

Twentieth Meeting of the Cross Polar Trans East Air Traffic Management Providers' Work Group (CPWG/20)

(Anchorage, Alaska 26-29 October 2015)

Agenda Item 5: Provide Status of CPWG/19 Actions

OUTCOMES OF VOLKAM/15 and PLANNING FOR VOLKAM/16 EXERCISES

(Action Item CP15-06)

(Presented by State ATM Corporation of Russia)

SUMMARY

This paper presents information on the outcomes of VOLKAM/15, planning of VOLKAM/16 and pertinent issues.

1. Introduction

1.1 Two steering groups were formed by the European Air Navigation Planning Group (EANPG) Programme Coordinating Group (COG) and North Atlantic (NAT) Implementation Management Group (IMG) to ensure continuation of regular volcanic ash exercises in the EUR and NAT Regions.

1.2 The European and North Atlantic Volcanic Ash Exercises Steering Group (EUR/NAT VOLCEX SG) plans on conducting one exercise in the second quarter of 2016 that is called VOLCEX16. Details of the exercise will be determined at the VOLCEX16 planning meeting that will be held at the ICAO EUR/NAT RO from 8 to 9 December 2015.

1.3 The Volcanic Ash Exercises Steering Group for the (far) Eastern part of the EUR Region (EUR (EAST) VOLCEX/SG) recently conducted a volcanic ash exercise from 2200 UTC on 15 April to 0400 UTC on 16 April 2015 called VOLKAM15. VOLKAM15 simulated a volcano eruption of a volcano called Ksudach located in southern Kamchatka. The simulated ash plume moved southeast to impact the northern pacific (NOPAC) and trans-east routes, as well as Pacific Organised Track System (PACOTS). The associated debrief meeting held in Paris on 22 April 2015 produced several recommendations that are discussed in this paper.

2. Discussion

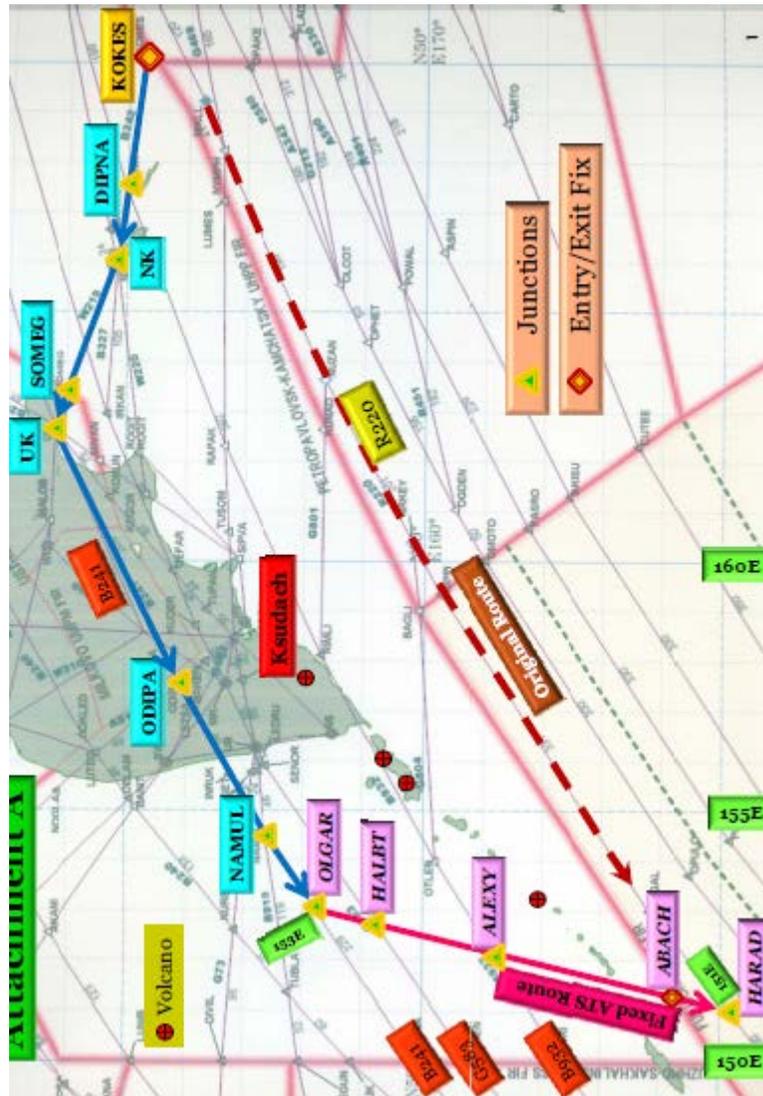
2.1 The objectives of the exercise (in bold) were met, noting improvements can be made in some areas.

- **Demonstrate coordination procedures between all participating parties (Air Navigation Service Providers, Air Traffic Management Centres, Aeronautical Information Services, Volcano Observatory, Volcanic Ash Advisory Centres, Meteorological Watch Offices and users)**
- Achieved – successful as demonstrated by information flow as per provisions, high participation in teleconference calls, responses proved by Air Navigation Service Providers

(ANSP)s to operators' simulated re-route requests (improvements still needed and addressed in recommendations).

- **Demonstrate tactical re-routes in both Russian Federation and Japan**

- Achieved – some airlines used the pre-determined routes provided in the exercise Letter of Agreement (LOA), while two airlines posed concerns with fixes related to re-joining R220 as they were not defined in their flight planning systems. One airline used B241 instead of re-joining R220 as this was a more efficient route given the destinations.
- Suggest in real events that the airline operator centre notifies all the affected air traffic control providers of the revised flight plan (including for those in flight). This would require acceptance of these revised plans by ANSPs.



- **Demonstrate VAAC Tokyo and VAAC Anchorage handover**
 - Achieved – with confirmation from Volcanic Ash Advisory Centre (VAAC) Tokyo.
- **Demonstrate transmission of special air-reports on volcanic ash in accordance to Annex 3 (aircraft->ACC->MWO->VAAC)**
 - Achieved – one report from American Airlines (AAL) of no ash using volcano coordinates prompted a new Volcano Observatory Notice for Aviation (VONA) with a colour change from red to orange. Another report from AAL confirmed ash over R220 later in the exercise. These reports could be viewed on SADIS. Other airlines stated they had sent reports, but were not observed on the SADIS.
- **Demonstrate information sharing via teleconferences and website**
 - Achieved – test teleconference was successful, which reduced the risk of having problems in the scheduled teleconferences. Voices were clear and most participants joined the two scheduled teleconferences.
 - VOLKAM data form was useful in that it allowed participants to review what would be discussed on teleconferences and reduced the risk of miscommunication. These data forms may be sent to a web-based facility in the future.

2.2

The following recommendations (in bold) were developed in the debrief meeting.

- **Recommendation 1: Formalize a permanent LOA between Petropavlovsk-Kamchatsky, Fukuoka Oceanic and Anchorage FIRs for handling cross boarder flights (including contingencies)**
 - New route(s) linking Petropavlovsk-Kamchatsky and Fukuoka Oceanic FIRs would need a flight check.
 - LOA should be concluded once the target date for implementation of new route(s) is known.
- **Recommendation 2: Process of communicating and accepting revised flight plans needs to be developed**
 - Cross Polar Working Group (CPWG) expected to develop a matrix on how ACCs provide revised flight plans downstream to other ACCs. The end goal is to harmonize such procedures.
 - ICAO to liaise with the appropriate ICAO global group for possible input to global provisions in this regard.
- **Recommendation 3: Clarify issuance of NOTAM**
 - NOTAM should be issued for significant changes related to volcanic activity (e.g. colour code change) and point to existing volcanic ash products (Volcanic Ash Advisory in text and graphic form as well as SIGMET).
 - The VOLKAM16 Exercise Directive will be updated accordingly (sequence of events – NOTAM issued only for colour code change; and provide corresponding examples).

- **Recommendation 4: Use of VOLKAM Data Form in support to Collaborate Decision Making**
 - Exchange VOLKAM Data Form by web conference (to be determined) instead of email.

- **Recommendation 5: Arrange teleconferences for real events**
 - Define rules that would warrant a telcon (e.g. volcanic ash cloud \geq FL300, expected impact to NOPAC and trans-east routes as well as PACOTS, level of current and expected traffic on these routes; and what determines who leads the telecon) by VOLKAM16 planning meeting.
 - Consider U.S. Command Center telecon facilities.
 - Need coordination between Oakland and operators for proposed changes to PACOTS (W bound tracks) – would operators use the new tracks.
 - Need coordination between Fukuoka and operators for proposed changes to PACOTS (E bound tracks) – would operators use the new tracks.
 - *Note: new PACOTS routes would avoid ash, but the existing PACOTS routes that maybe affected by the volcanic ash would still be available to airlines*

- **Recommendation 6: Consider reducing the exercise time from ending at 0400 UTC to ending at 0230 UTC**
 - The exercise duration for VOLKAM15 was from 2200 to 0400 UTC. To increase the efficiency of the exercise, the second telecon could occur at 0200 UTC instead of 0300 UTC (a full hour after the VAAC handover commences). The exercise could end after the second telecon at 0230 UTC reducing the exercise by 1.5 hours.

2.3 The VOLKAM15 debrief meeting also agreed that the *draft Guide on Operations when Volcanic Ash Impacts NOPAC, PACOTS and trans-east routes* be updated based on experience gained in VOLKAM15 and recirculated to participants for input that may be considered as an appendix to the EUR/NAT VACP. This task is also a follow-up to the Trans-Regional Airspace and Supporting ATM Systems Steering Group (TRASAS) Conclusion 4/6.

2.4 For more information related to VOLKAM15, the meeting is advised to review the report of the associated debrief meeting on the ICAO Portal (group EEVOLCEXSG).

2.5 The EUR (EAST) VOLCEX/SG/7 meeting was held in Petropavlovsk-Kamchatsky, Russian Federation from 18 to 20 August 2015 which developed a first draft VOLKAM16 Exercise Directive. A simulated volcano eruption of a volcano named Karpinsky located in the Northern Kuriles (Paramushir) will take place from 2200 UTC on 21 April 2016 to 0130 UTC on 22 April 2016. The simulated volcanic ash cloud to FL400 will move south-east, east and then northeast in order to impact trans-east routes, NOPAC routes and possibly PACOTS. A revised objective for this exercise is to test the method of transmitting changed or revised reroutes, including those already in flight. A matrix as to the preferred method in this regard for each ACC was being developed by the Cross Polar Working Group and could be used by operators in the exercise.

2.6 In addition, VOLKAM16 will include a second ash cloud to FL200 that will move north to test VAAC Tokyo and VAAC Anchorage coordination in producing VAA/VAG when crossing over the boundary of responsibility at 60N. Consequently, MWO Yelizovo would test issuing SIGMET for Petropavlovsk-Kamchatsky FIR based on VAA/VAG produced. For more information, the EUR (EAST) VOLCEX/SG/7 meeting report will be posted and available under the group EEVOLCEXSG.

3. Action by the Meeting

3.1 The meeting is invited to note the information presented.