CAE

October 26, 2010

Committee Secretary
Australian Senate Standing Committee on Rural Affairs and Transport

Reference: Inquiry on Pilot training and airline safety including consideration of the Transport Safety Investigation Amendment (Incident Reports) Bill 2010

Dear Committee Secretary,

Flight experience is an important contributor to pilot proficiency and the safety of flight. However, unstructured or minimally relevant experience is not necessarily a substitute for scientifically validated evidence and competency-based training. CAE recommends a sound instructional system design (ISD) approach validated by safety data including voluntary safety reporting systems without fear of retribution, flight operations quality assurance (FOQA) programs and safety management systems (SMS) programs. Flight experience must not be considered in isolation and without consideration with respect to its operational application.

On the subject of current industry pilot recruiting practices, and setting aside the financing issue, we believe it is important to focus on the process of pilot selection systems. For example, IATA has published a document at the request of ICAO entitled: "Guidance Material and Best Practices for Aptitude testing". CAE believes a structured approach to pilot selection that includes testing for motor skills, team/social behaviors, spatial orientation abilities and aptitudes best serve the industry. Investment in human performance early in the recruiting process should be enhanced.

For initial and recurrent type rating training, the use of high fidelity Flight Simulation Training Devices (FSTDs) must become mandatory. Indeed, FSTDs allow a properly qualified instructor to modify the training environment in such a way that it optimizes fulfilling of both learning objectives and safety objectives. FSTDs are the most efficient and safe training tool with which to teach flight crew mitigation strategies in a stimulus rich threat and error environment. Accumulating similar learning experiences considering meteorological, air traffic and ground traffic variables may take years without high fidelity simulation technologies and is therefore a far less efficient and impractical approach given today's technologies and aircraft capabilities.

Invariably, accidents and incidents have a common thread in that decision making judgment and threat and error management play a role. In a simulated environment, these cues can be orchestrated in a way that leads to enhanced learning. More cues lead to more fidelity, which in turn can lead to higher learning.

With regards to the capacity of any National Aviation Authority to appropriately oversee and update safety regulations given the state of technological development today, we believe at

CAE that there is a technology improvement rhythm that is outpacing the ability of the regulations to keep up. With that in mind, we think it is better for the regulations, and for aviation authorities, to focus on the processes and the desired safety systems outcomes as opposed to a prescriptive regulatory standard.

Finally, we believe that a healthy safety culture is predicated on an open, sharing, non-punitive information exchange. As such, it appears that obstacles to this objective should be of concern to regulators and all stakeholders vested in safety. In the end, there are limitations to the use of legislation to improve aviation safety. At some point, culture and process must be the dominant methods to improve safety.

Should you have any comments or questions please don't hesitate to contact the undersigned.

Thank your for the opportunity to comment.

Best Regards,

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