



International Civil Aviation Organization

**The Second Meeting of the Asia/Pacific Volcanic Ash Exercises Steering Group
(VOLCEX/SG/2)**

Bangkok, Thailand, 14-16 September 2015

Agenda Item 2: Review of VOLPHIN15/01

SUMMARY REPORT OF VOLPHIN15/01

(Presented by JCAB)

SUMMARY

This paper presents a summary report of the exercise actions of JCAB ATMC and lessons learned in VOLPHIN15/01

1. INTRODUCTION

1.1 The volcanic ash exercise in the APAC Region called VOLPHIN15/01 was conducted from 0000 UTC to 0645 UTC on 11 August 2015, with a scenario of eruption of TAAL volcano with volcanic ash cloud up to FL370 and above moving north to impact ATS routes and airspace within the Manila FIR.

1.2 The overall objective of the exercise is to maintain enhanced safety, regularity and efficiency of aviation in the event of a volcanic eruption by demonstrating the provision and exchange of volcanic ash information in support of flexible airspace management, improved situational awareness and collaborative decision making, and dynamically - optimized flight trajectory planning.

1.3 The exercise aims to demonstrate the practice of applicable global and regional procedures related to volcanic activity and volcanic ash, including: distribution of alerts, distribution of AIS and MET messages, responses by air traffic control and air traffic flow and capacity management units and aircraft operators, and enhanced situational awareness and CDM.

2. DISCUSSION

Report of exercise

2.1 In preparation for the exercise, JCAB ATMC provided some materials to facilitate participants more understanding about actions to be taken during the exercise and information flow between participating units, as attached at the VOLPHIN15/01 exercise directive Appendix B and D.

2.2 All participants fully recognized the importance to avoid disruption to the actual operation during the exercise. Furthermore we prepared and confirmed to create a common understanding using e-mail as first priority for exercise information sharing and coordination with related participating units, even if it might be imperfect in reliability and timeliness of transfer of information, and should not exclude telephone as secondary.

2.3 VAA and VAG in documents were distributed firmly, securely and rapidly to JCAB ATMC by JMA ATMetC (Japan Meteorological Agency, Air Traffic Meteorology Center) and NOTAM were distributed by AIS Manila through e-mail, and we could obtain them at web portal of VAAC Tokyo and AIS Japan as well.

2.4 Advanced coordination about required information and procedure for re-routing was conducted between JCAB ATMC and Manila ACC. We could mutually notify re-routing message of three flights, PAL468X, PAL437X and SIA619X quickly and smoothly on the exercise.

2.5 Detailed report of actions is described in VOLPHIN15/01 sheet of ATMC.

Lessons learned and recommendations

2.6 Preparation period for this exercise was insufficient to determine various matters among various participants involved such as means of information sharing, effective use of VOLPHIN15/01 sheet and procedure for exercise re-routing and ATFM measures. The second exercise will be more complex because volcanic ash will migrate into multiple FIRs and involve many and various participants, with scenarios to enable follow-up work in Manila FIR and to bring on volcanic ash exercises to Indonesia. For this reason, we should ensure enough time for preparation and dissemination.

2.7 For proceeding with the exercise efficiently, it is important to clarify the role of exercise leader and co-leader, moreover collaborative activities of directing agencies and observing agencies supporting them will be indispensable for practical issues and coordination, especially in the field of ANSP such as re-routing requested by airlines and ATFM measures at FIR boundary.

2.8 NOTAM distributed on the exercise included airspace closure within a radius from 60 miles to 200 miles of Manila VOR. We suppose it will be difficult for ANSP to assess and define affected airspace and aircraft operations by volcanic ash, nevertheless it will be required provision of useful information to contribute to flight safety and efficiency. Hence it needs to be considered about description item of exercise NOTAM.

2.9 The web portal of VAAC Tokyo was effective for real-time information sharing. It would be preferable for ANSP to be able to do the same method.

2.10 Teleconference should be a place to share various types of information among many more participants. It provides observers an opportunity to monitor remarks, and we realize it will be effective to share a summary after teleconference with all participants.

2.11 In order to clarify the purpose and achievement of the exercise, we recommend each participant to utilize VOLPHIN sheet according to their action items, and to update it periodically during the exercise for post-analysis. It makes the exercise effective.

2.12 Exercise actions related to ANSPs are suggested to be added in chronological list (Appendix C) of the directive with more specific examples as follows to make it easy for participants to understand what to do;

a) Apply (simulated) ATFM measures

- 1) ACC Manila/ATFMU Manila: "Issue exercise NOTAM of ATFM measures (within own FIR and/or at FIR boundary)"
- 2) ACC/ATM Center/s [names]: "If necessary, issue exercise NOTAM of ATFM measures (within own FIR) based on NOTAM issued by Manila ACC"

- b) Take appropriate (simulated) flight planning actions: e.g. reroute or cancel flights
 - 1) AOs [name/s]: “Request exercise re-routing, cancellation or diversion of flights to ACC and/or ATM Center/s”
 - 2) ACC/ATM Center/s [names]: “If necessary, coordinate with neighboring ACC/ATM Center/s about exercise re-routing or diversion”
 - 3) ACC/ATM Center/s [names]: “If necessary, respond approval or not to exercise coordination from ACC/ATM Center/s as origin”
 - 4) ACC/ATM Centre/s [names]: “Respond to exercise request from AOs, or issue exercise clearance to aircrafts”

3. ACTION BY THE MEETING

- 3.1 The meeting is invited to:
 - a) note the information contained in this paper;
 - b) discuss any relevant matters as appropriate; and
 - c) consider developing appropriate recommendations based on the information provided.
