



Sixth Meeting of CNS/MET Sub-Group of APANPIRG

Bangkok, Thailand, 15 – 19 July 2002

Agenda Item 14: Regional preparations for the MET Divisional Meeting

SPECIFICATION FOR A GRAPHICAL VOLCANIC ASH ADVISORY

(Presented by Australia)

SUMMARY

To propose for adoption in Annex 3 a specification and format for the graphical volcanic ash advisory.

1. Introduction

1.1 This is a copy of a working paper Australia will present under Agenda Item 1.4 at the MET Divisional Meeting. This paper proposes the introduction of a new specification and format for production by the Volcanic Ash Advisory Centres (VAAC) of a graphical volcanic ash advisory (VAG). In developing this specification the prime objective was to develop a product that provides all the safety information required by the pilot, by ATC and by flight planning; one that it is easy to comprehend; and one that satisfies the requirements of IATA.

2. Background

2.1 At the third meeting of the ICAO Volcanic Ash Warning Study Group (VAWSG) in Brisbane in May 2000 the representative for the United States presented a proposal for a VAG. Since that meeting the Australian Bureau of Meteorology, in conjunction with the Vulcan-Aus Group, a group that represents the Darwin VAAC, major airlines, Australian ATM, Geoscience Australia, and the Australian Commonwealth Scientific and Industrial Research Organisation (CSIRO), further developed the US concept.

3. Specification

3.1 It is proposed the VAG be comprised of at least one image that depicts the extent of the ash cloud/s at different times. This includes the extent at the analysis time and forecast times of plus 6 and plus 12 hours.

3.2 The proposed mandatory elements for the VAG are:

- a) name of the VAAC issuing the VAG;
- b) message identification (Volcanic Ash Advisory and sequence number;
- c) date-time groups – (year(nnnn) month(nn) date(nn) / time(nnnn) Z) indicating the analysis time and the issue time in UTC (Note: the forecast times are displayed in graphical format);
- d) information to distinguish between the extent of the ash cloud/s at analysis time and forecast times of plus 6 and plus 12 hours;
- e) name/s, number/s and location/s of volcano/s. (The VAG needs to be able to handle situations when more than one volcano is producing an ash cloud);
- f) volcano position indicator/s;

- g) extent of one or more layers of ash; and
- h) flight levels impacted (description of the upper boundaries of one or more layers of ash. For safety reasons a lower boundary has not been included).

4. **Explanatory information**

4.1 The rationale for some of the features of the proposed VAG are explained below:

- a) Analysis time - this term has been used instead of observation time, because in many instances observations are not available.
- b) Volcano height - in order to reduce clutter, and in recognition that it is the ash aircraft want to avoid, the height of the volcano, a known, is not included.
- c) Lower boundaries - because volcanic ash falls under the force of gravity, it was not considered to be in the interest of safety, to attempt to define a lower limit under any part of an ash cloud where it is safe to fly.

5. **Presentation Format**

5.1 Two examples in the proposed format, showing two hypothetical advisories for an eruption of Mt. Ulawun, issued six hour apart, are provided at Appendix A.

6. **Action for the MET Divisional Meeting**

6.1 The meeting is invited to recommend the adoption of this specification and format as the IAVW graphical volcanic ash advisory.

