**Fifteenth Meeting of the Cross Polar Trans East Air Traffic Management Providers’ Work Group (CPWG/15)**

(Bodo, Norway13-17 2013)

**Agenda Item 3: Summary of Pertinent Issues from the ANSPs Meeting and other relevant meetings**

VOLKAM/13 Volcanic Ash Exercise Update

(Presented by Civil Aviation Bureau of Japan)

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| **SUMMARY**  This paper presents information on the outcome of the Volcanic Ash Exercise in Kamchatka in 2013 (VOLKAM/13) conducted on 15-16 January 2013. |

1. **Introduction**
2. VOLKAM/13 was conducted on 15-16 January 2013 successfully, especially in terms of identification of issues in contingency operations by exercise participants.
3. To summarize the conclusions of VOLKAM/13, a debrief meeting was held in ICAO EUR/NAT regional office on 19 February 2013. Lessons learned and corresponding recommendations were submitted to the meeting and discussed. The agreed recommendations were listed as tasks in an action plan to be dealt with by participants.

1. This paper provides remarkable Lesson Learned that was reported during the 38th Meeting of the Informal Pacific ATC Co-ordinating Group (IPACG/38) on the outcome of the VOLKAM/13.
2. **Recommendation**
3. The Meeting is invited to note the information provided in this paper.

**THE THIRTY-EIGHTH MEETING OF THE**



**INFORMAL PACIFIC ATC CO-ORDINATING GROUP**

**(IPACG/38)**

(Mountain View, California, USA, 22-26 April 2013)

Agenda Item 5: Air Traffic Management (ATM) Issues

**Update on the VOLKAM/13 Volcanic Ash Exercise**

(Presented by the Civil Aviation Bureau of Japan and the Federal Aviation Administration)

**SUMMARY**

This paper provides information on the outcomes of the volcanic ash exercise held in Kamchatka, 15-16 January 2013 (VOLKAM/13).

1. Introduction

1.1 The first meeting of the Volcanic Ash Exercises Steering Group for the (far) eastern part of the EUR Region (EUR (EAST) VOLCEX/SG/1) was held on 21-23 August 2012 in Petropavlovsk-Kamchatsky, the Russian Federation. The meeting was composed of various disciplines related to Meteorology (MET) (10 participants), volcano operations and research (7), Air Traffic Services (9), that included Area Control Centres (ACC) and Air Traffic Flow Management (ATFM), as well as one representative from International Air Transport Association (IATA), one expert from Eurocontrol and one representative from the International Civil Aviation Organization (ICAO).

1.2 The attendees gave presentations that provided the framework to exchange viewpoints on volcanic ash, issuing advisories, Significant Meteorological Advisory (SIGMET) and Notice to Airmen (NOTAM) and managing airspace in such events. The attendees discussed plans for the first volcanic ash exercise between the three States taking place 15-16 January 2013 in Kamchatka (VOLKAM/13).

1.3 The following aims and objectives were developed for the Exercise:

* Demonstrate information flow (VONA, VAA, SIGMET, NOTAM);
* Demonstrate coordination procedures between national ATM Centres ( Air Traffic management Center (ATMC) Japan, Air Traffic Control System Command Center (ATCSCC), MATC Russian);
* Demonstrate coordination procedures between ACCs (ATMC Oceanic, Sapporo, Anchorage, Petropavlovsk-Kamchatsky, Magadan, Khabarovsk);
* Demonstrate coordination procedures between providers and airlines; and
* Consider adapting Air Traffic Management Volcanic Ash Contingency Plan (ATM VACP) template developed by the International Volcanic Ash Task Force (IVATF)
* \*Noting no operational impact expected from test

1.4 The exercise utilized a northwest wind scenario to impact northern Pacific (NOPAC) routes to the southeast of Kamchatka during 2100 UTC 15 January to 0600 UTC 16 January 2013. The focus was on coordination procedures between national ATM Centers (Russian Federation – MATMC, Japan – Fukuoka ATMC, and the U.S. – ATCSCC) and ACCs (Anchorage, Petropavlovsk-Kamchatsky, Magadan, Khaborovsk, Sapporto and Fukuoka ATMC) and providers such as air traffic services (ATS) MET. There was no operational impact during the exercise.

1. Discussion

2.1 Below is the log that was kept for the exercise:

21:02 Karymsky Volcano went red

21:06: Tokyo VAAC issues VAA

21:11 Alaska Volcano Observatory (AVO) notified ZAN of the eruption

21:24 P/K ACC called ZAN and told them they closed 5 airways

ZAN built Flow Evaluation Area (FEA) for Pacific Organized Track System (PACOTS) and NOPAC

Contacted FAA ATCSCC and requested an advisory be issued and a telcon with airlines be set up. Western Service Area in Seattle was notified.

21:39 RJJJ called RJAA HF-radio and asked them to issue VA information.

22:18 United Airlines called with reroutes into Russian airspace off NOPAC and PACOTS routes. This was coordinated with Russia via email.

23:00 UPS gave a PIREP…

23:30 telcon. KVERT advised that ashcloud was at 10,000 meters. when that was reduced, it was not broadcast or adjusted in products

03:07 ZAN CWSU issued a Mission Impact Statement (MIS) for volcanic ash

03:26 ZAN CWSU issued a Center Weather Advisory (CWA) for volcanic ash

04:21 New Eastbound PACOTS published.

05:23 ZAN CWSU extended the CWA

05:30 telecon,

06:00 Exercise ended

2.2 Anchorage noted that 20 airlines and 61 aircraft were affected during the exercise; 26 of which were eastbound and 35 westbound.

2.3 Overall, the exercise was considered successful. There was strong support and collaboration between the FAA Anchorage and Command Center, the JCAB and the State ATM Corporation.

2.4 A debrief meeting was held 19-20 February 2013 at the ICAO Paris Office. The ICAO Paris office noted that this was the first volcanic ash exercise in Kamchatka under the auspices of ICAO that involved the three States: Russian Federation, Japan and the United States. The exercise resulted in establishing inter- and intra-state coordination that could be used in real events in the future, as well as being the basis for future exercises.

2.5 Based on findings and feedback from the participants of the exercise, the group developed lessons learned for the next exercise scheduled for January 2014. Below are lessons of interest to the JCAB and FAA. A full listing of the lessons and actions can be found in the Summary of Discussions from the 19-20 February meeting in Attachment A.

* Lesson 1: Lack of direct communication between Fukuoka and PK Flight Information Regions FIRs (FIRs) which resulted in alternate reroute proposal to utilize Khabarovsk and Sapporo ACC’s Letter of Agreement (LOA).
  + Recommendation to consider developing LOA for contingency situations to include adjacent FIRs and/or ACCs.
* Lesson 2: Consider alternate communications amongst ACCs and ATM Centers since correspondence via email was identified as slow for ATM measures and did not work between Fukuoka ATMC and Oakland Center.
  + Recommendation 2: Consider enhancing procedures for communications (using various methods) in a real event considering the various participants (ATM Centers, ACCs, etc...) and consider including in contingency plan being developed by CPWG considering the ATM VACP template
* Lesson 3: Not clear on procedures involving reroutes and associated ACC handover coordination whether they are tactical (en-route) or pre-flight.
  + Recommendation 3: Clarify procedures between ATS Providers and operators to address reroutes and associated ACC handover coordination whether they are tactical (en-route) or pre-flight and publish them in national AIPs and reference in contingency plan
* Lesson 4: VAG of 18 hours not sufficient in formulating (PACOTS) since the route is effective 24 hours after issuance. The same is true for west bound tracks provided by Oakland ACC which are effective to 30 hours.
  + Recommendation 4: Communicate to user the confidence in PACOTS and west bound tracks decreases considerably after 18 hours due to the absence of proper guidance (VAG only valid to 18 hours in accordance to Annex 3)
  + Recommendation 4: Monitor the International Airways Volcano Watch Operations Group (IAVWOPSG) on developments related to VAG, particularly to the extent of forecast

Note that WP/31 of IAVWOPSG/7 recognizes Recommendation 4/17 of IVATF that includes “*assess the feasibility of providing volcanic ash advisories (VAA), including graphics (VAG), beyond the current T+18 hour requirement*”

* Lesson 8: Teleconferences proved useful, however they should be improved (background noise, style should be as clear and concise as possible) and considered for real-time events taking into account collaborative decision making (CDM), to allow for interaction between operators and ANSPs on reroutes published via NOTAM
  + Recommendation 8: Formalize teleconferences for real-time events taking into consideration CDM to address matters such as published reroutes via NOTAMs and operator’s needs. The CDM process is intended to develop a consensus amongst ANSPs and operators noting that operators utilize the safety risk assessment approach. Procedures on arranging teleconferences and their attributes (lead considering where the volcano erupts, participants, their roles, use of web portal for information sharing, language, directive to mute microphones unless otherwise asked) should be provided in the contingency plan and considered by CPWG.

2.6 The meeting attendees also developed a list of action items that will be updated during an April 2013 conference call in preparation for the next planning meeting in August 2013. It was agreed that some actions between the FAA and State ATM Corporation and actions between the JCAB and State ATM Corporation would be discussed bilaterally during the CPWG meeting scheduled 13-17 May 2013.

1. **Conclusion**
   1. The meeting is invited to note the information provided.