SAFO

Safety Alert for Operators

**U.S. Department
of Transportation
Federal Aviation
Administration**

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Flight Standards Service
Washington, DC

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: Incorrect Airport Surface Approaches and Landings

Purpose: This SAFO provides some best practices for accomplishing an approach and landing on the correct airport surface.

Background: On July 7, 2017, a commercial airliner conducting a visual approach at night overflew other airliners positioned on a taxiway and awaiting takeoff clearance. This airliner was cleared to land on runway 28R at the San Francisco International Airport yet flew the approach while lined up on Taxiway "C", which is adjacent and to the right of runway 28R. Runway 28L was closed and unlit, except for a lighted "X" identifying the runway closure. Taxiway "C" had four airliners in line to take-off on runway 28R. The inbound flightcrew queried the air traffic control tower (ATC) via radio asking about traffic on the runway. The response from ATC was "confirmed cleared to land" and that the runway was clear. The flightcrew continued their approach and associated misalignment without further questioning of ATC. A crewmember on one of the waiting airliners broadcast that the approaching jet was "on the taxiway." The inbound flightcrew initiated a go-around while flying directly over the taxiway and waiting airplanes.

Discussion: This incident is an extreme example of incorrect surface approaches and landings. This event highlights the importance of employing best practices for successful approaches and landings to the correct airport and runway. Some of the best practices include:

      A. Stabilized Approach: A stabilized approach is critical to pilots and flightcrews for maintaining situational awareness of the external environment. This means pilots and flightcrews are able to receive, process and utilize situational information to a greater affect. However, an unstable approach requires increased concentration on the performance of the airplane, by both the pilot flying (PF) and pilot monitoring (PM), to the detriment of processing other equally important situational information.

      B. Technology: Utilize published approaches such as Very High Frequency Omni Directional Radio Range (VOR), Localizer (LOC), Instrument Landing System (ILS), Area Navigation (RNAV), etc. Conducting an approach in visual conditions increases the potential for confusing visual clues such as airport lighting configuration, surrounding lights, or areas that look similar to the airport. Therefore, use of the most precise available approach or Flight Management System (FMS) RNAV navigational aids will serve to support pilot and flightcrew decisions.

      C. Cockpit/Crew Resource Management (CRM): Effective CRM is imperative because it leverages the skills of all crew-members. In a two-person (or more) flight deck, there is always a PF and

a PM. If something does not look correct the observing crewmember bears the responsibility for communicating what they see. The key behind successful CRM is being receptive, informative, proactive, and persistent. CRM also delineates job functions and the expectation of support.

D. Utilization of Available Resources: Effective CRM also establishes the use of all available resources including but not limited to:
- A briefing of the airfield diagram;
- A review of airport lighting including any approach lights systems (ALS);
- A review and discussion of Notices to Airmen (NOTAMS);
- Performance of the approach and landing checklists according to approved procedures;
- Use of approach navigational aids under both IMC and VMC conditions;
- Monitoring of the Automatic Terminal Information Service (ATIS) for information and changes to field conditions;
- Listening closely to all radio transmissions for pertinent information; and,
- Identification and verification of visual glide path information such as a Visual Approach Slope Indicator (VASI) or Precision Approach Path Indicator (PAPI) not only for glide path indications but also their location relative to the runway of intended landing.

E. Be Ready to Go-Around: The potential for a go-around/missed approach is briefed during every approach briefing. However, PFs/PMs need to be aware of the variety of reasons that a go-around may be necessary so they are ready to use it, and, if necessary, use it early, particularly during a time of confusion. The old aviator's adage, "when in doubt, go-around" still applies.

F. Other Pertinent Guidance: The FAA has recommended similar guidance in other documents:

- Advisory Circular 120-71B: "*Standard Operating Procedures and Pilot Monitoring Duties for Flight Deck Crewmembers,* January 10, 2017.
- Advisory Circular 91-79A: "*Mitigating the Risks of a Runway Overrun Upon Landing";* April 28, 2016.
- SAFO 15011; "*Roles and Responsibilities for Pilot Flying (PF) and Pilot Monitoring (PM)";* November 17, 2015.
- Aeronautical Information Manual (AIM), Chapter 2: *"Aeronautical Lighting and Other Airport Visual Aids";* December 10, 2015.

Due to the severity of the recent incident a review and incorporation of these recommendations is strongly encouraged.

Recommended Action: The Federal Aviation Administration (FAA) strongly urges directors of operations, directors of safety, directors of training, and chief pilots collaborate to:

- Emphasize the existing procedures and practices that ensure successful approaches and landings on the correct airport surface.

- Promote awareness of actual incorrect-surface landings throughout the National Airspace System, as well as international locations.

- Distribute information to flight crew members that highlights recent events, and the importance of accepting the responsibility for pro-actively reducing these hazards.

- Ensure all training includes references to best practices that support successful approaches and landings on the approved runways.

- Emphasize the need for crew rest and encourage communication between crewmembers relative to rest, as well as current condition while on the road. Highlight the need for vigilance when the work schedule takes a crewmember outside of his or her normal day. Physical status can have an impact on mental performance.

Contact: Questions or comments regarding this SAFO should be directed to the Air Transportation Division's Part 121 Air Carrier Operations Branch, AFS-220, at (202) 267-8166.