



## **INTERNATIONAL VOLCANIC ASH TASK FORCE (IVATF)**

### **FIRST MEETING**

**Montréal, 27 to 30 July 2010**

**Agenda Item 4: Review of operational response to volcanic ash aircraft encounter and notification and warning for VA (ATM sub-group)**

**4.1: Assessment of current contingency procedures and reporting criteria to detect and mitigate risk**

### **VOLCANO OBSERVATORY NOTIFICATIONS FOR AVIATION**

(Presented by the United States)

#### **SUMMARY**

A relatively new type of message developed by the IAVWOPSG, called the Volcano Observatory Notice for Aviation (VONA), is described. The provision in some cases of supplementary information products about eruption source parameters for use in dispersion models also is noted.

## **1. INTRODUCTION**

1.1 Recognizing the important role of Volcano Observatories in the International Airways Volcano Watch, ICAO's International Airways Volcano Watch Operations Group (IAVWOPSG) has developed a structured message format for Volcano Observatories (or agencies with equivalent functions) to use to deliver information about volcanic activity to air-traffic controllers, dispatchers, pilots, and aviation meteorologists. The message, called a Volcano Observatory Notice for Aviation (VONA), is intended to be used in concert with the aviation colour code for volcanic activity, including precursory (pre-eruptive) activity.

1.2 Recommended guidance is that a Volcano Observatory would issue VONA when the aviation colour code at a volcano is changed (up or down) or within a colour-code level when an ash-producing event or other significant change in volcanic behaviour occurs. The VONA would be sent

(faxed or emailed) by the Volcano Observatory to the pertinent Area Control Centre (ACC) for use in writing NOTAM, to Meteorological Watch Office (MWO) for use in formulating SIGMET, and to Volcanic Ash Advisory Centre (VAAC) for use in satellite surveillance and preparing advisories. Explanation of the aviation colour code and the VONA template in electronic format are included in the Handbook on the International Airways Volcano Watch (IAVW) (Doc 9766), available online at [http://www2.icao.int/en/anb/met-aim/met/iavwopsg/IAV\\_Handbook/Forms/AllItems.aspx](http://www2.icao.int/en/anb/met-aim/met/iavwopsg/IAV_Handbook/Forms/AllItems.aspx) .

## 2. DISCUSSION

2.1 Volcano Observatories operated by the U.S. Geological Survey (USGS) issue VONA as described in the U.S. *National Volcanic Ash Operating Plan for Aviation*, available online at <http://www.ofcm.gov/p35-nvaopa/fcm-p35.htm/>. USGS Volcano Observatories first directly call the pertinent ACC, MWO, and VAAC to convey important eruptive information, then follow-up by faxing, emailing, and posting VONA text messages. Current and past USGS VONA are posted at <http://volcanoes.usgs.gov/> .

2.2 Awareness and use of the VONA are beginning to expand beyond the United States. New Zealand's Institute of Geological and Nuclear Sciences is adopting use of the VONA. As part of a volcanic ash test in 2008 involving the Toulouse VAAC region, the Centre of Volcanology and Geological Risks Assessment issued test VONA for a hypothetical eruption of Agua de Pau volcano in the Azores. The World Organization of Volcano Observatories is posting information about use of the VONA and aviation colour codes on its Web site at <http://www.wovo.org/aviation-colour-codes.html/>.

2.3 It should be emphasized that volcanic information products for aviation are not restricted to VONA. The VONA fills a need for clear, concise information about major changes in volcanic unrest and eruptive activity, but there may be additional information needs beyond what is included in the VONA. In particular, Volcano Observatories may have more detailed information or important insights about input parameters to VAAC ash-dispersion models, such as plume height and style and eruption rate and duration. In those cases, volcanological agencies can supplement VONA with other information products, as exemplified by the frequent volcanic ash status reports prepared by the Icelandic Meteorological Office and the Institute of Earth Sciences during the 2010 eruption of Eyjafjallajökull volcano, Iceland (see <http://en.vedur.is/earthquakes-and-volcanism/articles/nr/1884/>).

## 2.4 ACTION BY THE IVATF

2.5 The IVATF is invited to note the information in this paper.

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