AERONAUTICAL INFORMATION CIRCULAR 11/21

EFFECTS OF APPROACH LIGHT SYSTEM INTENSITY ON INSTRUMENT FLIGHT PROCEDURE MINIMA

Introduction

A functioning high-intensity approach lighting (HIAL) system with all its intensity levels available allows the lowest approach minima to be used. When the HIAL system becomes inoperative, or selection of its intensity levels is restricted to only one level, the approach minima may need adjustment to remove the benefit provided by the HIAL system.

Purpose of the Circular

This aeronautical information circular (AIC) reminds Canadian airspace users to adjust the approach minima when a HIAL system becomes inoperative. This includes situations when the HIAL system is operating at a fixed intensity level without the normal ability for the pilot to select or request an intensity level suitable for the prevailing weather conditions while conducting the approach.

Background

Several conditions must be met before a runway can be certified as a precision runway. In addition to the obstacle environment, there are certain requirements related to visual aids. One of these requirements is the presence of a functioning HIAL system, including its capability to operate at different intensity levels. With all of the applicable elements present, the runway can be certified as a precision runway and instrument landing system (ILS), and localizer precision with vertical guidance (LPV) approach minima can achieve decision heights (DH) as low as 200 feet and visibilities as low as ½ statute mile (SM) (2600 feet runway visual range [RVR]).

Other instrument flight procedure (IFP) types with a DH or height above touchdown zone elevation (HAT) of 250 feet or higher also benefit from a HIAL system. Although their DH/HAT is not reduced, their advisory visibility may be reduced by up to ½ SM.

However, when the HIAL system becomes inoperative, a precision runway is no longer precision and the IFP minima must be adjusted up to non-precision values. Likewise, minima for IFPs that have had their advisory visibility reduced by up to ½ SM must be adjusted to remove this benefit.

Instructions for accomplishing these adjustments are found in the following publications:

- *AIP Canada*, Part 3 Aerodromes (AD), Section 2.22.4, “High Intensity Approach Lights (HIAL) Inoperative”
- *Canada Air Pilot*, Instrument Procedures, General Pages, Section “Operating Minima – Approach—HIAL Inoperative”
- *Transport Canada Aeronautical Information Manual* (TC AIM – TP 14371E), Rules of the Air and Air Traffic Services (RAC), Section 9.19.2.8, “Effects of the High Intensity Approach Lighting (HIAL) System on *Canada Air Pilot* (CAP) Advisory Visibilities and Runway Certification”

Details

Although the inability of the pilot to request (through air traffic services [ATS]) or select (via aircraft radio control of aerodrome lighting [ARCAL]) HIAL system intensity levels while conducting an approach is not the same as the HIAL system being inoperative, the same adjustments must be made to the approach minima. When only one intensity level is available in a HIAL system, the runway is no longer a precision runway and any reduction to the advisory visibility provided by the HIAL system no longer applies.

When only one intensity level is available in a HIAL system, or when a HIAL system becomes inoperative, a notice to airmen (NOTAM) is issued by the airport operator (*Canadian NOTAM Operating Procedures* (CNOP), Section 5.7.5, “Approach Lighting”). Limitations on the intensity levels of a HIAL system may be caused by a system malfunction or may be the result of an ATS unit evacuation, after which ATS personnel cannot manually adjust the intensity level at the pilot’s request. In either case, after being informed through NOTAM of an inoperative HIAL system or its intensity limitations, the pilot must make adjustments to approach minima as explained in the above noted publications.

Expiry Date

This AIC expires 21 April 2022.

Further Information

For further information, please contact:

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