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Procedures for the conduct of flights in airspace contaminated with volcanic ash

1. Applicability

This AIC shall apply to aircraft operators, owners and maintenance organizations for which volcanic ash contamination may be a hazard to their flight operations.

2. Introduction

The purpose of this promulgation is to provide information about the procedures for the safe conduct of flights in airspace contaminated with volcanic ash and about the pertinent publications and meteorological information. This promulgation explains, in particular, the procedures for operators of aircraft that are subject to the scope of Regulation (EU) No 2018/1139 in conjunction with Regulation (EU) No 965/2012. The procedures are in line with the recommendations of the International Civil Aviation Organisation (ICAO), ICAO Doc 9974 [1] and of the European Union Aviation Safety Agency (EASA), EASA Safety Information Bulletin (SIB) 2010-17R7 [2], which means that they are in line with the procedures of the Member States of the European Union.

3. Reference documents

Further explanations can be found in the following reference documents:

- 1) ICAO Doc 9974 - Flight Safety and Volcanic Ash
- 2) EASA Safety Information Bulletin (SIB) 2010-17R7
- 3) ICAO EUR/NAT Volcanic Ash Contingency Plan (VACP) (ICAO EUR Doc 019/NAT Doc 006 Part II)
- 4) Regulation (EU) No 965/2012 - ORO.GEN.200 (a)(3) and GM2 ORO.GEN.200 (a)(3)

4. Key principles

- The operator is responsible for the safety of its operations under the oversight of their respective State regulatory authority. The guiding principle for such operations is the use of a safety risk management approach, as described in ICAO Doc 9974 and EASA Safety Information Bulletin (SIB) 2010-17R5.
- In order to consider whether or not to operate into airspace forecast to be, or aerodromes known to be, contaminated with volcanic ash, the operator should have in place an identifiable safety risk assessment (SRA) within its Safety Management System (SMS) in order to decide whether or not to operate into airspace forecast to be, or aerodromes known to be, contaminated with volcanic ash. The operator's SRA must be accepted by its State regulatory authority.
- Flights through visible or discernible volcanic ash should be avoided, in particular, if the visibility of the ash is impeded (e.g. in instrument meteorological conditions (IMC), at night).
- The safety control measures set out in ICAO Doc 9974 and EASA Safety Information Bulletin (SIB) 2010-17R5 are intended to be sufficiently robust that they facilitate acceptance, without further investigation, by a State whose airspace is forecast to be affected by volcanic ash. The State can – based on the implementation of internationally accepted Safety Management principles - be confident in the ability of operators from other States to undertake operations safely in its airspace.

5. Definitions

The following definitions of contamination are applicable in the Republic of Cyprus regarding operation of aircraft in airspace contaminated with volcanic ash.

- Area of Low Contamination: Airspace of defined dimensions where volcanic ash may be encountered at concentrations equal to or less than 2×10^{-3} g/m³. (Cyan)
- Area of Medium Contamination: Airspace of defined dimensions where volcanic ash may be encountered at concentrations greater than 2×10^{-3} g/m³, but less than 4×10^{-3} g/m³. (Grey)
- Area of High Contamination: Airspace of defined dimensions where volcanic ash may be encountered at concentrations equal to or greater than 4×10^{-3} g/m³, or areas of contaminated airspace where no ash concentration guidance is available. (Red)

These definitions are consistent ICAO EUR/NAT Volcanic Ash Contingency Plan (VACP) (ICAO EUR Doc 019/NAT Doc 006 Part II) and EASA Safety Information Bulletin (SIB) 2010-17R5.

6. Publication of information

Information about the contamination of airspace with volcanic ash is promulgated by the ICAO Volcanic Ash Advisory Centres (VAAC) and the by VAAC London or VAAC Toulouse by means of the following publications:

6.1 NOTAM

Whenever necessary, the procedures for the conduct of flights in airspace contaminated with volcanic ash will be activated by a NOTAM.

6.2 VAAC forecasts

According to the provisions of ICAO and EASA, it is recommended to use the forecasts prepared VAAC London or VAAC Toulouse as well as the forecasts of volcanic ash concentrations also provided by the VAAC when planning and conducting flights in European airspace.

6.3 SIGMET

Observation and forecast data of the Cyprus Department of Meteorology MET (DOM). DOM provides information of the VAAC as well as their own observation (depending on availability) and forecast data concerning volcanic ash in Nicosia FIR. These data are published on the DOM's website (<https://dom.org.cy/WARNING/>) and are freely available to all decision-makers and airspace users. According to the ICAO provisions, the DOM disseminates SIGMET within the scope of their meteorological observations/forecasts and advises users as the case arises.

According to GM2 ORO.GEN.200 (a) (3) to Regulation (EU) No 965/2012 [4], when making their decisions for the conduct of a flight, pilots must consider that the VAAC forecasts may differ from the current measurements as well as from the data and forecasts provided by the national meteorological services. The decision-making should therefore mainly be based on the more detailed information provided by the national meteorological service and explicitly not only on the VAAC forecast.

7. SRA application in the Republic of Cyprus

7.1 Regulatory requirements for operators

In Cyprus, operators of aircraft that are subject to the scope of application of Regulation (EU) No 2018/1139 make their decisions concerning the conduct of flights into airspace contaminated with volcanic ash or such aerodromes on the basis of their safety risk assessment in the forecast areas with low, medium and high

contamination. The defined procedures for this safety risk assessment require the acceptance of the competent authority. If it is known that airspaces or aerodromes are contaminated with volcanic ash, operators of aircraft in accordance with Regulation (EU) No 2018/1139 in conjunction with Regulation (EU) No 965/2012 shall conduct their flight operations according to the result of their accepted safety risk assessment and the procedures laid down in the relevant manuals.

7.2 Mutual SRA recognition

With respect to the entire decision-making process concerning the operation of aircraft into airspace forecast to be, or aerodromes known to be, contaminated with volcanic ash, the Republic of Cyprus permits operators of aircraft registered in other States to make their decision in line with the above-mentioned approach (see 7.1) in Cyprus on the basis of their safety risk assessment, provided that it has been accepted by the competent authority of their respective State.

8. Volcanic ash pilot reports and occurrence reporting

8.1 In-flight reporting

Pilots encountering volcanic ash within Nicosia FIR shall report this to Nicosia ACC. Pilots should also submit a report to Nicosia ACC even if they do not encounter any ash in areas where volcanic ash has been forecast.

8.2 Post-flight reporting

The procedures described in the ICAO EUR/NAT Volcanic Ash Contingency Plan (VACP) (ICAO EUR Doc 019/NAT Doc 006 Part II) Appendix 2 [3] shall be applied.

8.3 Occurrence reporting

Special occurrences in aircraft and/or aircraft engines and/or volcanic ash encounters are subject to mandatory reporting in accordance with Regulation (EU) No 376/2014 in conjunction with Implementing Regulation (EU) No 2015/1018 as well as in accordance with Regulation (EU) No 965/2012, ORO.GEN.160, in conjunction with the relevant AMC material. The reporting procedures laid down in the aircraft operator's manuals shall be complied with.

9. Special safeguard provisions and general orders

9.1 Special safeguard provisions

To avert operational hazards to the safety of air traffic and to public safety order the Department of Civil aviation of Republic of the Republic of Cyprus can temporarily adopt special safeguard provisions and general orders on the basis of Article 70 (1) of regulation (EU) No 2018/1139 of 4 July 2018.