Civil Aviation Authority

GUIDANCE
FOR THE ASSESSMENT AND REPORTING ON SURFACE CONDITIONS OF AERODROME MOVEMENT AREAS

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List of Effective Pages

Page No.	Rev No.	Date of Issue
1	01	18/10/23
2	01	18/10/23
3	01	18/10/23
4	01	18/10/23
5	01	18/10/23
6	01	18/10/23
7	01	18/10/23
8	01	18/10/23
9	01	18/10/23
10	01	18/10/23
11	01	18/10/23
12	01	18/10/23
13	01	18/10/23
14	01	18/10/23
15	01	18/10/23

Page No.	Rev No.	Date of Issue

Page No.	Rev No.	Date of Issue

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Guidance for the assessment and reporting on surface conditions of aerodrome movement areas					
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Glossary

Abbreviations and Acronyms

AIP	Aeronautical information publications
AIC	Aeronautical information circulars
NOTAM	Notice to airmen
ATIS	Automatic terminal information services
ICAO	International Civil Aviation Authority
RCR	Runway Condition Report
CAA	Civil Aviation Authority
Cir	Circular

Table of Content

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1. Purpose

This guidance provides information to the airport operator on:

- Assessment of the surface condition of the aerodrome movement areas
- Reporting data on the surface condition of the aerodrome movement areas to the Aeronautical Information Services
- Using the appropriate method of promulgating the information on the surface condition of the aerodrome movement areas (AIP, AIC, NOTAM, SNOWTAM, AIREPs, ATIS or ATC communications).

2. Introduction

Oman Civil Aviation Authority has promulgated the Civil Aviation Regulations – CAR 139 Part 1, Aerodrome Certification, Design and Operation. Among its requirements, the aerodrome operator and designated service providers shall monitor the condition of the movement area and the operational status of related facilities within their scope of responsibility and report on matters of operational significance affecting aircraft and aerodrome operations in order to take appropriate action.

a) Of particular significance, the movement areas shall be monitored for the presence of contaminants and the information submitted as soon as possible to the Aeronautical Information Services (AIS) for publication via NOTAM.

b) The following sections establish the information that should be collected, how it is to be shared and how it will be reported to aeronautical users.

c) All regulations can be found on the Oman CAA website at Civil Aviation Authority - Regulations (caa.gov.om).

3. Reference

- CAR-139 Part 1, Aerodrome Certification, Design and Operation
- CAR-175, Aeronautical Information Services
- AMC-CAR 139, Procedure for aerodrome certification and safety oversight
- Cir 329, Assessment, Measurement and Reporting of Runway Surface Conditions

4. Data Expectations

In order to provide for consistent information, ICAO establishes a standard data structure forreporting the surface conditions of movement areas. The data structure is designed to provide a common taxonomy on the surface conditions of the movement areas to allow crew to adjust their operational plans.

5. Assessing surface conditions of the movement areas

5.1 As stated under section 2.9.2 of CAR-139 Part 1, the condition of the movement area and the operational status of related facilities shall be monitored, and reports on matters of operational significance affecting aircraft and aerodrome operations shall be provided in order to take appropriate action, including in respect of water or any other contamination on a runway, a taxiway or an apron.

Note 1: Contaminants may include mud, dust, sand, volcanic ash, fuel and oils, or rubber.

5.2 The information is collected through planned inspections of the movement area at least once where the aerodrome reference code number is 1 or 2 and at least twice where the aerodrome reference code number is 3 or 4.

5.3 Also, special inspection of the movement area needs to be conducted based on identified events such as following receipt of a complaint or when an unusual condition or unusual event occurs on the aerodrome, such as a significant meteorological event or an accident or incident, or during construction activity.

5.4 Inspection checklists must be used for recording all faults. All identified deficiencies must be reported.

5.5 A special care should be given to objects that can be found on runways and taxiways from the following sources:

a) debris from damaged pavement
b) debris from joint sealings
c) rubber debris from aircraft tires
d) stones from grass mowing
e) metal or plastic parts from aircraft
f) sand and soil from heavy storms or engine blast of aircraft
g) dead birds or other small animals hit by aircraft

Construction or maintenance work and Broken Surfaces

5.6 Where aircraft are constantly using areas open to contractors, inspection should be carried out at frequent intervals to ensure that the contractor has carried out any necessary cleaning to avoid and eliminate any foreign object debris (FOD).

5.7 Additionally, the aprons should be inspected for contaminants and objects such as stones, bottles, cans, stoppers, bottle caps, lost hand tools, personal belongings, nails, screws, bolts, paper, rubber, wire, plastic material, wooden, textile, synthetic and metal parts of all sizes from boxes, cases, pallets, containers and other packing devices, hydraulic oils, fuel and lubricants.

Assessment of Frictional Characteristics

5.8 With regard to the runway surface conditions, the inspection includes an assessment of the surface friction characteristics to determine friction level of paved surfaces or slipperiness of paved runways.

5.9 The friction of a wet paved runway should be measured for:

a) its friction characteristics when wet.
b) an evaluation to what extent paved runways are slippery when wet.
c) a determination of the friction of the runways that become slippery under unusual conditions.

5.10 As stated under section 2.9.8 of CAR-139 Part 1, notification shall be given to relevant aerodrome users when the friction level of a paved runway or portion thereof is less than the minimum friction level specified in the table 2-1 of CAR-139: Runway Surface Condition Levels.

Note: Information to be promulgated in a NOTAM includes specifying which portion of the runway is below the minimum friction level and its location on the runway.

5.11 Measurement of runway surface friction characteristics for maintenance purposes should be undertaken using any of the equipment cited in Table 2-1 of CAR-139 Part 1.

Assessment of Water Conditions on Runway

General procedure for evaluating water on runway surface are indicated in AMC-CAR 139 Part 1.

6. Contaminated Runway

6.1 The problem of friction on runway surfaces affected by contaminants can be expressed primarily as a generalized maintenance problem consisting of improved interfacial drainage or removal of the contaminants. The most dominant of these are:

a) maintenance of improved interfacial drainage capability for pavements contaminated by water (more than 3 mm in depth);
b) removal of rubber deposits; and
c) removal of other contaminants such as mud, dust, sand, volcanic ash, fuel and oils.

6.2 These issues can be significantly influenced by the level of maintenance provided by the airport operator.

7. Submission of data to the Aeronautical Information Services (AIS)

7.1 The conditions requiring reporting by the aerodrome operator to the Aeronautical Information

Services are described in the table 1.

7.2 There should be a written arrangement in the form of Service Level Agreement (SLA) concerning data quality between the aerodrome operator (data originator) and the AIS (distributor) for managing the aeronautical information data chain.

7.3 Reports are to be submitted to the Aeronautical Information Services (AIS) based on the SLA, and the procedures established in the aerodrome manual for reporting changes in aerodrome conditions.

Nature of information	**Type of publication**
changes of temporary nature	NOTAM/ AIP Supplement
changes of short duration containing extensive text, and/or graphics	AIP Supplement
changes of permanent nature	Amendment of the aerodrome manual, and Amendment of the AIP
friction of any portion of a runway below the minimum value	NOTAM
runway or portion thereof slippery when wet	NOTAM
contaminant such as mud, dust, sand, volcanic ash, fuel, oils, or rubber	NOTAM
runway is wholly or partly contaminated by standing water, snow, slush, ice or frost, or is wet associated with the clearing or treatment of snow, slush, ice or frost	The runway condition report should be disseminated through the AIS and ATS services
runway is wet, not associated with the presence of standing water, snow, slush, ice or frost	The assessed information should be disseminated using the runway condition report through the ATS only

Note 1: The Runway Condition Report form is given in Appendix 1

Note 2: The NOTAM request form is given in Appendix 2.

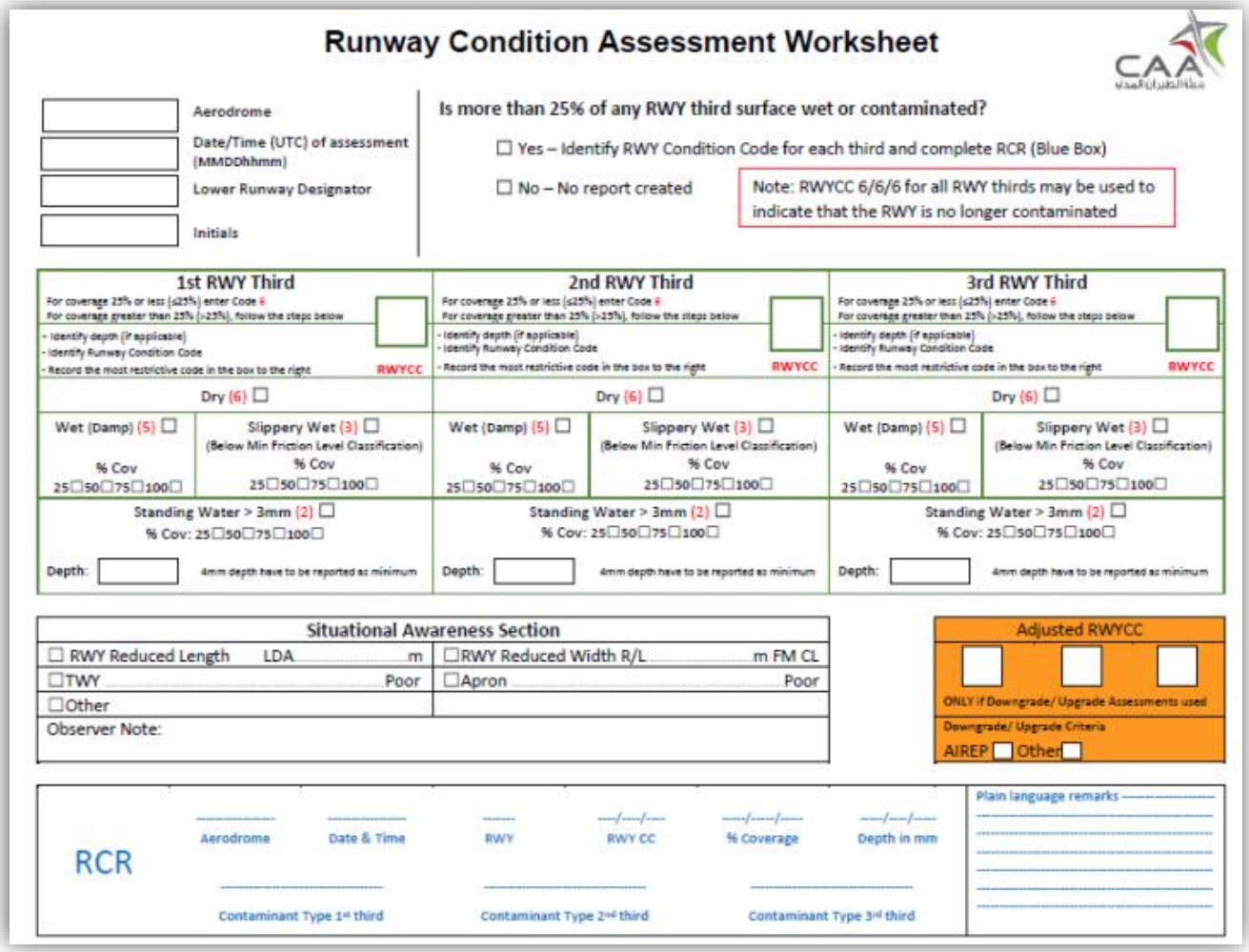
8. Corrective Maintenance

8.1 Once contaminants have been identified, prompt actions should be taken by the aerodrome operator for its removal and ensure cleanliness of the runway surface. Contaminants include fuel,

lubricants, hydraulic oils, marking paint or rubber.

8.2 At the conclusion of maintenance, construction work, or contaminant removal operations, airport operations staff should inspect the working area to ensure that it has been left in a satisfactory condition prior to the return of a runway to operational status.

Appendix 1. RCR FORM



Runway Condition Assessment Worksheet

Aerodrome

Date/Time (UTC) of assessment (MMDDhhmm)

Lower Runway Designator

Initials

Is more than 25% of any RWY third surface wet or contaminated?

☐ Yes – Identify RWY Condition Code for each third and complete RCR (Blue Box)

☐ No – No report created

Note: RWYCC 6/6/6 for all RWY thirds may be used to indicate that the RWY is no longer contaminated

1st RWY Third	2nd RWY Third	3rd RWY Third
For coverage 25% or less (≤25%) enter Code 6 For coverage greater than 25% (>25%), follow the steps below - Identify depth (if applicable) - Identify Runway Condition Code - Record the most restrictive code in the box to the right RWYCC	For coverage 25% or less (≤25%) enter Code 6 For coverage greater than 25% (>25%), follow the steps below - Identify depth (if applicable) - Identify Runway Condition Code - Record the most restrictive code in the box to the right RWYCC	For coverage 25% or less (≤25%) enter Code 6 For coverage greater than 25% (>25%), follow the steps below - Identify depth (if applicable) - Identify Runway Condition Code - Record the most restrictive code in the box to the right RWYCC
Dry (6) ☐	Dry (6) ☐	Dry (6) ☐
Wet (Damp) (5) ☐ % Cov 25☐50☐75☐100☐	Wet (Damp) (5) ☐ % Cov 25☐50☐75☐100☐	Wet (Damp) (5) ☐ % Cov 25☐50☐75☐100☐
Slippery Wet (3) ☐ (Below Min Friction Level Classification) % Cov 25☐50☐75☐100☐	Slippery Wet (3) ☐ (Below Min Friction Level Classification) % Cov 25☐50☐75☐100☐	Slippery Wet (3) ☐ (Below Min Friction Level Classification) % Cov 25☐50☐75☐100☐
Standing Water > 3mm (2) ☐ % Cov: 25☐50☐75☐100☐ Depth: 4mm depth have to be reported as minimum	Standing Water > 3mm (2) ☐ % Cov: 25☐50☐75☐100☐ Depth: 4mm depth have to be reported as minimum	Standing Water > 3mm (2) ☐ % Cov: 25☐50☐75☐100☐ Depth: 4mm depth have to be reported as minimum

Situational Awareness Section

☐ RWY Reduced Length LDA ..... m	☐RWY Reduced Width R/L ..... m FM CL
☐TWY ..... Poor	☐Apron ..... Poor
☐Other	
Observer Note:	

Adjusted RWYCC

ONLY if Downgrade/ Upgrade Assessments used

Downgrade/ Upgrade Criteria

AIREP ☐ Other ☐

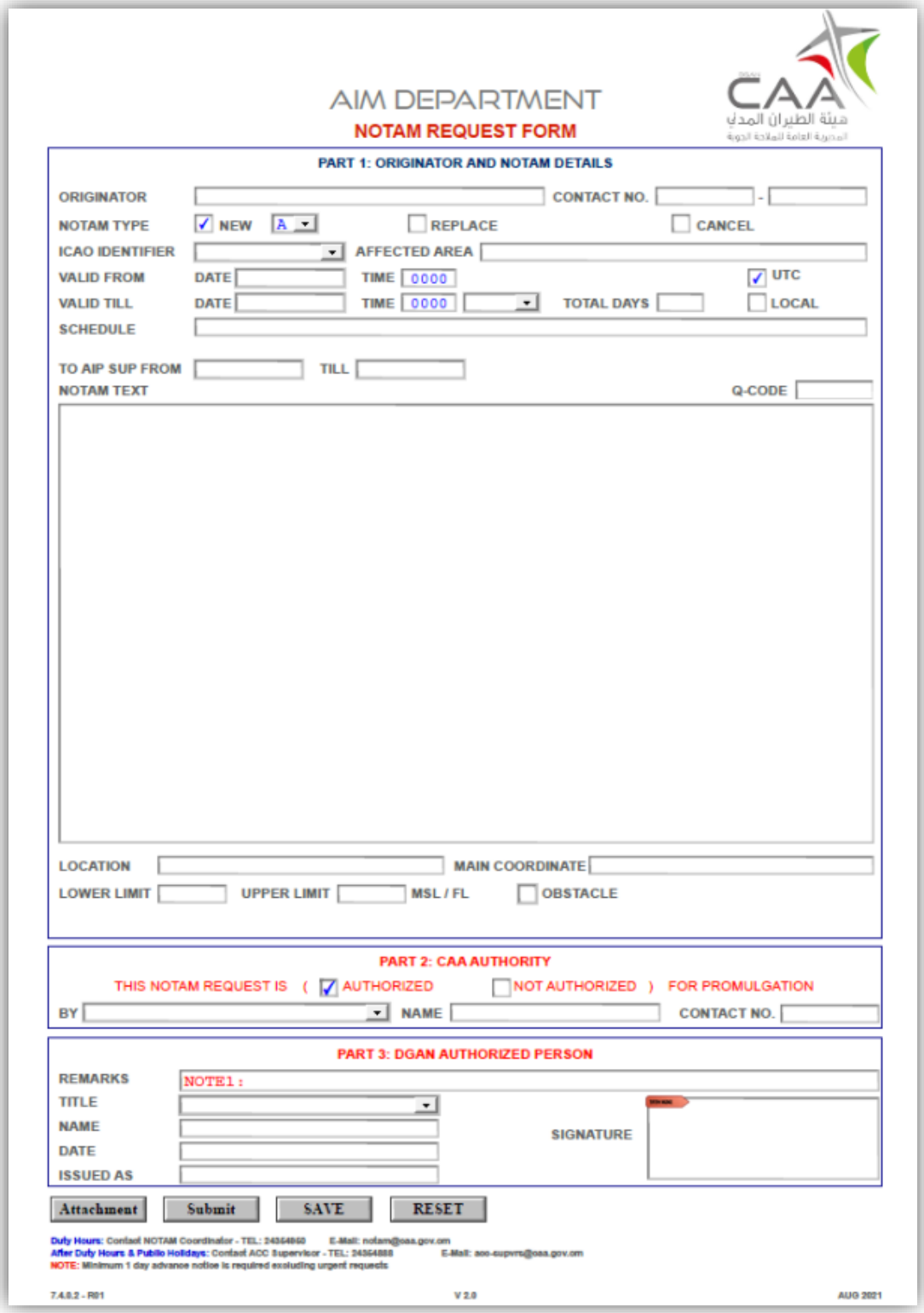
RCR

Aerodrome | Date & Time | RWY | RWY CC | % Coverage | Depth in mm

Contaminant Type 1st third | Contaminant Type 2nd third | Contaminant Type 3rd third

Plain language remarks

Appendix 2. NOTAM REQUEST FORM



AIM DEPARTMENT

NOTAM REQUEST FORM

CAA هيئة الطيران المدني

PART 1: ORIGINATOR AND NOTAM DETAILS

ORIGINATOR | CONTACT NO. | -

NOTAM TYPE | ☑ NEW | A | ☐ REPLACE | ☐ CANCEL

ICAO IDENTIFIER | AFFECTED AREA

VALID FROM | DATE | TIME 0000 | ☑ UTC

VALID TILL | DATE | TIME 0000 | TOTAL DAYS | ☐ LOCAL

SCHEDULE

TO AIP SUP FROM | TILL

NOTAM TEXT | Q-CODE

LOCATION | MAIN COORDINATE

LOWER LIMIT | UPPER LIMIT | MSL / FL | ☐ OBSTACLE

PART 2: CAA AUTHORITY

THIS NOTAM REQUEST IS (☑ AUTHORIZED ☐ NOT AUTHORIZED) FOR PROMULGATION

BY | NAME | CONTACT NO.

PART 3: DGAN AUTHORIZED PERSON

REMARKS | NOTE1 :

TITLE

NAME

DATE

ISSUED AS

SIGNATURE

Attachment | Submit | SAVE | RESET

Duty Hours: Contact NOTAM Coordinator - TEL: 24364860 E-Mail: notam@caa.gov.om

After Duty Hours & Public Holidays: Contact ACC Supervisor - TEL: 24364888 E-Mail: acc-supvrs@caa.gov.om

NOTE: Minimum 1 day advance notice is required excluding urgent requests

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