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of Transportation
**Federal Aviation
Administration**

SAFO

Safety Alert for Operators

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http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo

A SAFO contains important safety information and may include recommended action. SAFO content should be especially valuable to air carriers in meeting their statutory duty to provide service with the highest possible degree of safety in the public interest. Besides the specific action recommended in a SAFO, an alternative action may be as effective in addressing the safety issue named in the SAFO.

Subject: Operational Considerations for Airport Winter Operations

Purpose: This SAFO emphasizes the importance of pilots' and dispatchers' preflight and in-flight planning for winter airport operations during taxi, takeoff, and landing. The SAFO elaborates on the previously published, SAFO 08012 regarding ground operations during snow and ice conditions. Parallel information will be disseminated via appropriate correspondence documents to airport operators and air traffic control (ATC) facility personnel.

Background: From December 17, 2008 to January 18, 2009, the Federal Aviation Administration (FAA) received sixteen incident reports of commercial or corporate airplanes that departed airport paved surfaces during taxi, takeoff or landing. These incidents involved factors such as loss of stopping capability, loss of steering control, speeds greater than surface friction conditions permitted, or reduced visibility of surface markings and signage.

Discussion: Investigation of these events indicates that several factors were involved in causing the incidents discussed above. Being aware of the subjects discussed below will help flightcrews, aircraft operators, and airport operators guard against future occurrences of airport paved surface departures.

1) Aircraft Operators and Pilots: Obtaining and using all the information relating to winter operations at departure and destination airports is vital for safety. Flightcrews and dispatchers should assess national and local Notices to Airmen (NOTAM) during winter weather conditions. In addition, they should consider contacting the airport directly for updates on weather and ground conditions. It should also be noted that an improved NOTAM system being developed by the FAA and industry will improve pilots and dispatchers ability to obtain useful weather and airfield information.

2) Airport Operators: While it's important for pilots and dispatchers to seek up to date weather and airport condition information, it is just as important for airport operators and operations on an airport to disseminate this information in a quick and timely manner. During winter weather, airport surface conditions can change very quickly and unevenly across the airport. A few degrees of temperature variance can change an airport surface that had very good stopping and cornering friction to one that has little or no friction coefficient. Depending on the snow plan priorities of the airport authority and the type and rate of precipitation, not all surfaces receive equal levels of contamination removal. For example, in some cases when runways are chemically treated it may only be possible for the centerline and a

limited space on each side of the centerline to be treated with no treatment of the runway sides and possibly the runway exits.

3) Air Traffic Control (ATC): Controllers need to be aware that in winter weather conditions, traction and braking by the aircraft will likely be reduced. Operations in conditions of contaminated ramps, taxiways and runways are not "ops normal" and the controller plays a key role in adapting airport flight operations to this dynamic situation. Keeping field condition and braking reports up to date is a vital function during inclement winter weather.

Recommended Action: Directors of Operations, Directors of Training and flightcrews should review and emphasize operations guidance and procedures in the following areas:

1) Preflight and In-Flight Planning: Aircraft operators and flightcrews need to be proactive in obtaining accurate and timely airport surface condition information. These actions may require direct contact, via landline or radio, with the airport operator, air carrier's local operations facility, and the controlling ATC facility. It may be necessary for the inquiries to be very specific as to the conditions of the specific surfaces that the aircraft will utilize on its arrival and/or departure. When an air carrier flight is involved, the air carrier's operations center must get the most accurate and timely information possible to the flightcrew to use in their decision making process.

2) Ground Operations: Flightcrews must use caution if there is a possibility that airport surfaces are contaminated. Plan and execute flights for the worst surface condition possible:

a) Ask for updated surface condition information from all parties that could have the information such as ATC, operations, dispatch, and the airport operator. If necessary ask for the information in plain language to develop a clear understanding of the actual surface conditions.

b) Slow the aircraft to a fast walking speed on the centerline of the landing runway prior to attempting to exit the runway. Taxi at a fast walking speed until parked at the ramp or until aligned with the centerline of the runway for takeoff.

c) When the surface conditions may be slippery, do not accept ATC clearances to expedite taxiing or exit the runway sooner than prudent. Be certain of the aircraft's controllability under the degraded surface conditions.

d) If not absolutely certain of where the paved surfaces are, **STOP** the aircraft until certain of the true aircraft and pavement relationship. Do not taxi through thick contamination that could bog the aircraft down and cause it to be stuck or require high power settings to keep rolling. If adequate and safe stopping and cornering control cannot be assured **STOP** the aircraft.

e) In ramp areas, if the air carrier has responsibility for maintaining the ramp surfaces, the carrier should maintain the ramp in a condition that provides for safe operations of aircraft and service vehicles. If this can't be accomplished, the carrier may need to close the ramp area until the ramp is properly prepared. In this situation it may be necessary to tow aircraft to and from parking areas rather than allow the aircraft to taxi in and out. These same precautions should apply if the ramp surfaces are maintained by other organizations on the airport. This implies the added burden of coordination with the appropriate authority and other ramp users.

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