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October 11, 2001

Mr. Doug Mein
Director, Air Navigation & Airspace
Transport Canada Building
Transport Canada Civil Aviation
Place De Ville, Tower C
Ottawa, Ontario

Dear Mr. Mein:

The Air Line Pilots Association is filing a dissenting opinion to the decision taken at the recent CARAC Part VIII Technical Committee meeting with respect to:

- NPA 2001-259 creating CAR 808.01 (New) Land and Hold Short Operations
- NPA 2001-260 creating CAR 828 (New) Land and Hold Short Operations Standards
- NPA 2001-261 creating CAR 302.800 Land and Hold Short Operations
- NPA 2001-263 creating CAR 602.107 (New) Land and Hold Short Operations

During the Technical Committee deliberations there were amendments made which changed the numbering sequence of the NPA. For ease of reference, our comments are made relative to the numbering scheme of the NPA as it was tabled at the CARAC Part VIII meeting prior to being amended by the committee.

NPA 2001-259 CAR 808.01 (New)

The proposed CAR 808.01 defines LAHSO to, "mean operations that include landing and holding short of an intersecting runway, a taxiway, a predetermined position..." and was amended slightly through discussion within the Technical Committee. ALPA can find no definition of "intersecting" either in Transport Canada or ICAO publications. Transport Canada staff confirmed that there appears to be no definition of "intersecting" although the term is used in many documents and regulations. Common usage within Transport Canada and, as applied in NAV CANADA procedures confirm that intersecting means those runways that physically touch and excludes those whose flight paths intersect.

One of ALPA's continuing concerns with LAHSO is the need for acceptable rejected landing procedures. Without these procedures, aircraft conducting a rejected landing

may find themselves in conflict with crossing traffic landing and holding short of an intersecting runway. We understand that NAV CANADA provides some procedural rules to airborne traffic on intersecting runways that is not applied to traffic on non-intersecting runways. During an ALPA-led Safety Risk Assessment at Vancouver International Airport, a diverse team of knowledgeable experts identified the provision of such procedural spacing as essential in ensuring that an aircraft conducting a rejected landing does not conflict with an aircraft approaching or conducting a missed approach from an intersecting runway.

While ALPA recognizes that LAHSO is an "on-the runway" procedure, the reality is that aircraft on either or both intersecting runways for various reasons may conduct a balked landing. Procedural spacing will only be provided for runways that physically touch not for runways whose flight paths may intersect.

ALPA believes that a definition of "intersecting" runways must be captured in the regulations to provide the best possible level of safety in conducting all aspects of LAHSO operations. Further, we believe that definition can only be effective if it includes runway pairs whose flight paths may intersect at an altitude at which a conflict may occur.

NPA 2001-260 CAR 828 (New)

The Air Line Pilots Association dissents from the proposed 828.03, as there is no restriction on conducting LAHSO on contaminated surfaces. We further dissent from 828.03 (3), which requires the cessation of LAHSO on wet runways, only when the coefficient of friction exceeds 0.6. ALPA is against LAHSO when visible moisture is present. The reason for our use of the term visible moisture is to provide definitive guidance to pilots and to allow a simple assessment of when LAHSO is authorized. ALPA also notes that Transport Canada's definition of "wet" means that a hand placed on the runway surface will have water dripping from it when removed. That definition seems close to standing water and would increase the possibility of an aircraft hydroplaning and being unable to stop in the Landing Distance Available.

The NPA allows LAHSO on wet runways but there is no provision to modify the landing distance available to compensate for increased landing and stopping distances under the various conditions. As well, there are no aircraft performance data, which would allow for an effective operational understanding of the stopping capabilities of a particular aircraft on a particular day under wet conditions.

ALPA dissents from 828.05 (1), which authorizes LAHSO with 1000-foot ceiling and 3 statute miles of visibility. Transport Canada and NAV CANADA have been very clear in rejecting ALPA's argument against LAHSO that LAHSO is a visual maneuver. The pilot

remains responsible for avoiding other traffic and maneuvering the aircraft to do so. ALPA believes a minimum ceiling of 1500 feet Above Ground Level (AGL) should be present before LAHSO is authorized.

ALPA dissents from 828.05 (3), which authorizes LAHSO with a 5-knot tailwind. Tailwinds create a different landing profile than that normally experienced by pilots. It becomes more difficult to touch down at a particular spot – required for LAHSO – and the ground roll is increased making it more difficult to stop the aircraft in the Available Landing Distance. ALPA does not support LAHSO operations when there is a tailwind.

ALPA dissents from 828.05 (4) which authorizes LAHSO in a maximum crosswind of 25 knots for a bare and dry runway and 15 knots for a bare and wet runway. Our objections to conducting LAHSO on wet runways has already been stated above and includes the lack of the use of the "visible moisture" concept, which would allow pilots to quickly assess the condition of the landing surface and decide whether LAHSO should be conducted. We further object to the use of maximum authorized crosswind for a procedure that requires much more approach and landing precision on the part of the pilot to be successful. There is no doubt that increased crosswinds increase the difficulty of a pilot being able to touch down effectively with the degree of accuracy required for the aircraft to stop in the Available Landing Distance. Further, a crosswind on these limits may increase the chances of a rejected landing, for which there are no published procedures nor is there a requirement in the NPA for published rejected landing procedures to be developed and approved. Finally, at no time does the NPA include gusts in the crosswind limits. There is no consideration given for the pilot adding 50% of the gust speed to landing speed in increasing the landing distance available.

As a minimum, these components which are allowed in the current NPA, should result in increased landing distance available being required to prevent the anticipated safety margins from being eroded. ALPA is unclear, and believes Transport Canada is unclear, as to what additional distance factors should be added to compensate for the various weather conditions allowed under the NPA. In particular, ALPA is unclear and believes Transport Canada is unclear on the cumulative effects of the various conditions which are allowed under the NPA.

ALPA dissents from 828.05 (5), which authorizes a pilot to request, or an air traffic controller to offer LAHSO when a tailwind of 10 knots is present. This limit places the pilot in a position of having to stop the aircraft within the Landing Distance Available with increased ground speed and the resulting increased ground roll. Additionally, the chances of not touching down exactly where one needs to stop effectively are greater.

ALPA dissents from 302.801 for reason that there is no definition of "intersecting" although the proposed regulation refers to "intersecting" runways.

NPA 2001-263 CAR 602.107 (New)

ALPA dissents to 602.109 for the same reasons as stated in our dissents to NPA 2001-260 above.

602.109 (1) authorizes LAHSO when the ceiling is 1000 feet.

602.109 (3) authorizes LAHSO under all conditions when there is a tailwind of 5 knots.

602.109 (4) authorizes LAHSO when there is a crosswind of 25 knots for a bare and dry runway and 15 knots for a bare and wet runway. The definition for "wet" runway means that a hand placed on the surface will drip water when it is removed. This appears to this association to very close to a standing water condition.

602.109 (5) authorizes a pilot to request or an air traffic controller to offer LAHSO when the runway is bare and dry when the tailwind is 10 knots or below.

602.109 contains no restriction against LAHSO on contaminated runways.

No where in the regulations is there a definition of "damp" runways which would serve to separate those occasions when there may be water on the runway from those occasions when there may just moisture on the runway which would not effect normal aircraft operations. ALPA suggests consideration should be made to use a "visible moisture" concept to assess the appropriateness of the runway surface for LAHSO.

In conclusion, ALPA dissents from Transport Canada's plan to authorize LAHSO under the conditions stated in the proposed NPA's. This Association believes there is sufficient information on aircraft performance, runway surface condition and sufficient incidents to confirm that the proposed conditions are unacceptable from a safety perspective. The Air Line Pilots Association will recommend to its members and to members of other pilot groups not to accept LAHSO under the conditions as specified by Transport Canada.

Additional Points of Dissent

ALPA dissents from the NPA's authorizing LAHSO for the following reasons:

- There is no provision for a rejected landing procedure
- There is no requirement to conduct runway pair modeling for a possible rejected landing procedure
- There is no standard for pilot training which would ensure a common understanding of the LAHSO procedures and the possible effects on aircraft performance of the various factors which have been included
- There is no restriction on mixing commercial and general aviation during LAHSO

Sincerely,

Captain John M. Cox
Executive Air Safety Chairman

JMC:scs