

**BRIEF by the Honourable Virgil P. Moshansky, C.M., Q.C., F.R.A.e.S, presented at the hearings of the House of Commons Standing Committee of Transport, Infrastructure and Communities, at Ottawa, ON, on Thursday, April 6, 2017.**

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Madame Chair and committee members. I thank you for the invitation to appear before you.

Some of you may know of me as the Commissioner of Inquiry appointed by the Government of Canada under the Inquiries Act to investigate the causes of the crash of an Air Ontario passenger jet aircraft at Dryden, Ontario, on March 10, 1989. in which 24 passengers and crew members died.

As a condition of accepting appointment as Commissioner, I insisted upon and received a two-fold mandate. Firstly, to inquire into the contributing factors and causes of the Dryden crash, and secondly, to make recommendations which I deemed appropriate, in the interests of aviation safety generally. This allowed me free rein to probe into and report upon safety deficiencies discovered within all aspects of the Canadian aviation system.

I appeared before the Standing Committee as the sole witness at a near full day hearing on February 28, 2007, at which time I lauded Transport Canada for introducing the concept of Safety Management Systems (SMS) but warned against failure to maintain an effective Regulatory Oversight system, as is mandated by the International Civil Aviation Organization (ICAO), a specialized agency of the United Nations. ICAO promulgates Standards and Recommended Practices (SARPS) which Contracting States are bound to implement by, inter alia, the Chicago Convention.

My Commission became a full-blown inquiry into every aspect of aviation safety in Canada. It took three years to complete, including two years of many 10 to 15 hour hearing days. By comparison, superior trial courts normally sit about 4.5 hours per day. Many serious ancillary aviation safety issues were examined and reported on pursuant to this wide mandate, which, for example, allowed me to conduct a major seven-month investigation in 1991 into the serious aircraft ground de-icing problems existing at Toronto's Pearson International Airport. This resulted in precedent setting aircraft ground de-icing recommendations which have been adopted worldwide.

Over 600 witnesses were interviewed and 165 were called to testify at the Dryden Inquiry, under oath and subject to cross examination, as in a court of law, many being international and Canadian aviation experts with impeccable credentials in diverse disciplines. Over 35,000 pages of evidentiary transcript and over 1400 Exhibits were considered, which produced a four volume Final report of near 2000 pages, plus two Interim Reports.

While I most certainly commend this Committee for focusing its attention on an examination into aviation safety issues existing within the Canadian aviation system, I respectfully submit,

from personal experience with the three year Dryden Commission, that these Committee hearings, which must be completed in a brief specific time frame, should only be the beginning of a long and arduous process, if they are going to be meaningful. It is impossible for me or anyone else in a four-minute opening statement and a maximum 3000-word brief to provide in a one hour time frame, with two other participants, more than a very cursory overview of current and complicated aviation safety concerns.

I trust that you will have had an opportunity to read this Brief. In it I primarily direct my comments to the introduction by Transport Canada in the mid 2,000s of the Safety Management System (SMS), a concept which I had recommended in my Final Report of the Dryden Inquiry, with the proviso that such a scheme must be accompanied by a strong Regulatory Oversight regime.

I will also address what I perceive, and what the evidence unequivocally points to, as the continuing root cause of Transport Canada's failure to abide by my SMS recommendations, and indeed by ICAO's requirements, as to Regulatory Oversight. The problem unquestionably is rooted in the failure by Canadian governments, both past and present, as a member state of ICAO, to adequately fund the Regulatory arm of Transport Canada to enable it to fully discharge its Regulatory Oversight functions and responsibility.

The lack of adequate funding of Transport Canada's Regulatory Oversight branch in the 1980s was the root cause of the Dryden crash in 1989, and it remains hanging like a Damocles Sword over the Canadian air travelling public today.

Equally egregious was the cost-cutting frenzy foisted by the federal government upon Transport Canada management in the early 2000's which resulted in the cynical, progressive and finally total abandonment by Transport Canada of hands-on Regulatory oversight of air carriers since 2007.

Later in this Brief I will propose for your consideration a possible and reasonable way out of this conundrum. But first, I will repeat to you some of my words to the Standing Committee in 2007, as they are as relevant today as they were then.

“The hallmark of the regulator, pre-Dryden, was cost-cutting. Most thoughtful persons recognize that resources are finite and that there is nothing wrong with cost-cutting so long as it is applied judiciously and that there is prioritizing among areas that are to be cut. Clearly the safety of the Canadian air travelling public, which experience shows is best assured by vigorous and vigilant regulatory oversight, should enjoy the very highest priority in the government's order of things”.

In the case of the Dryden crash, conventional accident investigation could easily have come to the simplistic conclusion that the crash was solely due to pilot error and the Inquiry could have been wrapped up in a matter of days. However, this would have been to squander a rare opportunity to examine the entire aviation system for organizational failures.

Preliminary evidence uncovered by my commission investigators pointed compellingly to a widespread systems failure contributing to the crash. A decision was made, over the objections of counsel for the regulator and the carrier, to conduct, for the first time in aviation accident investigation history, an in-depth, structured investigation of the entire aviation system within which Air Ontario Flight 1363 functioned, including the role of all the primary components of the aviation system, i.e. the regulator, the carrier, the aircrew, and the operating environment, with an emphasis on the impact of human factors throughout the aviation system upon the events at Dryden. Prior to the Dryden Inquiry, it was virtually unthinkable for aviation accident investigators to examine the possibility of a role by the regulator in a series of events leading to an accident. That ended with Dryden.

The Air Ontario jet that crashed - the Fokker F-28 - had only just been introduced into the carrier's fleet, yet a Transport Canada audit of Air Ontario five months before the Dryden crash incredibly did not even examine the F-28 implementation program. Six weeks before the Dryden crash, Transport Canada's own Superintendent of Air Carriers, who had been pleading with his superiors for more resources, wrote in desperation to senior management warning that, because of the lack of inspectors and resources, the Aviation Regulation Directorate could not carry out its mandate to assure the safety of large air carrier service in Canada.

He predicted that a major air crash was inevitable in this country. His prophetic warning was rebuffed by senior management. He was dismissed as a fear monger. While the inspectorate force was being drastically reduced and underfunded, the top-level Transport Canada bureaucrats were awarding themselves substantial performance bonuses for making cost-saving cutbacks, and these cutbacks were in fact being achieved by reducing the number of Aviation Inspectors. On March 10, 1989, that prophetic warning became a terrible and preventable reality.

After the release of my Final Report in May of 1992 relative calm ensued, Transport Canada continued with diminished but active regulatory oversight and the Transport Canada Dryden Implementation Project, in which I was involved actively as an Advisor, for the next three years, took centre stage for several years. Subsequently, in the early 2000s, the government, rather than increasing funding to Transport Canada to enable its Inspectorate force to carry out its aviation safety mandate, elected to resume its austerity program.

As a result of insufficient funding by the government in the early 2000s, the Inspectorate force was further reduced and Transport Canada first began introducing its SMS initiative in 2005 and gave industry a mandate that their program be completed by 2014. That SMS initiative is in line with my Dryden recommendations that each carrier be required to have in place a dedicated safety department headed by a safety officer reporting directly to senior management.

However, SMS, if it is to succeed, it most certainly must be accompanied, as I had unequivocally recommended in my Final report, by an effective, properly financed and adequately staffed system of monitoring, surveillance and enforcement on the part of the Regulator. That is the key

factor which is still missing today from the Transport Canada SMS initiative. Transport Canada's motivation clearly was revealed to be cost cutting in an era when aircraft operations were increasing exponentially, and the easiest area to cut costs was in Regulatory Oversight, but that has the potential to be the Achilles heel of SMS.

The basic objective of the introduction of SMS clearly was to download from Transport Canada unto the air carriers the responsibility and the financial burden of establishing and carrying out their own safety protocols, including enforcement. A senior Transport Canada official publicly conceded that the lack of funding within Transport Canada was behind the promotion of the SMS concept.

Under SMS, the airlines are supposed to police themselves and report to Transport Canada when they themselves have contravened any air regulations and/or ignored safety issues. History shows that self-reporting is a hard sell. I am skeptical of the self-reporting initiative under SMS, especially in the absence of effective whistle-blower legislation in Canada. Members of parliament should be as well.

Transport Canada has now totally abandoned traditional hands-on regulatory oversight, in-flight inspections and audits across the aviation system (thereby eliminating expensive Inspector personnel).

Aviation Inspectors have been reduced to inspecting only the carrier's SMS paper work. A decidedly pollyanna type of approach to aviation safety, which is in clear breach of international aviation safety requirements set by ICAO. Our own Transportation Safety Board has cited concerns with Safety Management Systems and lack of oversight in its 2014 and 2016 Watchlists.

These blatant cost saving moves by the government diminished aviation safety immensely. Canada is the only country in the world to have done so. We should all be embarrassed.

Mustering up as much humility as I can, I will say that ever since Dryden my continuing commitment over the past 28 years has been to the cause of advancement of aviation safety, and it has been personally satisfying to be acknowledged by many, both nationally and internationally, including even Transport Canada itself, which presented me with its Canadian Aviation Safety Award in 1995, "for exceptional contribution to the promotion of Canadian Aviation Safety".

The passage of 28 years since Dryden has not dimmed the lessons of Dryden, as we learned them, and they are still relevant today. Today, history is repeating itself, only worse. Transport Canada has been and still is under financial hardship. Traditional oversight is not being merely reduced. It has been totally eliminated and replaced entirely by the self-reporting Safety

Management System or SMS, an approach that is equal parts labour intensive and ineffective as a stand-alone approach to an aviation safety system.

Transport Canada now instructs its inspectors to use no inspection techniques other than SMS assessments, to process inspections or program validations. That's it. TC's Staff Instruction SUR-001 directs inspectors to perform SMS activities and nothing else.

Clearly, SMS was never intended to be a stand-alone safety system. It was and still is an international requirement that ICAO member states maintain a robust oversight system to monitor and enforce compliance with safety requirements, in addition to requiring aviation companies to adopt Safety Management Systems in their own operations. Transport Canada is clearly not meeting this international oversight requirement and is putting Canadians lives at risk as a result.

SMS itself is so labour intensive that airlines and other aviation companies are being inspected less and less. Transport Canada previously inspected licence holders annually. Then it became once every three years. Now inspections are conducted just once every five years. Some aviation companies may never be inspected.

The evidence is that even at this reduced inspection rate Transport Canada's severely undermanned inspectors simply can't keep up with the work. The Regulator's 2016-17 completion rate for planned SMS assessments – the most comprehensive review which Transport Canada does – is just 50%.

To relieve the financial pressure, Transport Canada is now eliminating entire sectors of aviation from its SMS surveillance program, entirely without regard to safety, and, I am informed, without accordingly advising Parliament, MPs or the Canadian public. The Committee may want to look into this rather alarming development.

After the private jet aircraft carrying your Parliamentary colleague and the former Premier of Alberta, Jim Prentice, crashed outside of Kelowna in the summer of 2016, Transport Canada was forced to admit for the first time publicly that it had actually ceased safety oversight of that sector of aviation some four years before, in 2012. The fact is that Transport Canada has quietly and without fanfare eliminated even more aviation sectors from its aviation safety surveillance program.

As of August 17, 2016, Transport Canada removed urban heliports, e.g. the heliport atop St. Michael's Hospital in downtown Toronto, from its oversight program. These facilities will no longer be subject to any scheduled safety compliance inspections by Transport Canada whatsoever. Aircraft involved in dangerous aerial work to maintain hydro facilities, fight fires, and the like, will no longer be subject to any safety checks by Transport Canada inspectors.

In addition, every certified airport in Canada, from St. John's International, to Pearson International to Vancouver International, will no longer be subject to full safety assessments. Instead, a Transport Canada inspection will now only cover one small part of an airport's safety plan and those checks could be done as infrequently as once every five years. By comparison, the US Federal Aviation Administration requires full inspections of airports annually.

I am aware that the Transportation Safety Board chair has already appeared before your committee earlier this week. According to her rather astonishing testimony, there are more than 50 TSB recommendations to improve safety, many of them related to aviation, that Transport Canada has failed to act upon for more than a decade.

The Transportation Safety Board has cited weak and ineffective regulatory oversight, time and again, noting for example, in the case of the Ornge medical evacuation helicopter crash in May 31, 2013 that TC knew about the safety problems leading to the crash but took no action to bring this operator back into compliance with the safety requirements. Canadian air travellers should not have to rely on good luck or divine intervention to ensure aviation safety in Canada as regulatory oversight is dismantled by Transport Canada, piece by piece.

It has been revealed that the TSB has had to circumvent Transport Canada because of its inaction on Board safety recommendations, and that it has been going directly to the aviation industry for action on the Board's safety recommendations. I have to say that this is as embarrassing as it is alarming.

An October 26, 2016, quote from the Chair of the Transportation Safety board, Kathy Fox, highlights the situation:

“This kind of reluctance to step in and take action—of not knowing when enough is enough—goes beyond one company or even one accident. In fact, it's turned up in a number of TSB investigations, with enough frequency to earn it a prominent spot on our Watchlist of key safety issues. **Without a significant overhaul in the way Transport Canada oversees how companies manage safety—and how those companies in turn demonstrate that their safety processes are working—this issue is unlikely to go away anytime soon.**” (The highlighting is mine)

Your Committee, I respectfully submit, has the power and a moral and perhaps the legal obligation, as the elected guardian of the safety of Canadian air travellers, to recommend to the government that appropriate action be taken without delay to correct an unacceptable situation, by substantially increasing the funding of its Aviation Inspectorate and directing, at a minimum, the immediate restoration of at least unannounced regulatory spot checks and hands-on oversight and inspections of all levels of air carriers before we experience another Dryden, or worse.

A very knowledgeable, honourable and highly experienced aviation safety expert sent me a rather cryptic e-mail message a few days ago, referring to my appearance here today, which I think I should share with you. He stated in a veiled warning:

“A thankful nation causes you to be in the forefront of these elected officials who may or may not truly comprehend that the SMS system ain’t broke-yet - but the rust has eaten through the main spars.”

It is my considered opinion, that in all the circumstances, flying in Canada is now as risky today as it was immediately before the Dryden crash, and it is certainly less safe than it was in the 10 to 15 year period post - Dryden.

Which leads to this question. What is to be done to enable Transport Canada to properly and adequately fund its Inspectorate force? There are two possible routes to take:

1. The government of Canada should accept its responsibility to assure the safety of its citizens who fly on Canadian air carriers at all levels, by providing adequate funding from its resources to Transport Canada in order to assure its ability to provide for the restoration of an effective regulatory oversight regime, in conjunction with its SMS initiative.
2. Alternatively, I would recommend the imposition by the federal government of a passenger safety tax of five to ten dollars on each airline ticket sold in Canada, earmarked specifically and only for the funding of Transport Canada’s Aviation Directorate’s regulatory audit and oversight activities. It is my view that Canadian air travellers would be willing to pay such a small price to assure their flying safety. I know that I would.

As to how much money this would raise, I quote the following figures from Statistics Canada for the period, February 15, 2015 to January 16, 2016:

**Total passengers (thousands) Source: Statistics Canada**

In this period there were 48.89 million passengers on Air Canada and West Jet alone. (Other regional carriers would inflate these figures considerably).

A \$5.00 dedicated oversight ticket tax would raise \$244.45 million. A \$10 dedicated ticket tax would raise \$489.89 million. I recognize that in the case of return tickets these figures would be halved. Either way, more than enough, I believe, to provide the required funds.

I strongly urge this Committee to act upon these recommendations.

Finally, and in conclusion:

Has the time not surely come for a system-wide inquiry to be held again in Canada to test the aviation system's vital signs? The widespread aviation safety alarms emanating from within the front lines of the aviation industry strongly suggest that indeed the time for such an inquiry is here and now and long overdue.

Twenty eight years after Dryden, I urge that now is the time for the federal government to assume a proactive approach to taking the pulse of aviation safety in this country, by establishing an aviation safety inquiry under the Inquiries Act to conduct an in-depth, system wide check on the current state of commercial aviation's vital signs in Canada, before another major air disaster occurs.

I submit, with respect, that this committee should consider urgently and emphatically recommending such an inquiry. Among the lives you save could be your own.