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CIVIL AVIATION DIRECTIVE

Hereinafter referred to as "Directive", Issued by the Executive Director in accordance with section 38 (6) of the Civil Aviation Act, 2016 (Act No. 6 of 2016) and hereinafter referred to as ("the Act").


Doc No. NCAA- OPS-1/07/2018

PUTTING INTO FORCE

OPERATOR APPROVAL REQUIREMENTS FOR FYWE (EROS) RNP APCH RWY 01

Date of issue: **01 JULY 2018**

Approved by:



Ms. Angeline Simana
Executive Director
Namibia Civil Aviation Authority

OPERATOR APPROVAL REQUIREMENTS FOR FYWE (EROS) RNP APCH RWY 01

1) BACKGROUND

Operators require NCAA approval to conduct the RNP APCH RWY 01 at Eros (FYWE) aerodrome, Namibia

Eros (FYWE) aerodrome is situated in an obstacle rich environment. It also has a relatively short and narrow runway.

Due to the terrain to the south of the aerodrome, the Vertical Path Angle (VPA) for the approach to Runway 01 exceeds 6.1% / 3.5° (3.5 degrees), which is the maximum **standard** descent angle according to ICAO DOC 8168. The VPA for the RNP APCH RWY 01 is 7.5% / 4.3° (4.3 degrees).

2) PURPOSE

This Directive is intended to put into force a set of requirements to be met for operators wishing to gain NCAA approval to conduct the FYWE RNP APCH RWY 01.

3) APPLICABILITY

This Directive applies to all operators wishing to conduct operations using the FYWE RNP APCH RWY 01

4) EFFECTIVE DATE

This Directive shall come into force on the 1 July 2018 and shall remain in force until it is withdrawn by the Executive Director.

5) CANCELLATION

This Directive supersedes any arrangement made or technical standard which was issued or purported to be issued concerning this issue.

6) REFERENCES

- Procedures for Air Navigation - Air Operations, Volume II - Construction of Visual and Instrument Flight Procedures, PANS-OPS -Volume II (DOC 8168);
- Instrument Flight Procedures Construction Manual (DOC 9368);

- Performance Based Navigation Manual (Doc 9613)

7) CONTACT

Operators requiring further information should contact their NCAA designated Principal Inspector in the first instance or email mombolav@dca.com.na

8) OPERATOR REQUIREMENTS

All operators wishing to conduct RNP APCH RWY 01 Eros will require NCAA special approval for eligible aircraft. Some aircraft may be excluded by manufacturer imposed limitations.

The following requirements will apply:

- Conduct an aeronautical study (including non-normal operations), as contained in Appendix 1, for each aircraft performance category wishing to conduct RNP APCH RWY 01 Eros;
- Conduct flight validation of the RNP APCH RWY 01 procedure and include results in the approval application for each aircraft performance category;

NOTE 1: any flight validation must be conducted by day in VMC only

NOTE 2: flight validation may be conducted in a simulator appropriate for the aircraft type

NOTE 3: a sample flight validation form is attached at Appendix 2

- Provide a risk assessment and mitigation strategy for the RNP APCH RWY 01 operation in accordance with ICAO DOC 9859 Safety Management Manual (SMM);
- Request NCAA Special Approval using the Five Phase Approval Process;
- **NOTE:** an operator may include the specific information required in a. and b. above in an initial application for RNP APCH approval; and
- Receive NCAA Special Approval

9) APPROVAL

Part 127 operators do not require special approval for approach angles up to 13.2% and as such do not require special approval for this approach. Part 127 operators are permitted to fly RNP APCH to CAT A minima.

Part 91, Part 121, and Part 135 operators must make application to the NCAA. Once satisfied that all aspects of the approval process have been received and duly considered, The Authority will issue an approval for the conduct of RNP APCH RWY 01 FYWE, provided the granting of such approval will not compromise aviation safety, and for;

- Part 121, and 135 operators as an addition to their Navigation Specifications as endorsed on their Air Operator Certificate; or
- Part 91 operators, as a Letter of Authorisation (LoA).

APPENDIX 1

Windhoek-Eros - Aeronautical study

The final descent angle for the LNAV and LNAV/VNAV approach for the runway 01 is 4.3°, the same as the PAPI angle for this runway. According to PANS-OPS (ICAO Doc 8168, Vol. 2) the maximum standard descent angle is 3.5°.

However greater descent angles can be used based on the following statements.

PANS-OPS, Part III - Section 3, Chapter 4, paragraph 4.2.1.3 states:

A procedure with a promulgated VPA that exceeds 3.5° is a non-standard procedure.

It shall be subject to an aeronautical study and will require special approval by the national competent authority.

PANS-OPS, Part I - Section 4, Appendix B to Chapter 5 states:

1.1 Following changes in the PANS-OPS criteria (e.g.: maximum descent gradient changed from 6.5 per cent to 6.1 per cent for Cat C, D, E) some existing non-precision approach procedures at aerodromes with an obstacle rich environment cannot comply with the maximum descent gradients of the final segment.

1.2 Steep angle approach procedures do not meet PANS-OPS criteria. Such nonstandard procedures should only be published after careful consideration that at least includes an aeronautical study and a special approval by the appropriate State authority.

3. The Aeronautical Study required before implementation of steep angle approach procedures should take into account all the circumstances surrounding the approach and identify risk assessments which have been considered.

In this study consideration should be given to at least the following items:

- a) minimum drag configuration;
- b) effect of wind shear; maximum tail wind;

- c) control laws;
- d) handling characteristics;
- e) minimum power for anti-icing;
- f) GPWS modifications;
- g) use of flight director/autopilot;
- h) engine spin-up time;
- i) Vat increase for handling considerations;
- j) weather minima;
- k) visual aids;
- l) crew training and qualifications; and
- m) aircraft certification requirements.