



Advisory Circular

Subject: Aerodrome Operating Visibility

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| Issuing Office: | Civil Aviation | Document No.: | AC 602-002 |
| File Classification No.: | Z 5000- 34 | Issue No.: | 02 |
| RDIMS No.: | 6675576-v5 | Effective Date: | 2011-06-30 |

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1.0 INTRODUCTION

- (1) This Advisory Circular (AC) is provided for information and guidance purposes. It describes an example of an acceptable means, but not the only means, of demonstrating compliance with regulations and standards. This AC on its own does not change, create, amend or permit deviations from regulatory requirements, nor does it establish minimum standards.

1.1 Purpose

- (1) The purpose of this AC is to address issues experienced by stakeholders (air operators, private operators and aerodrome operators) related to changes in Reduced Visibility Operations and Low Visibility Operations.

1.2 Applicability

- (1) This document is applicable to all Air Operators, Private Operators and Airport Operators as defined in Part I of the *Canadian Aviation Regulations* (CARs).

1.3 Description of Changes

- (1) Section 4.2 (4) of this AC is amended to include reference to taxi for departure at an uncontrolled site for consistency with AC 302-006.

2.0 REFERENCES AND REQUIREMENTS

2.1 Reference Documents

- (1) It is intended that the following reference materials be used in conjunction with this document:
 - (a) *Aeronautics Act* (R.S., 1985, c. A-2);
 - (b) Part I, of the *Canadian Aviation Regulations* (CARs) —*General Provisions*;
 - (c) Part III, Subpart 02 of the CARs—*Airports*;
 - (d) Part VI, Subpart 02 of the CARs—*Operating and Flight Rules*;
 - (e) Advisory Circular (AC) 302-001, Issue 01, 2008-03-07—*Publication of the Level of Service with Respect to Departure Below RVR 2600 (1/2 Statute Mile)*;
 - (f) AC 302-006, Issue 02, 2009-12-17 - *Publication of Special Reduced/Low Visibility Procedures in the appropriate Aeronautical Information Publication(s)*;
 - (g) AC 700-007, Issue 02, 2009-10-06 —*Airport Taxi-in/Taxi-out Requirements in Reduced/Low Visibility*;
 - (h) Commercial and Business Aviation Advisory Circular (CBAAC) No. 0256, 2006-07-31—*Low Visibility Take-Off Airport Requirements*;
 - (i) For Frequently asked Questions (FAQs) please refer to the following link: [Reduced/Low Visibility Operations Frequently Asked Questions \(FAQs\)](#);
 - (j) NAV CANADA Publication —*Canada Flight Supplement (CFS)*; and
 - (k) NAV CANADA Publication — *Canadian NOTAM Procedures Manual*.

2.2 Cancelled Documents

- (1) Not applicable.
- (2) By default, it is understood that the publication of a new issue of a document automatically renders any earlier issues of the same document null and void.

2.3 Definitions and Abbreviations

- (1) The following **definitions** are used in this document:
 - (a) **Aerodrome:** means any area of land, water (including the frozen surface thereof) or other supporting surface used, designed, prepared, equipped or set apart for use either in whole or in part for the arrival, departure, movement or servicing of aircraft and includes any buildings, installations and equipment situated thereon or associated therewith.
 - (b) **Airport:** means an aerodrome in respect of which an airport certificate issued under Subpart 302 of the CARs is in force.
 - (c) **Low Visibility Operations:** means operations below RVR 1200 ($\frac{1}{4}$ SM).
 - (d) **Low Visibility Operations Plan (LVOP):** means a plan that calls for specific procedures established by the airport operator and/or ATC when aerodrome visibility is below RVR 1200 ($\frac{1}{4}$ SM).
 - (e) **Reduced Visibility Operations:** means operations below RVR 2600 ($\frac{1}{2}$ SM) down to and including RVR 1200 ($\frac{1}{4}$ SM).
 - (f) **Reduced Visibility Operations Plan (RVOP):** means a plan that calls for specific procedures established by the aerodrome operator and/or ATC when aerodrome visibility is below RVR 2600 ($\frac{1}{2}$ SM) down to and including RVR 1200 ($\frac{1}{4}$ SM).
- (2) The following **abbreviations** are used in this document:
 - (a) **ATC:** Air Traffic Control;
 - (b) **ATS:** Air Traffic Services;
 - (c) **RVR:** Runway Visual Range; and
 - (d) **SM:** statute mile.

3.0 BACKGROUND

- (1) The harmonization of Reduced and Low Visibility Operations at airports, as described in Commercial and Business Aviation Circular (CBAAC) 0256, AC 302-001, and AC 700-007, has resulted in implementation issues for air, private and airport operators.
- (2) On May 8th, 2009, Transport Canada Civil Aviation (TCCA) met with Aviation Industry Associations, NAV CANADA and the Department of National Defence (DND). At this meeting Industry requested, and TCCA agreed, to publish guidance material for aerodrome operators related to the publication of the special reduced/low visibility restrictions and procedures required by pilots. A further meeting held October 15th 2009, with industry representatives, included the flight operations departments of various Canadian airlines. The result of this meeting reinforced the criticality of clear and accurate guidance for aircraft operations in order to assist in the aircrews and flight departments in their planning and decision making process.

4.0 APPLICABLE REQUIREMENTS

- (1) While Low Visibility Operations Plans (LVOP) are required by regulations, there are no regulatory requirements for airport operators to submit Reduced Visibility Operations Plans (RVOP).
- (2) Air and private operators are required by paragraph 602.96(2)(b) of the CARs to ensure that the aerodrome is suitable for their intended operations. The capability of an aerodrome to support reduced or low visibility operations should be considered to ensure compliance with paragraph 602.96(2)(b) of the CARs.

4.1 Publication of Aerodrome Level of Service

- (1) The standard minimum visibility required for ground operation and take-off at an aerodrome is Runway Visual Range (RVR) 2600 (1/2 SM).
- (2) Some air and private operators are authorized via an Operation Specification to take-off at visibilities reported to be less than RVR 2600 (1/2 SM). The approach ban permits conducting some approaches at reported visibilities of less than RVR 2600 (1/2 SM) from which landings can result. In order to support operations at reported visibilities of less than RVR 2600 (1/2 SM) the aerodrome requires additional equipment and/or special procedures.
- (3) For aerodromes that choose to support operations at reported visibilities of less than RVR 2600 (1/2 SM), aerodrome operators should publish the level of service their aerodrome supports. If no level of service is published then the operation at that aerodrome is limited to operations at a visibility not less than RVR 2600 (1/2 SM).
- (4) This level of service information is published in the *Canada Flight Supplement* (CFS) under Runway Data. One of the following two levels of service at less than the standard minimums may be published.
 - (a) "RVR 1200 (1/4 SM)", this indicates that the aerodrome and the runway meet the requirement for operations at visibilities of less than RVR 2600 (1/2 SM) to equal to or greater than RVR 1200 (1/4 SM).
 - (b) "RVR 600", this indicates that the aerodrome and the runway meet the requirements for operations at visibilities less than RVR 1200 (1/4 SM) to greater than or equal to RVR 600.
- (5) Due to additional requirements for night operations, in some cases, the reduced level of service may be annotated "day only". This indicates that a specific level of service is only approved for day operations.
- (6) As is the case with other Aeronautical Information, this information can be superseded by NOTAM; and some chart producers may elect to publish this information in other publications.

4.2 Aerodrome Operating Restrictions – Visibility

- (1) Paragraph 602.96(2)(b) of the CARs requires that before taking off from, landing at or otherwise operating an aircraft at an aerodrome, the Pilot-in-Command (PIC) of the aircraft shall be satisfied that the aerodrome is suitable for the intended operation.
- (2) One factor that needs to be considered to ensure compliance with paragraph 602.96(2)(b) of the CARs is the Aerodrome Operating Visibility. For the purpose of the PIC determining if the aerodrome is suitable for operations, the aerodrome operating visibility is defined as follows:
 - (a) At sites with an active Air Traffic Control (ATC) Tower: (in accordance with published airport operational procedures)
 - (i) For arrivals and departures (*refer to Note*), the aerodrome operating visibility is in accordance with the following hierarchy:
 - (A) RVR for the runway of intended use;
 - (B) Aerodrome visibility (METAR);
 - (C) Visibility as determined by the pilot.

Note:

For departure, where the reported aerodrome visibility is below the level of service for the intended runway of operations, RVR for that runway may be used by the pilot. However pilots need to be cognizant because the aerodrome is in a reduced or low visibility condition, the aerodrome operator may have elected to either

establish special procedures pursuant to an RVOP/LVOP to continue operations such as to restrict aircraft on the manoeuvring area to one at any time, or to actually cease operations (refer to Note under Section 4.2(4) of this AC).

- (b) At sites without an active ATC Tower: (outside ATC operating hours, Mandatory Frequency (MF), Unicom, CARS, or advisory sites, etc.)
 - (i) For arrivals, the aerodrome operating visibility is in accordance with the following hierarchy:
 - (A) RVR for the runway of intended use;
 - (B) Aerodrome visibility (METAR);
 - (C) Visibility as determined by the pilot.
 - (ii) For departures (*refer to **Note***), the aerodrome operating visibility is the lowest of the following visibilities:
 - (A) Aerodrome visibility (METAR);
 - (B) Any reported RVR;
 - (C) Visibility as determined by the pilot.

Note

For departure, where the reported aerodrome visibility is below the level of service for the intended runway of operations, RVR for that runway may only be used by the pilot where special procedures have been established by the aerodrome operator pursuant to an RVOP/LVOP, such as to restrict aircraft on the manoeuvring area to one at any time.

Tower observed visibility does not take precedence over reported ground visibility. Where ground visibility is reported tower observed visibility is considered advisory only. However where ground visibility is not reported, tower reported visibility replaces ground visibility and needs to be considered in the determination of the aerodrome operating visibility.

- (3) For the purpose of paragraphs 4.2 (4) and (5) of this AC, the visibility is less than the minimum visibility required for landing and taxi operations if the aerodrome's operating visibility is less than the level of service published in the CFS for the runway of intended use.
- (4) Where the aerodrome operating visibility as set out in paragraph 4.2 (2) of this AC, is less than the minimum visibility published in the CFS, taxi operations are deemed to be occurring below the published aerodrome operating visibility; except when:
 - (a) Visibility deteriorates below the published aerodrome operating visibility after the aircraft has commenced taxi for departure (including de-icing stop);
 - (b) Visibility deteriorates below the published aerodrome operating visibility after the aircraft has landed and is taxiing to the destination on the aerodrome;
 - (c) The aircraft is taxiing on the manoeuvring area as authorized by ATC in accordance with the aerodrome's published operational procedures; or
 - (d) The aircraft is taxiing for departure at a site without an active ATC Tower, in accordance with the aerodrome's operational procedures published pursuant to paragraph 602.96(3)(d) of the CARs; or
 - (e) The aircraft is taxiing on the manoeuvring area for purposes other than take-off or landing as authorized by the Aerodrome Operator in accordance with the aerodrome's RVOP/LVOP.

Note:

For (c), (d), and (e), the Aerodrome Operator will publish special reduced/low visibility restrictions or procedures, where required, for pilots in the appropriate aeronautical publication(s).

- (5) Where the Aerodrome operating visibility as set out in paragraph 4.2 (2) of this AC, is less than the minimum visibility published in the CFS, a landing is deemed to occur below the published aerodrome operating visibility for the runway of intended use; except where:
- (a) At the time a visibility report is received, the aircraft has passed the Final Approached Fix (FAF) inbound or, where there is no FAF, the point where the final approach course is intercepted;
 - (b) The RVR for the runway of intended landing is varying between distances less than and greater than the minimum RVR and the ground visibility is equal to or greater than the minimum visibility;
 - (c) At sites without an active ATC Tower, the ground visibility is varying between distances less than and greater than the minimum ground visibility and the RVR is equal to or greater than the minimum visibility; or
 - (d) At sites without an active ATC Tower, prior to 1,000' above aerodrome elevation the PIC determines that a localized meteorological phenomenon is affecting the ground visibility by observing that the runway of intended landing and the taxi route to the destination on the aerodrome are seen and recognized.

4.3 Publication of special reduced/low visibility restrictions and procedures

- (1) The following are examples of typical restrictions or procedures, which would be included in a RVOP or LVOP that a pilot could expect to see published in the aeronautical information publications:
- (a) Portions of the manoeuvring area not to be used.
 - (b) Specific runway(s) to be closed, or restrictions on the use of specific runway(s).
 - (c) Specific taxiway(s) to be closed, or restrictions on the use of specific taxiway(s).
 - (d) Specific taxi routes to be used, including (but not limited to):
 - (i) Use of one-way flows;
 - (ii) Routes to/from de-icing facilities; and
 - (iii) Routes for follow-me vehicles.
 - (e) Specific procedures for aircraft proceeding to/from de-icing facilities.
 - (f) Specific procedures for follow-me vehicles, i.e., communication procedures (including receipt and read-back of taxi clearances) and marshalling procedures.
 - (g) Specific restrictions and procedures to reposition aircraft for maintenance or other operational purposes.
 - (h) At sites where the ATC tower operates limited hours, specific restrictions and procedures may need to be published outside these operating hours.
 - (i) Operating restrictions / procedures such as one aircraft at a time on the manoeuvring area (*aerodromes with or without an active ATC tower*).
 - (j) Specific reduced/low visibility taxi/ground movement chart.
 - (k) For the purposes of reduced/low visibility operations, rotorcrafts are normally treated like any other aircraft. Rotorcraft, either wheel or skid equipped, normally use runways for

reduced/low visibility operations their taxi requirements are the same as for fixed-wing aircraft. Where specific Instrument Flight Rules (IFR) departure locations or heliports are located on the aerodrome, restrictions and procedures for the use of these facilities need to be published for pilots.

Note:

Once at the take-off point, rotorcrafts are permitted to take-off when the visibility is one half the Canada Air Pilot (CAP) value but not less than ¼ SM.

- (l) Any other pertinent elements.

5.0 INFORMATION MANAGEMENT

- (1) Not applicable.

6.0 DOCUMENT HISTORY

- (1) Advisory Circular (AC) 602-002 **Issue 01**, RDIMS 5413704, 2009-12-17 — *Aerodrome Operating Visibility*.

7.0 CONTACT OFFICE

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Transport Canada documents or intranet pages mentioned in this document are available upon request.