

**Seventeenth Meeting of the Cross Polar Trans East Air Traffic Management Providers' Work Group  
(CPWG/17)**

(Samara, Russia, 3-6 June 2014)

**Agenda Item 5: Status on CPWG/16 Action Items**

**Reroutes and Coordination Issues Associated with Volcanic Events**

**(Action Item #16-06)**

(Presented by the Federal Aviation Administration)

**SUMMARY**

This working paper presents information on issues raised by a case study provided by American Airlines at the 16<sup>th</sup> Meeting of the Cross Polar Trans East Air Traffic Management Providers' Work Group.

**1. Introduction**

1.1 During the 16<sup>th</sup> Meeting of the Cross Polar Trans East Air Traffic Management Provider's Work Group (CPWG/16), American Airlines (AAL) presented a working paper (WP04) regarding events affecting an airborne flight during the eruption of the Kliuchevskoi Volcano on the Kamchatka Peninsula on 16 October 2013.

1.2 Updated information provided by Tokyo VAAC indicated that the original impact of the Kliuchevskoi eruption may have been greater than originally forecast. A decision to re-evaluate the published westbound Pacific Organized Track System (PACOTS) flex tracks was made with collaboration from airline operators, Anchorage ARTCC (ZAN), Oakland ARTCC(ZOA), and other stakeholders. A decision to amend the PACOTS about ten degrees south of where they were originally planned was reached and the tracks were reissued accordingly.

1.3 At the time the decision was made to reissue the PACOTS, AAL175 was approximately 45 minutes into their flight from KDFW to RJAA. AAL dispatch began working with their flight crew and ATC to reroute the aircraft. The AAL dispatcher issued a new routing to the aircraft via ACARS and sent the same routing to ATC.

1.4 There were several issues noted with coordination of the new routing and issuance of the route to the flight crew. AAL noted that while they submitted a new flight plan to US domestic ATC, the flight plan was not received by the facility currently working the facility or those downstream in the contiguous 48 states. Flight plan information was sent successfully to both Russia and Japan. However, it was noted that there were some coordination issues with Japan because they had already received departure message information on the original flight plan.

1.5 There are some shortfalls in existing procedures that are raised as a result of AAL's working paper at CPWG/16. This paper will address the concerns noted by AAL at CPWG/16 and seek to find solution to existing gaps in the current system.

## **2. Discussion**

2.1 Prior to departure, the filed flight plan (FPL) can be modified by aircraft operators. This includes revised routings or completely different flight plans. There are procedures in place to address duplicate flight plans and revisions to ensure aircraft are issued the correct routing/flight plan.

2.2 Once an aircraft departs and the flight plan is activated, the FPL becomes the current flight plan (CPL). There are automation safeguards which prevent others (e.g. airline dispatch, non-data authority, etc.) from modifying the CPL. In the case of AAL175, when the dispatcher transmitted the new flight plan to ATC it was rejected by FAA automation because there was a CPL with the same callsign active. Due to the way flight plans from domestic US airspace are processed downline to other FAA facilities, ZAN received the revised flight plan. However, reissuing a flight plan in the manner that AAL did also creates coordination issues (as noted with Japan) and could lead to operational events related to coordination errors (e.g. gross navigation errors, improper facility to facility coordination, etc.).

2.3 The practice of operators reissuing new flight plans for airborne aircraft in the manner noted in AAL's working paper may not be the desired course of action for ANSPs. There is concern that during a large scale event, conflicting flight plan information could create high controller workload as automation and coordination issues are sorted through, in addition to separating traffic and issuing revised clearances.

2.3 There are shortfalls in existing procedures that are raised when volcanic activity or other events cause extensive route changes to be made. In particular, the following questions are raised-

- a) What is the best way to coordinate a reroute once an aircraft is airborne?
- b) What resources are available for coordination (e.g. MATMC, ATCSCC, etc.)?
- c) Who is responsible and what is the best mechanism for coordinating entry into airspace that was not originally part of the flights plan? For instance, in the case of AAL175, what would be the best way to assure timely coordination and approval to overfly Russian airspace?

## **3. Action by the Meeting**

3.1 The meeting is invited to:

- a. review the information contained in this Working Paper;
- b. discuss issues noted in the paper and develop procedures to address.