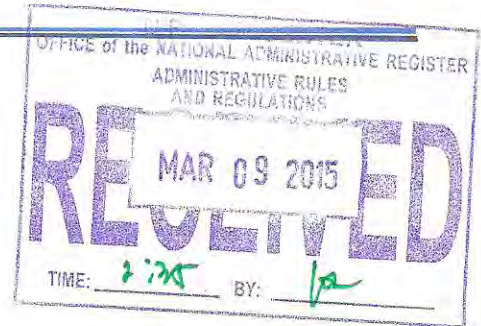




MEMORANDUM CIRCULAR NO.: 04-15



TO : ALL CONCERNED
FROM : THE DIRECTOR GENERAL
SUBJECT : AMENDMENT TO PHILIPPINE CIVIL AVIATION REGULATIONS - AIR NAVIGATION SERVICES (CAR-ANS) PART 11 INCORPORATING AMENDMENT 48 TO ANNEX 11

REFERENCE:

1. Philippine Civil Aviation Regulations- Air Navigation Services
2. ICAO Annex 11
3. ICAO Annex 11; Amendment 48
4. Regulations Amendment Procedures
5. Board Resolution No. 2012-054 dated 28 September 2012

Pursuant to the powers vested in me under the Republic Act 9497, otherwise known as the Civil Aviation Authority Act of 2008 and in accordance with the Board Resolution No.: 2012-054 dated 28 September 2012, I hereby approve the incorporation of ICAO Annex 11 Amendment No. 48 to the Philippine Civil Aviation Regulations – Air Navigation Services (CAR-ANS) Part 11.

ORIGINAL REGULATION:

CAR-ANS PART 11

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11.1. DEFINITIONS

Accident. An occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, in which:

...

b) the aircraft sustains damage or structural failure which:

- adversely affects the structural strength, performance, or flight characteristics of the aircraft, and
- would normally require major repair or replacement of the affected component, *except* for engine failure or damage, when the damage is limited to the engine, its cowlings or accessories; or for damage limited to propellers, wing tips, antennas, tires, brakes, fairings, small dents or puncture holes in the aircraft skin; or

...

Note 1. - For statistical uniformity only, an injury resulting in death within thirty days of the date of the accident is classified as a fatal injury.

Note 2. - An aircraft is considered to be missing when the official search has been terminated and the wreckage has not been located.

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Incident. An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation

"The Future is in the Skies"

...

11.2. GENERAL

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11.2.19 Aeronautical Data

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11.2.19.3 Protection of electronic aeronautical data while stored or in transit shall be totally monitored by the cyclic redundancy check (CRC). To achieve protection of the integrity level of critical and essential aeronautical data as classified in 11.2.18.2, a 32- or 24-bit CRC algorithm shall apply respectively.

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11.3 AIR TRAFFIC CONTROL SERVICE

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11.3.3 Operation of air traffic control service

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11.3.3.5.1 For all airspace where a reduced vertical separation minimum of 300 m (1000ft) is applied between FL290 and FL 410 inclusive, a program shall be instituted, on a regional basis, for monitoring the height-keeping performance of aircraft operating at these levels, in order to ensure that the implementation and continued application of this vertical separation minimum meets the safety objectives. The coverage of the height monitoring facilities provided under this program shall be adequate to permit monitoring of the relevant aircraft types of all operators that operate in RVSM airspace.

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11.4 FLIGHT INFORMATION SERVICE

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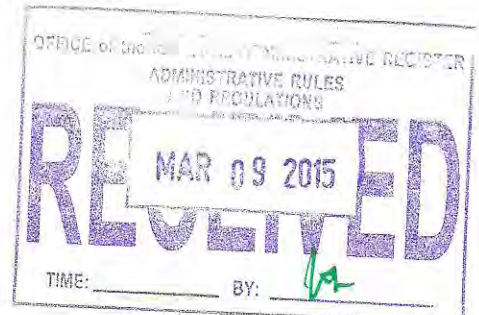
11.4.3 Operational flight information service broadcasts

...

11.4.3.7 ATIS for arriving and departing aircraft

ATIS messages containing both arrival and departure information shall contain the following elements of information in the order listed:

- a) name of aerodrome;
- d) arrival and/or departure indicator;
- e) contract type, if communication is via D-ATIS;
- f) designator;
- g) time of observation, if appropriate;
- h) type of approach(es) to be expected;
- i) the runway(s) in use; status of arresting system constituting a potential hazard, if any;
- j) significant runway surface conditions and, if appropriate, braking action;
- k) holding delay, if appropriate;
- l) transition level, if applicable;
- m) other essential operational information;
- n) surface wind direction and speed, including significant variations and, if surface wind sensors related specifically to the sections of runway(s) in use are available and the information is required by operators, the indication of the runway and the section of the runway to which the information refers;
- *m) visibility and, when applicable, RVR;
- *n) present weather;
- *o) cloud below 1 500 m (5 000 ft) or below the highest minimum sector altitude, whichever is greater; cumulonimbus; if the sky is obscured, vertical visibility when available;
- p) air temperature;
- †q) dew point temperature;
- r) altimeter setting(s);



- s) any available information on significant meteorological phenomena in the approach and climb-out areas including wind shear, and information on recent weather of operational significance;
- t) trend forecast, when available; and
- u) specific ATIS instructions.

...

11.4.3.8 ATIS for arriving aircraft

ATIS messages containing arrival information only shall contain the following elements of information in the order listed:

...

- l) surface wind direction and speed, including significant variations and, if surface wind sensors related specifically to the sections of runway(s) in use are available and the information is required by operators, the indication of the runway and the section of the runway to which the information refers;

...

- *m) visibility and, when applicable, RVR;

...

11.4.3.9 ATIS for departing aircraft

ATIS messages containing departure information only shall contain the following elements of information in the order listed:

...

- k) surface wind direction and speed, including significant variations and, if surface wind sensors related specifically to the sections of runway(s) in use are available and the information is required by operators, the indication of the runway and the section of the runway to which the information refers;

- *l) visibility and, when applicable, RVR;

...

*These elements are replaced by the term "CAVOK", whenever the conditions as specified in the PANS-ATM (Doc 4444), Chapter 11 prevail.

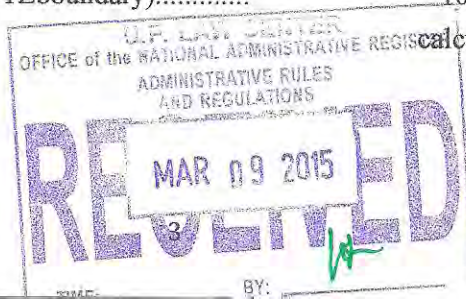
†As determined on the basis of regional air navigation agreements.

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APPENDIX 11.5. AERONAUTICAL DATA QUALITY REQUIREMENTS

Table 1. Latitude and longitude

Latitude and longitude	Accuracy Data type	Integrity classification
Flight information region boundary points.....	2 km (1 NM) declared	1×10^{-3} routine
P, R, D areas boundary points (outside CTA/CTZ boundaries).....	2 km (1 NM) declared	1×10^{-3} routine
P, R, D areas boundary points (inside CTA/CTZ boundary).....	100 m calculated	1×10^{-5} essential



CTA/CTZ boundary points.....	100 m calculated	1×10^{-5} essential
En-route nav aids and fixes, holding, STAR/SID points.....	100 m surveyed/calculated	1×10^{-5} essential
Obstacles en-route,.....	100 m surveyed	1×10^{-3} routine
Final approach fixes/points and other essential fixes/points comprising instrument approach procedure.....	3 m surveyed/calculated	1×10^{-5} essential

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AMENDED REGULATION:

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11.1. DEFINITIONS

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Accident. An occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time it comes to rest at the end of the flight and the primary propulsion system is shut down, in which:

- ...
- b) the aircraft sustains damage or structural failure which:
- adversely affects the structural strength, performance, or flight characteristics of the aircraft, and
 - would normally require major repair or replacement of the affected component,
- except* for engine failure or damage, when the damage is limited to a single engine, (including its cowlings or accessories), to propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin (such as small dents or puncture holes), or for minor damages to main rotor blades, landing gear, and those resulting from hail or bird strike (including holes in the radome); or

...

Note 1. - For statistical uniformity only, an injury resulting in death within thirty days of the date of the accident is classified, by ICAO, as a fatal injury.

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Note 3. - The type of unmanned aircraft system to be investigated is addressed in Annex 13.5.1.

Note 4. - Guidance for the determination of aircraft damage can be found in Annex 13, Attachment G.

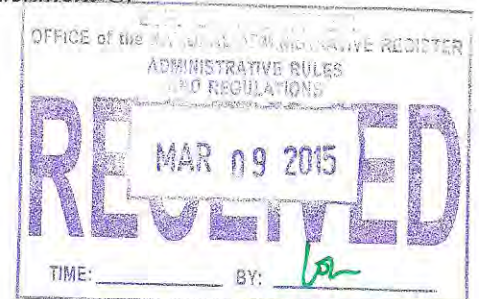
...

Incident. An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation

Note.- The types of incidents which are of main interest to the International Civil Aviation Organization for accident prevention studies are listed in Annex 13, Attachment C.

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11.2 GENERAL



2.19 Aeronautical data

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11.2.19.3 Electronic aeronautical data sets, shall be protected by the inclusion in the data sets of a 32-bit cyclic redundancy check (CRC) implemented by the application dealing with the data sets. This shall apply to the protection of all integrity levels of data sets as specified in 2.19.2.

Note 1. - The requirement in 2.19.3 does not apply to the communications systems used for the transfer of data sets.

Note 2.- Guidance material on the use of a 32-bit CRC algorithm to implement a protection of electronic aeronautical data sets is contained in the aeronautical Information Service Manual (Doc 8126).

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11.3 AIR TRAFFIC CONTROL SERVICE

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11.3.3 Operation of air traffic control service

...

11.3.3.5.1 For all airspace where a reduced vertical separation minimum of 300 m (1 000 ft) is applied between FL 290 and FL 410 inclusive, a programme shall be instituted, on a regional basis, for monitoring the height-keeping performance of aircraft operating at these levels, in order to ensure that the continued application of this vertical separation minimum meets the safety objectives. The scope of regional monitoring programmes shall be adequate to conduct analyses of aircraft group performance and evaluate the stability of altimetry system error.

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11.4 FLIGHT INFORMATION SERVICE

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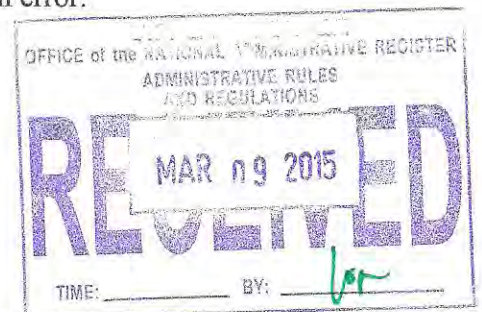
11.4.3 Operational flight information service broadcasts

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- e) time of observation, if appropriate;
- f) type of approach(es) to be expected;
- g) the runway(s) in use; status of arresting system constituting a potential hazard, if any;
- h) significant runway surface conditions and, if appropriate, braking action;
- i) holding delay, if appropriate;
- j) transition level, if applicable;
- k) other essential operational information;
- l) surface wind direction (in degrees magnetic) and speed, including significant variations and, if surface wind sensors related specifically to the sections of runway(s) in use are available and the information is required by operators, the indication of the runway and the section of the runway to which the information refers;



- *m) visibility and, when applicable, RVR and, if visibility/RVR sensors related specifically to the sections of runway(s) in use are available and the information is required by operators, the indication of the runway and the section of the runway to which the information refers;
- *n) present weather;
- *o) cloud below 1 500 m (5 000 ft) or below the highest minimum sector altitude, whichever is greater; cumulonimbus; if the sky is obscured, vertical visibility when available;
- p) air temperature;
- †q) dew point temperature;
- r) altimeter setting(s);
- s) any available information on significant meteorological phenomena in the approach and climb out areas including wind shear, and information on recent weather of operational significance;
- t) trend forecast, when available; and
- u) specific ATIS instructions.

...

11.4.3.8 ATIS for arriving aircraft

ATIS messages containing arrival information only shall contain the following elements of information in the order listed:

...

- l) surface wind direction (in degrees magnetic) and speed, including significant variations and, if surface wind sensors related specifically to the sections of runway(s) in use are available and the information is required by operators, the indication of the runway and the section of the runway to which the information refers;
- *m) visibility and, when applicable, RVR and if visibility/RVR sensors related specifically to the sections of runway(s) in use are available and the information is required by operators, the indication of the runway and the section of the runway to which the information refers;

...

11.4.3.9 ATIS for departing aircraft

ATIS messages containing departure information only shall contain the following elements of information in the order listed:

...

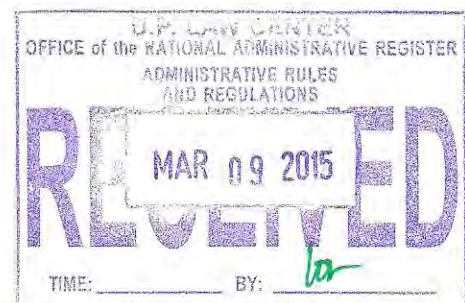
- k) surface wind direction (in degrees magnetic) and speed, including significant variations and, if surface wind sensors related specifically to the sections of runway(s) in use are available and the information is required by operators, the indication of the runway and the section of the runway to which the information refers;
- *l) visibility and, when applicable, RVR and if visibility/RVR sensors related specifically to the sections of runway(s) in use are available and the information is required by operators, the indication of the runway and the section of the runway to which the information refers;

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*These elements are replaced by the term "CAVOK", whenever the conditions as specified in the PANS-ATM (Doc 4444), Chapter 11 prevail.

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APPENDIX 11.5. AERONAUTICAL DATA QUALITY REQUIREMENTS

Table 1. Latitude and longitude

Latitude and longitude	Accuracy Data type	Integrity classification
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P, R, D areas boundary points (outside CTA/CTR boundaries).....	2 km declared	1×10^{-3} routine
P, R, D areas boundary points (inside CTA/CTR boundary)	100 m calculated	1×10^{-5} essential
CTA/CTR boundary points.....	100 m calculated	1×10^{-5} essential
En-route nav aids and fixes, holding, STAR/SID points.....	100 m surveyed/calculated	1×10^{-5} essential
Obstacles in Area 1 (the entire State territory).....	50 m surveyed	1×10^{-3} routine
Obstacles in Area 2 (the part outside the aerodrome/heliport boundary.....	5 m surveyed	1×10^{-5} essential
Final approach fixes/points and other essential fixes/points comprising the instrument approach procedure.....	3 m surveyed/calculated	1×10^{-5} essential

Note 1. - See CAR-ANS Part 15, Appendix 15G, for graphical illustrations of obstacle data collection surfaces and criteria used to identify obstacles in the defined areas.

Note 2. - In those portions of Area 2 where flight operations are prohibited due to very high terrain or other local restrictions and/or regulations, obstacle data are to be collected in accordance with the Area 1 numerical requirements specified in CAR-ANS Part 15 Appendix 15G, Table 15G-2.

EFFECTIVITY CLAUSE:

This amendment shall be added to the PCAR-ANS Part 11, series of 2015 and shall take effect immediately and shall supersede any other memoranda, regulations, and directives in conflict with this provision after compliance with the requisite single newspaper publication and a copy filed with the U.P. Law Center- Office of the National Administrative Register.

So ordered. Signed this 05 day of MAR 2015, CAAP, Pasay City.

LT GEN WILLIAM K HOTCHKISS III AFP (Ret)

