational relevant change in the
- Aeroplane performance section? (Go to Step 1)
- Situational awareness section? (Go to Step 3)

→ Continuous monitoring of situation

		Examples of pertinent information
Step 1: Preparation	• Evaluate current information • Coordinate with other involved parties • Obtain access to the runway	• Last RCR • Significant changes • Relevant NOTAMs • AIREPs • Prevailing weather condition • Performed RWY treatments
Step 2: ***RWY condition assessment*** ***(Aeroplane performance)***	• Collecting data for each third of the RWY • Assess the collected data and turn it into information	• Visual observations • Measurements • Assess contaminant type, depth and coverage • Apply upgrade/ downgrade criteria • Assign RWYCC for each third of the RWY (see the basic RCAM flowchart process)
Step 3: ***Additional assessments*** ***(Situational awareness)***	• Collecting additional data for the RWY • Collecting data for taxiways and aprons • Assess the collected data and turn it into information	• Visual observations • Measurements • Drifting snow • Chemical treatment on RWY • Loose sand on the RWY • Snow Banks • Poor TWY conditions • Poor Apron Conditions

Step 4: Reporting	• Arrange the collected information in the defined order of the RCR
	• Promulgate the RCR
		• ATC
		  ◦ Radiotelephony
		  ◦ ATIS
		• AIS
		  ◦ SNOWTAM

Using RCAM to report: Step 1

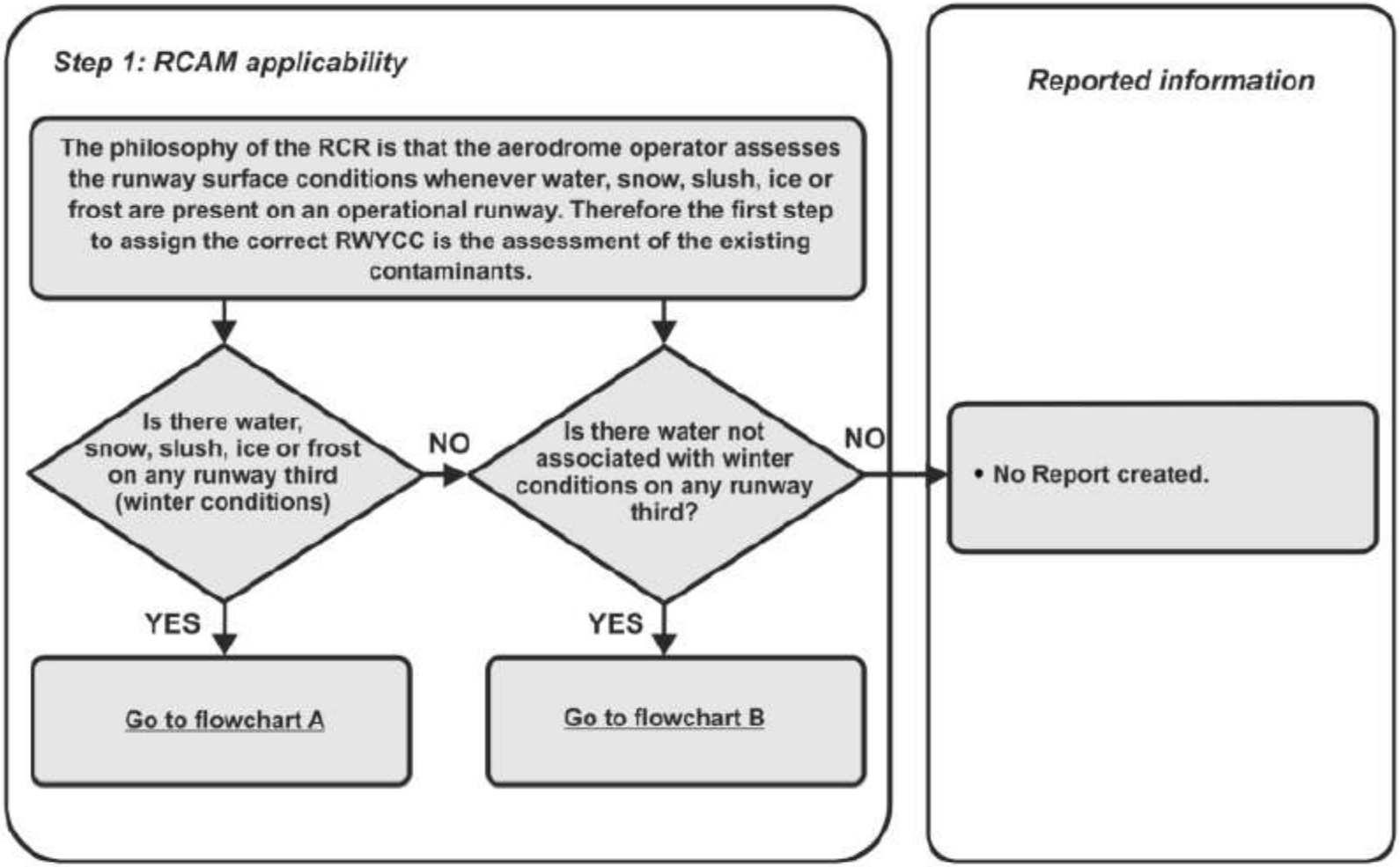
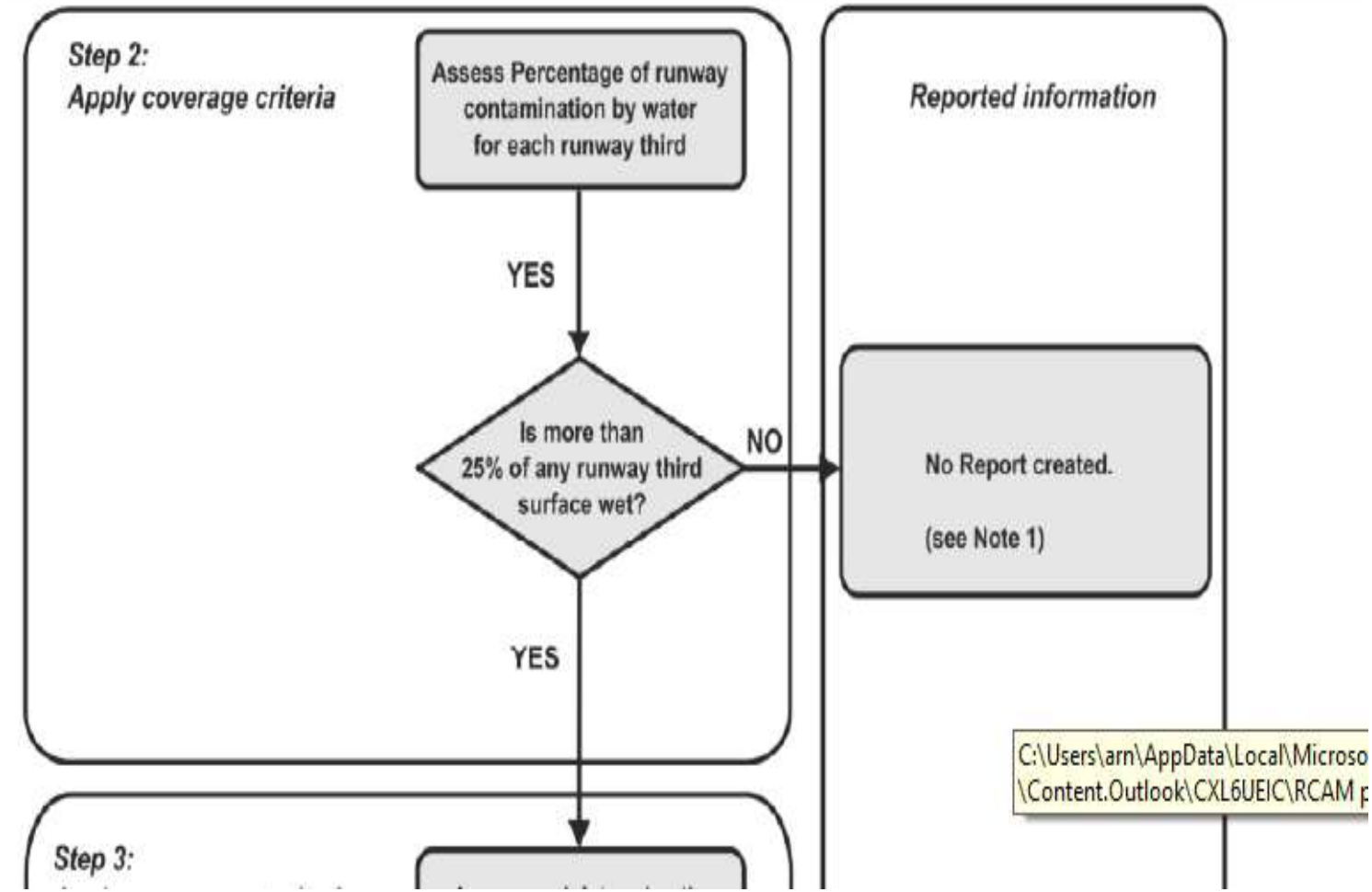
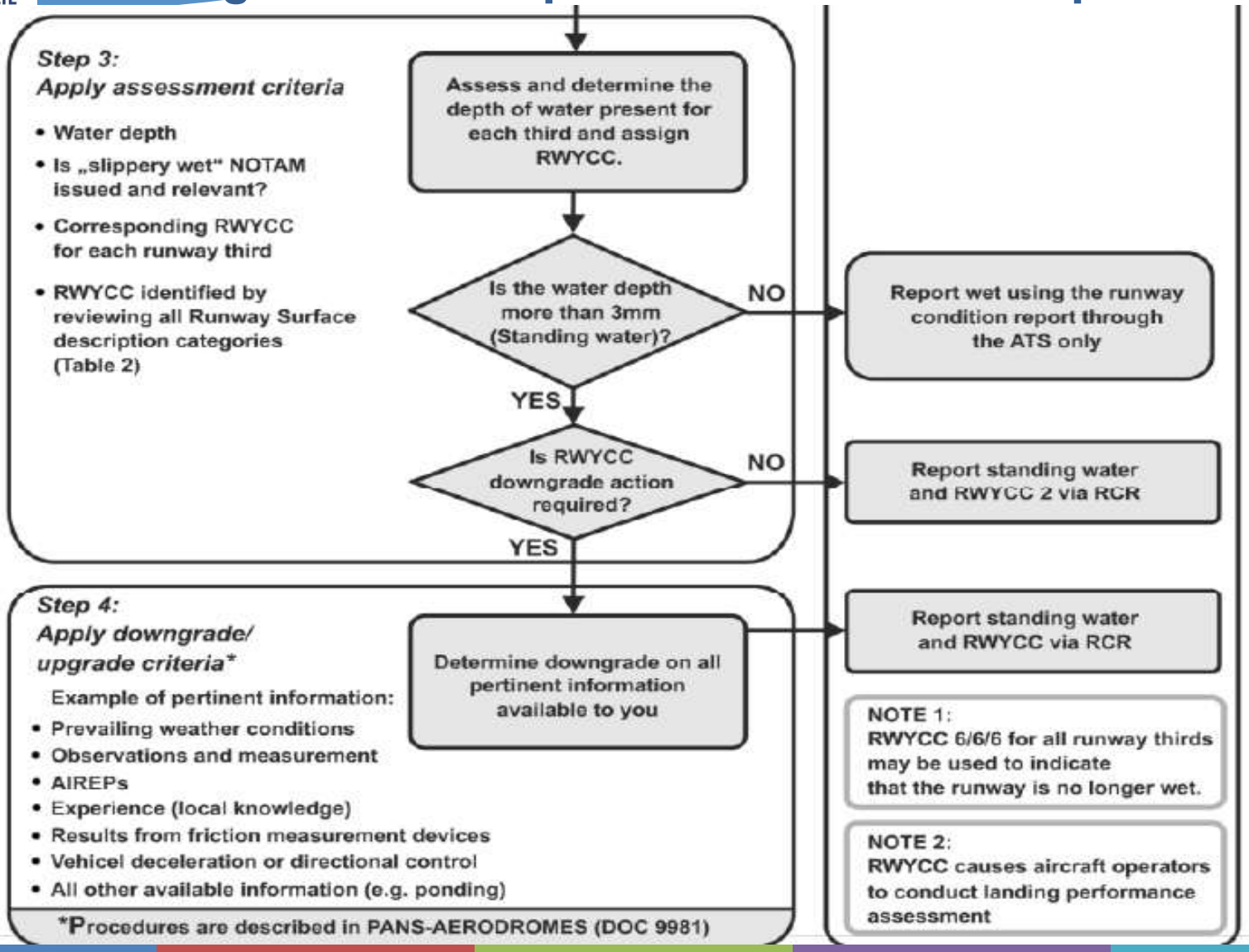


Figure 4-3. The basic RCAM flowchart process

Using RCAM to report: Flowchart B- Step 2



Using RCAM to report: Flowchart B- Step 3 & 4



Significant change

Significant changes in depth of contaminants

04mm is the minimum depth value at and above which the depth is reported for STANDING WATER
For 03mm and below the runway third is considered WET
Above 4 mm depth, **Any significant change from the initial assessed value should be reported**

New RCR

A change in RWYCC requires a complete assessment taking into account all information available
Significant changes may trigger the generation of new information in RCR

Contaminant	*Valid values to be reported*	*Significant change*
STANDING WATER	04, then assessed value	3 mm up to and including 15 mm
SLUSH	03, then assessed value	3 mm up to and including 15 mm
WET SNOW	03, then assessed value	5 mm
DRY SNOW	03, then assessed value	20 mm

Any significant change should be reported. This information is needed for:
-Taxi-out
- Line up and take-off or missed approach
- Descend
- Taxi-in

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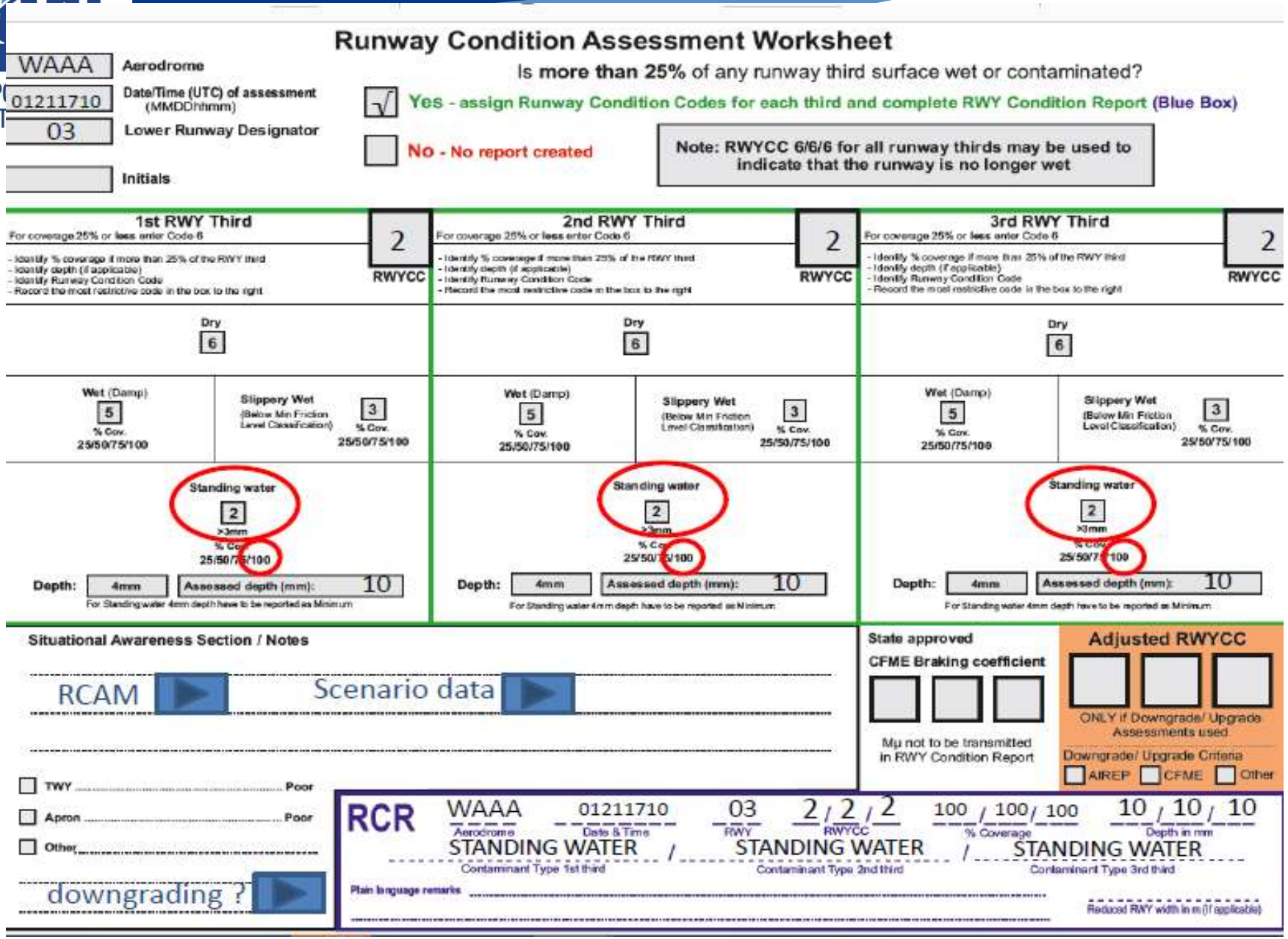
PROGRESS TESTS

Makassar Airport (WAAA), Sulawesi Selatan, Indonesia

- **RWY 03/21**
- **January 21th, 2019 at 17:10 UTC**
- **A thunderstorm has passed and a significant amount of rain is pouring down on the airport and surrounding region**
- **When driving down the runway which is completely covered by water, we estimate that the depth of the water layer is approximately 1 cm**
- **The OAT is 28° Celsius, dew point 28° Celsius**


Runway Condition Assessment Worksheet
WAAA
Aerodrome
01211710
Date/Time (UTC) of assessment (MMDDhhmm)
03
Lower Runway Designator
Initials
Is more than 25% of any runway third surface wet or contaminated?
Yes - assign Runway Condition Codes for each third and complete RWY Condition Report (Blue Box)
No - No report created
Note: RWYCC 6/6/6 for all runway thirds may be used to indicate that the runway is no longer wet
1st RWY Third
For coverage 25% or less enter Code 6
- Identify % coverage if more than 25% of the RWY third
- Identify depth (if applicable)
- Identify Runway Condition Code
- Record the most restrictive code in the box to the right
2
RWYCC
2nd RWY Third
For coverage 25% or less enter Code 6
- Identify % coverage if more than 25% of the RWY third
- Identify depth (if applicable)
- Identify Runway Condition Code
- Record the most restrictive code in the box to the right
2
RWYCC
3rd RWY Third
For coverage 25% or less enter Code 6
- Identify % coverage if more than 25% of the RWY third
- Identify depth (if applicable)
- Identify Runway Condition Code
- Record the most restrictive code in the box to the right
2
RWYCC
Dry
6
Wet (Damp)
5
% Cov.
25/50/75/100
Slippery Wet
(Below Min Friction Level Classification)
3
% Cov.
25/50/75/100
Standing water
2
>3mm
% Cov.
25/50/75/100
Depth:
4mm
Assessed depth (mm):
10
For Standing water 4mm depth have to be reported as Minimum
Situational Awareness Section / Notes
RCAM
Scenario data
TWY ..... Poor
Apron ..... Poor
Other .....
downgrading ?
State approved
CFME Braking coefficient
Mμ not to be transmitted in RWY Condition Report
Adjusted RWYCC
ONLY if Downgrade/ Upgrade Assessments used
Downgrade/ Upgrade Criteria
AIREP
CFME
Other
RCR
WAAA
Aerodrome
01211710
Date & Time
03
RWY
2 / 2 / 2
RWYCC
100 / 100 / 100
% Coverage
10 / 10 / 10
Depth in mm
STANDING WATER / STANDING WATER / STANDING WATER
Contaminant Type 1st third
Contaminant Type 2nd third
Contaminant Type 3rd third
Plain language remarks
Reduced RWY width in m (if applicable)

Makassar Airport (WAAA), Sulawesi Selatan, Indonesia

- RWY 03/21
- January 21th, 2019 at 17:10 UTC
- A thunderstorm has passed and a significant amount of rain is pouring down on the airport and surrounding region
- When driving down the runway which is completely covered by water, we estimate that the depth of the water layer on the middle third of the runway is approximately 1 mm and the other sections of the runway are completely

4) A final assessment of the precipitation reveals that the depth has increased to 7 mm

IS a new Runway condition report required?
If yes how are you going to report?

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/SWET

2) With continuing precipitation, a new runway condition report is required to be generated as 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

3) With even more precipitation, further assessment reveals the depth of precipitation has increased from 4 mm to 6 mm along the entire length of the runway.
Is a new RCR is required and if yes How would you report?

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Any Questions?

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