

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

(Anchorage, Alaska, 26-29 October 2015)

Agenda Item5: Status of CPWG Action Items

Reroutes and Coordination Issues Associated with Volcanic Events

(Action Item 18-02)

(Presented by the Federal Aviation Administration)

SUMMARY

This working paper presents information for the Group's consideration

1. Introduction

1.1 During the 16th 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 via a FPL message to US domestic ATC, the flight plan was not received by the facility currently working the aircraft or those facilities further along the aircraft's route in U.S. domestic airspace. 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 ANSPs have expressed concern with use of FPL, CHG, and other route messages for aircraft that are airborne or within close proximity to their proposed departure time. At issue is the potential for introduction of multiple flight plans into the ATC system and potential for route discontinuities between what ATC expects the aircraft to fly (expected vs. flown). Additionally, concerns by aircraft operators and ANSPs have been raised about the process for downstream route coordination and approval, especially in airspace volumes that require advanced approval by the ANSP/State, or requirements for aircraft operation centers (AOCs) to send these types of messages.

1.6 Given the potential for volcanic events and other natural disasters that could disrupt planned routes of flight in the North Pacific (NOPAC) and other regions where CPWG ANSPs provide service, developing a consistent harmonized approach to multiple reroutes is essential. Over the past several meetings, the FAA has presented several working papers for the CPWG to consider. At the previous meeting, the FAA presented WP/08 which outlined how ANSPs process CHG messages and forward information to downstream facilities.

1.7 Considering the difficulties experienced by the flight crew of AAL175 in getting a lengthy reroute in domestic airspace, potential for “expected vs. flown” errors that can occur with multiple FPLs or CHG messages being introduced, and other issues associated with significant reroute events, this paper proposes to generate a panel-type discussion of problems with potential solutions that CPWG members may consider as best practices.

2. Discussion

2.1 As was the case with AAL175, issues with length of route, lack of familiarity with oceanic procedures, frequency congestion, and manual entry of a lengthy reroute by ATC can hamper timely and correct delivery of an airborne reroute. For airborne reroutes in a domestic, voice, or CPDLC environment that does not support use of uploadable uplink messages, what are some “best practices” or potential solutions?

2.2 What practices should be followed in oceanic/remote airspace where CPDLC is available and uploadable uplink clearance messages are supported? What about in situations with non-CPDLC aircraft using HF?

2.3 For AOCs what are the requirements, whether ICAO or company, for submitting a CHG, FPL, or other route amendment?

2.4 What are current practices and requirements for downstream coordination for AOCs? ANSP practices were outlined in WP/08 at CPWG/19- what changes to current ANSP/operator practices are desired?

2.5 What other issues do ANSPs and operators see as needing to be addressed in terms of significant reroute events (e.g. collaborative telcons)?

3. Action by the Meeting

3.1 The meeting is invited to:

- a. review the information contained in this Working Paper;
- b. participate in a panel-type discussion regarding the various questions posed by the paper;
- c. bring forward any other issues/concerns not addressed by the questions posed by the paper;
- d. develop a recommended list of “best practices”