VOLUME TWO
PART 1: PRE-BOMBING

CHAPTER II: THREAT ASSESSMENT AND RESPONSE

2.0 The Intelligence Cycle and Intelligence Community

Was the bombing of Air India Flight 182 the result of a failure by the Government of Canada to properly assess and respond to the threat of Sikh extremism in Canada? This question has never been satisfactorily answered by the reviews undertaken to date.[1]

This chapter addresses the results of the Commission's investigation into the adequacy of the Government of Canada's assessment of, and response to, the Sikh extremist threat leading up to the Air India bombing. It begins with a description of the "intelligence cycle," which will be useful as a conceptual tool to probe the adequacy of intelligence analysis systems. Next is a description of the threat assessment community within the Government of Canada, the agencies involved and their respective roles, in particular CSIS and the RCMP. Subsequent sections will analyze the actions of each department and agency involved, along with the Government of Canada as a whole, and ask whether these actions led to intelligence failure(s) that contributed to the Air India tragedy, and, if so, where and why?

The Seaborn Report, issued in September 1985, concluded that intelligence cannot be relied on to predict, and thus forestall, specific acts of terrorism, and placed reliance instead on "…a regime of sufficient rigorous security" to deter terrorists.[2]

> Generally speaking, information respecting specific projected terrorist targets is rarely forthcoming. Thus efforts to improve sources of information will likely at best achieve results only in the long term and even then the degree of uncertainty will

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1 See Exhibit P-105, Wesley Wark, "The Intelligence-Law Enforcement Nexus: A study of co-operation between the Canadian Security Intelligence Service and the Royal Canadian Mounted Police, 1984-2006, in the Context of the Air India terrorist attack" in Vol 1 of Research Studies: Threat Assessment RCMP/CSIS Co-operation [Wark Paper on Intelligence Law Enforcement Nexus], Professor Wark reviewed the Seaborn report and the 1992 SIRC Study of Air India. The Seaborn Report avoided dealing with whether Air India was an intelligence failure by emphasizing minimalist expectations on the role of intelligence to counterterrorism threats. The 1992 SIRC study called attention to weaknesses in the CSIS intelligence, but refrained from calling the incident an intelligence failure.

2 Exhibit P-101 CAF0039, p. 3. The Seaborn Report was the first Government of Canada review of the Air India disaster. Blair Seaborn, who was the Intelligence and Security Co-ordinator, was commissioned by the Solicitor General to investigate the role of intelligence, *inter alia*, in aviation security matters. Seaborn issued his report on September 24, 1985.

> necessarily remain high. It is not, therefore, practical to rely on intelligence as the principal, let along the sole, means of countering terrorism …. The principal value in intelligence lies in assisting authorities to determine levels of security appropriate to the perceived threat. [3]

The SIRC report, issued in November 1992, assessed the adequacy of CSIS intelligence production and dissemination, concluding that CSIS intelligence assessments lacked analysis and detail. However, they found that "…no assessment contained any specific information concerning a threat to Air India Flight 182"[4] and that CSIS had disseminated all relevant assessments to the RCMP.

In March of 1985, the Government of Canada assessed the adequacy of federal counterterrorism measures in light of the seizure of the Turkish embassy by Armenian extremists.[5] The Government found that aspects of the government counterterrorism measures were handled in an *ad hoc* manner. The review identified several areas for improvement in the Government's threat assessment and response, but these improvements were not effectively implemented before the Air India bombing.

The Commission has undertaken a review of whether there were deficiencies in the Government's threat assessment and response regime that resulted in a failure to prevent the bombing of Air India Flight 182.

The concept of "intelligence failure" is not without its own complexities and controversies. The challenge in studying intelligence failures is to distinguish between unrealistic expectations about the performance of the intelligence community and reasonably avoidable weaknesses in the intelligence process.[6] Richard Betts wrote, in his seminal paper on intelligence, that "…intelligence failures are not only inevitable, they are natural."[7] By this, he meant that intelligence cannot be expected to detect any and all threats or to prevent them from coming to fruition. By contrast, Professor Wesley Wark warned against accepting this "tolerance for disaster" concept.[8]

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3 Exhibit P-101 CAF0039, p. 2.
4 Exhibit P-101 CAB0902, p. 28.
5 Exhibit P-101 CAF0063. This document, entitled "A Review of Federal Counter-Terrorism Arrangements," is an interdepartmental review of the Government's response to the Turkish Embassy seizure by Armenian extremists on March 12, 1985 and to the subsequent bomb threat to the Toronto transit system received on March 26, 1985, presumably by Armenian terrorists. See also Exhibit P-101 CAF0004.
6 Testimony of Wesley Wark, vol. 16, March 5, 2007, pp. 1445-1446.
7 Richard Betts, "Analysis, War and Decision: Why Intelligence Failures are Inevitable," World Politics, 31, no. 1 (October 1978), p. 89.
8 Wark Paper on Intelligence-Law Enforcement Nexus, p. 153.

> The idea behind studying intelligence failure is to try and understand the weaknesses of the intelligence process, as well as to put into some kind of realistic perspective our expectations of what intelligence services can deliver on. The difficulty with intelligence services is that they operate in a world of theoretical perfection. Intelligence services are meant always to find the truth, and always to find the truth in advance, to be able to make predictions about how very complex domestic and international systems might work out. That is our expectation of intelligence. That is the expectation of the standard that intelligence services have to live up to. Intelligence failures occur when intelligence services don't live up to those expectations. One of the challenges of studying intelligence failures is really to know when you are in the presence of a failure and when you're in the presence of an unrealistic expectation.[9]

In terms of the Air India bombing, the issue of "intelligence failures" is tied to questions of whether the failure to detect and/or prevent the bombing through intelligence was "inevitable" or "avoidable", and whether the failures were due to systemic errors in the intelligence process or to the incorrect handling of intelligence information within that process. In either case, the study of the "intelligence failures" should lead to a review of the overall system to determine possible improvements that would reduce the likelihood of a recurrence. It is also necessary to keep in mind the benefit of hindsight, and refrain from easy criticism that does not account for the context under which failures occurred.

The relevant questions to be asked are:

- Who was responsible for the assessment of, and response to, the threat of Sikh extremism?
- What was the historical context and what were the major influences affecting the Government's assessment and response to the threat of Sikh extremism?
- What went wrong with the threat assessment and response system? Were these systemic or local deficiencies? Were they inevitable or avoidable?

The Intelligence Cycle: A Framework for Review of Intelligence Failures

Professor Wesley Wark introduced the concept of the intelligence cycle as a useful conceptual tool to identify and assess intelligence failures. This model can help in an assessment of the component parts of a threat assessment system.

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9 Testimony of Wesley Wark, vol. 16, March 5, 2007, pp. 1445-1446.

This permits the identification of any breakdown or failure within the system.[10]

The intelligence cycle consists of the four principal tasks, as described by Professor Wark.[11]

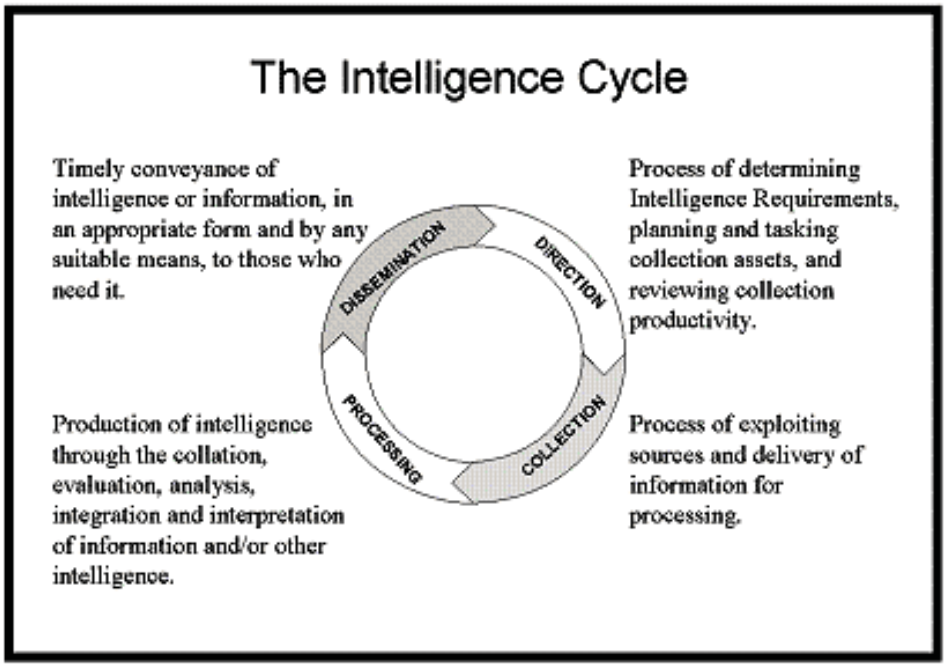

Figure 1: Intelligence Cycle

The cycle begins with tasking. This includes the setting of investigative priorities for the intelligence community as a whole by the government, as well as internal directives that reflect the priorities of individual agencies. Tasking depends on guidance from public officials to set collection requirements, and to review and revise these requirements as the nature of the threat changes with time. Tasking priorities guide the choice of investigative techniques and the allotment of resources. Proper tasking is critical in the face of the reality of limited resources, to ensure that resources are directed at the most serious and emerging threats to security.

The second component is collection, which refers to the gathering of raw information through various sources in response to a tasking order. These sources include:

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10 Testimony of Wesley Wark, vol. 16, March 5, 2007, pp. 1443-1444.

11 The description of the intelligence cycle is based on the Testimony of Wesley Wark, vol. 16, March 5, 2007, pp. 1442-1443. Open source documents were also consulted: See, for example, The Central Intelligence Agency, "The Intelligence Cycle", online: Federation of American Scientists <http://www.fas.org/irp/cia/product/facttell/intcycle.htm> (accessed October 16, 2009).

- Open sources, which include print and broadcast media, official government documents, research publications, and other published material;

- Investigative techniques, which include community interviews, human sources, physical surveillance and technical interception of communications;

- Information sharing with other government departments and foreign partner agencies.

Collection efforts are conducted to further inform and clarify the investigative priorities identified by the government.

The cycle then moves to analysis, which is the stage at which the collected raw information is converted into finished intelligence. This involves assessment of the information's reliability and relevance, and consideration of the information in its overall global context. The finished intelligence provides judgments about the implications of threats of concern to the government. This intelligence product can be used to advise the government on the threat posed, for purposes of devising policy or operational measures to combat the threat.

The fourth component in the intelligence cycle is dissemination. This involves the distribution of finished intelligence product to relevant decision-makers in government, who can use it to develop informed policies and direct appropriate operational responses. This final step also informs the first step of the next cycle – the government uses the finished intelligence to assess and redefine the tasking priorities for the intelligence community.

The National Counterterrorism Community: Roles and Responsibilities

In 1985, Canada's national counterterrorism strategy was implemented through the cooperation of various government agencies.[12] The Solicitor General was the lead Minister responsible for the national counterterrorism strategy. CSIS had primary responsibility for the collection, assessment and production of *domestic* security intelligence. The RCMP was responsible for determining the appropriate level of protection, based on the CSIS threat assessments, and for coordinating the threat response with other government agencies. The DEA had primary responsibility for the collection, assessment and production of *foreign* security intelligence and for the response to terrorist threats abroad. Other agencies, including the Communications Security Establishment (CSE), Department of National Defence (DND), Transport Canada (TC), Canada Employment and Immigration Commission (CEIC), Revenue Canada and local police forces provided specialized intelligence and assisted in threat responses.

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12 Exhibit P-101 CAF0875.

In 1985, there was a recognized need for greater interdepartmental assessment of security threats and coordination of threat responses.[13] The Interdepartmental Committee on Security and Intelligence (ICSI) was formed in 1972 to provide a forum for interdepartmental assessments for strategic intelligence. The Intelligence and Security Coordinator position was created within the Privy Council Office (PCO) in February 1985.

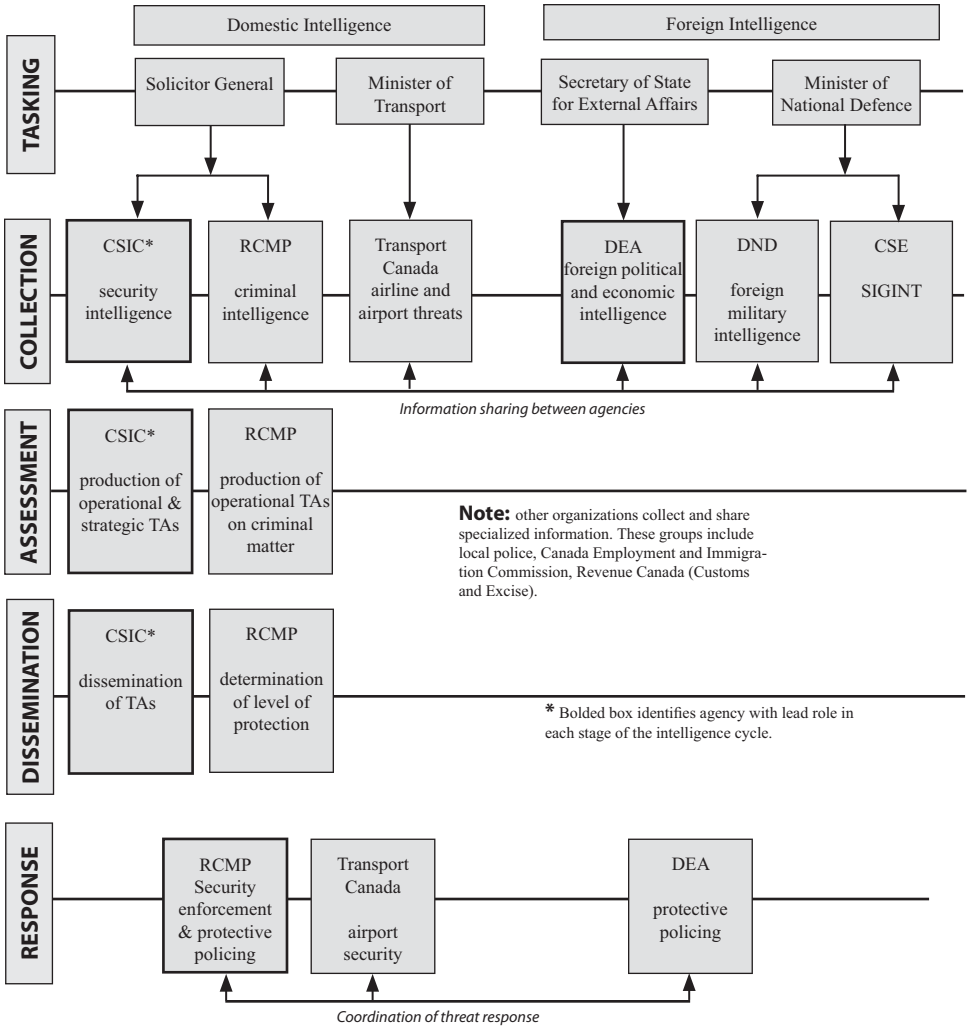

Figure 2: National Counterterrorism Community (1985)

13 Exhibit P-101 CAF0063, p. 2.

The following section provides a general outline of the organizational structure within the Government of Canada, set up to undertake the assessment of, and response to, terrorist threats within Canada.[14] The internal structure of each respective government department and agency is described elsewhere in this report. Chapter III (Pre-bombing), What Went Wrong?, addresses the adequacy of these structures, policies and practices, and in particular, the question of whether failures occurred in the Government's assessment of, and response to, the threat to Air India in the pre-bombing stage.

Solicitor General and other Ministers

The Prime Minister of Canada is ultimately accountable to Parliament for the security and integrity of Canada. In 1985, this function was delegated to the Solicitor General. The Solicitor General had the lead role for the planning and coordination of Canada's federal counterterrorism program. The Solicitor General oversaw the activities of CSIS and the RCMP, the lead agencies responsible respectively for the assessment and response to threats to the security of Canada. Upon the creation of CSIS, the RCMP and CSIS were purposely placed under the common direction of the Solicitor General, in an effort to mitigate the effects of the separation of security intelligence investigations from law enforcement. The Solicitor General was responsible for resolving disagreements between CSIS and the RCMP about the sharing of information.

The Solicitor General was assigned a key role in the control and management of the new civilian service. The MacKenzie and McDonald Commissions[15] had recommended political direction over security intelligence operations, in contrast to law enforcement, which, in conformity with the principles of police and prosecutorial independence, was to continue without political direction. Ministerial approval was required for all CSIS warrant requests for investigations targeting organizations or individuals.[16]

Ministers of other involved agencies, including the Secretary of State for External Affairs, the Minister of National Defence, the Minister of Transport and the Minister of Employment and Immigration, set their own departmental intelligence priorities and were accountable for the activities of the organizations that reported to each of them. Ministers were responsible for participating in interdepartmental efforts to coordinate threat assessment and response, such as the Interdepartmental Committee on Security and Intelligence (ICSI).

The Royal Canadian Mounted Police

The RCMP had primary responsibility to perform peace officer duties in relation to offences arising from conduct constituting threats to the security of Canada

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14 The description of each agency's role and responsibilities are based on Exhibit P-101 CAA0076, CAF0002, CAF0004, CAF0039, CAF0063 and various provisions of the *Canadian Security Intelligence Service Act*, R.S.C. 1985, c. C-23 [*CSIS Act*].

15 See Section 2.1 (Pre-bombing), The Civilianization of Security Services, for detail regarding the MacKenzie and McDonald Commissions.

16 *CSIS Act*, s. 21.

(security enforcement) or offences against internationally protected persons (protective policing). Part IV of the *CSIS Act*, which became the *Security Offences Act*, clarified the RCMP's lead role in these two areas.

The RCMP collected and assessed information relevant to its security enforcement and protective policing mandates, as well as to its general criminal investigations. The *CSIS Act* transferred the responsibility to collect, assess, report and advise on threats to the security of Canada (security intelligence) from the RCMP Security Service to the newly-formed CSIS. When CSIS was created, the RCMP was directed to rely on CSIS for intelligence relevant to its investigations of national security offences. In turn, the RCMP was responsible for passing to CSIS any information relevant to national security threats.[17]

The RCMP had the lead role in determining the appropriate level of protection to afford in response to threats within Canada, and in coordinating these responses. These decisions were to be based on all information and intelligence available, particularly CSIS threat assessments. Threat response was often a multi-agency operation. The RCMP provided security to diplomatic personnel and premises in consultation with DEA and provided airport security and policing at designated Canadian airports in collaboration with Transport Canada.

Canadian Security Intelligence Service

The primary mandate of CSIS is to collect, analyze, produce and disseminate intelligence on threats to national security and to advise the Government of Canada on such threats (security intelligence). While CSIS was assigned primary responsibility for threat assessment, it had to rely on other agencies and departments to take appropriate responsive action. The system was premised on CSIS disseminating meaningful intelligence product to the appropriate responding agencies, to allow for a timely and informed response.

CSIS collected security intelligence through a broad range of investigative techniques, including human and technical sources as well as open sources. CSIS relied on information from liaison officers stationed abroad, as well as on partnerships with foreign agencies and other government departments. The *CSIS Act* recognized that other domestic and foreign organizations would acquire information relevant to threats to the security of Canada and allowed CSIS to enter into "cooperative arrangements" to facilitate sharing of information.[18] CSIS relied on DEA for foreign political and economic intelligence, on CSE for signals intelligence, on DND for military intelligence and on the RCMP and other police forces for intelligence on domestic threats. Several agreements were entered into around the time the agency was created, to clarify the primacy of CSIS in intelligence collection and the need for close cooperation with other agencies. CSIS was intended to be a repository for intelligence from all sources, from which it could produce comprehensive threat assessments relevant to the needs of the Government.

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17 The respective roles of the RCMP and CSIS after July 16, 1984 (Creation of CSIS) are discussed in Exhibit P-101 CAA0076 (1984 MOU: Transfer and Sharing of Information), CAA0081 and CAF0030.

18 *CSIS Act*, s. 17

External Affairs

The Department of External Affairs (DEA) collected and disseminated foreign political and economic intelligence obtained from its diplomatic missions and contacts.[19] The foreign intelligence collected by the DEA would be used to inform the domestic threat assessments produced by CSIS.

The DEA was responsible for ensuring that Canada fulfilled its obligations under the *Vienna Convention on Diplomatic Relations* to provide adequate protection to diplomatic personnel and premises in Canada. It played a liaison role, passing threat warnings received from foreign diplomatic missions and governments to the Canadian intelligence and security community and advocating for an appropriate threat response. DEA would advise the RCMP on the degree of protection it believed should be accorded to a particular mission, based on its specialized knowledge of international affairs. The RCMP retained the responsibility, ultimately, for determining the actual level of protection to be afforded. In cases where the DEA felt that the appropriate response was not being provided, it could make representations at higher levels.

Communications Security Establishment

The Communications Security Establishment (CSE) was responsible for the collection and dissemination of foreign signals intelligence (SIGINT).[20] SIGINT was gathered through the interception of foreign radio, radar and other electromagnetic transmissions. SIGINT was an important source of timely information on the diplomatic, military, economic, security and commercial activities, intentions and capabilities of foreign governments, individuals and corporations. The Government of Canada had partnerships with allied agencies for the sharing of SIGINT information. Due to the highly sensitive nature of the SIGINT product, the CSE maintained exclusive control over the collection and dissemination of SIGINT within the Government of Canada.

Transport Canada

Transport Canada had the lead role in planning and directing the development and implementation of policies, procedures and legislation pertaining to the security of the Canadian transportation system, including airports and airlines. The Minister of Transport was responsible for leading the management of a terrorist incident involving an aircraft in flight.

Aviation security in Canada was governed by Regulations imposed under the *Aeronautics Act*, which obligated federal aviation authorities and air carriers to observe specified security standards. Transport Canada was responsible for establishing the overall security standards for airports and airlines, and

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19 Additional information on the roles and responsibility of the DEA was found in Exhibit P-101 CAF0060, CAF0062, CAF0068 and Testimony of Gordon Smith, vol. 24, May 7, 2007, p. 2448.

20 Additional information on the roles and responsibility of the CSE was found in "The Communications Security Establishment – Canada's Most Secret Intelligence Agency" prepared by Philip Rosen, Senior Analyst, September 1993, online: Depository Services Program <http://dsp-psd.tpsgc.gc.ca/Collection-R/LoPBdP/BP/bp343-e.htm> (accessed November 27, 2009)..

for providing some physical security equipment at airports. Air carriers were responsible for applying the security standards for passengers, baggage and cargo, and for ensuring security within individual aircraft. Threat information could also be provided by individual air carriers, or by their respective governments, to the RCMP, Transport Canada or DEA.

Interdepartmental Committee on Security and Intelligence

The Interdepartmental Committee on Security and Intelligence (ICSI) was established in 1972 to review intelligence and proposals to be delivered to the Cabinet Committee on Security and Intelligence (CCSI), and to exercise general oversight of the federal counterterrorism establishment.[21] ICSI furnished general policy guidance to ensure that ministers received the required information and advice from the intelligence community. Membership of ICSI was at the deputy minister level, and included the RCMP Commissioner and CSIS Director, as well as deputy level representatives from CSIS, RCMP, DEA, DND, DOJ, Solicitor General, Treasury Board, CEIC and PCO.

ICSI oversaw the activities of two committees: the Security Advisory Committee (SAC) and the Intelligence Advisory Committee (IAC). The SAC considered and provided coordinated advice to ICSI on proposals for security policies and procedures. It provided ICSI with joint assessments of the internal security situation in Canada. The SAC was chaired by the Deputy Solicitor General and the committee comprised senior officials from PCO, Treasury Board, DOJ, DEA, DND, CEIC, CSIS, RCMP and CSE. The IAC, on the other hand, pooled and reviewed intelligence and threat analyses from various sources within government, and ensured that intelligence was properly disseminated. The IAC was chaired by the PCO Intelligence and Security (I & S) Coordinator and membership was also at the deputy minister level.

In 1985, these groups were responsible for coordinating the interdepartmental assessment of strategic intelligence intended for providing advice to Government. The groups met infrequently and thus did not play a major role in the management of operational intelligence, which remained the primary responsibility of CSIS.

Privy Council Office

The PCO Intelligence and Security Coordinator, Blair Seaborn, was appointed in February 1985, and had principal responsibility for all security and intelligence matters. The Coordinator played an increasingly important role in the Government's efforts to improve the federal counterterrorism program. On behalf of the Prime Minister, Seaborn was responsible for monitoring the measures of individual government departments to counter terrorism and for providing recommendations to improve these measures. He completed post-

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21 Additional information on the roles and responsibility of the ICSI was found in Exhibit P-101 CAF0874 and CAF0877.

mortem analyses of the Turkish embassy storming in March 1985[22] and the Air India and Narita bombings,[23] producing reports that recommended several changes to the Government's CT program.

2.1 The Civilianization of Security Services

The MacKenzie Commission

The civilianization of the RCMP Intelligence Service began long before the creation of CSIS. In 1966, Maxwell MacKenzie was named head of the Royal Commission on Security (the "MacKenzie Commission"), and was charged with analyzing the RCMP Special Branch following a lapse of security at a federal institution. The Commission's mandate was to investigate security procedures in government as well as to inquire generally into the question of Canada's national security.[24]

The MacKenzie Commission report, produced in 1969, included the controversial recommendation that the RCMP's security function be separated from the police force – stemming from the finding that its security intelligence functions were incompatible with law enforcement. This problem existed, according to MacKenzie, because of the Special Branch's sole reliance on members of the RCMP, who lacked sufficient sophistication and powers of analysis to discharge fully its security intelligence role.[25] A police service, with its distinctive mandate and culture, was not suited to these functions.

The government of the day rejected civilianization as a whole but settled on a compromise.[26] In 1970, the newly renamed RCMP Security Service (SS) remained part of the RCMP, but John Starnes, a career diplomat and, more importantly, a civilian, was named Director General. However, this compromise did not achieve the desired results. Many years later, John Starnes wrote in his memoirs, "In my view, the MacKenzie Commission should have received much more attention. The government should have been much firmer in dealing with the RCMP's largely emotional and sometimes unrealistic objections to the idea of having a security service divorced from the RCMP."[27]

The MacKenzie Commission also recommended that legislation be introduced to guide the use of intrusive investigative techniques. In response to this recommendation, the Government included it in the passing of section 16 of the *Official Secrets Act* in 1974. This section mandated that the Solicitor General was to authorize the interception of communication when an investigation fell within the field of national security.[28]

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22 Exhibit P-101 CAF0063.
23 Exhibit P-101 CAF0039.
24 Philip Rosen, "The Canadian Security Intelligence Service," Parliamentary Research Branch, revised January 24, 2000, Library of Parliament, pp. 2-3 [Rosen, "The Canadian Security Intelligence Service"].
25 Rosen, "The Canadian Security Intelligence Service" p. 3.
26 "Looking Back: The case for security intelligence review in Canada" :online: Security Intelligence Review Committee <http://www.sirc-csars.gc.ca/opbapb/rfcrfx/sc02a-eng.html#9> (accessed August 26, 2008).
27 John Starnes, "Closely Guarded: A Life in Canadian Security and Intelligence" (Toronto: University of Toronto Press, 1998,) p. 135.
28 Rosen, "The Canadian Security Intelligence Service" p. 3.

The McDonald Commission

According to the McDonald Commission report,[29] during the 1970s the RCMP Security Service engaged in numerous illegal acts and practices in its attempt to disrupt potential threats arising from the FLQ crisis. In 1977, in response to these actions, the Royal Commission of Inquiry into Certain Activities of the Royal Canadian Mounted Police ("the McDonald Commission") was formed. The final report of the Commission was issued in 1981 and it recommended numerous sweeping changes.

Key among the findings was that there had been abuses of the law and that a new institutional setup was required to prevent those abuses from occurring again.[30] One of the fears was that there was a danger in allowing a security service to enforce security and, potentially, to become a law unto itself.[31] As James ("Jim") Warren (who was the Director General of Counter Terrorism at CSIS in July 1986) stated, "…it was a lot easier for a security service, if you will, to trample on the rights of Canadians." The police, if they act inappropriately, will be exposed by the court system, whereas a security service rarely, if ever, will bring matters before a court. Therefore, "…things could go on as they had in the days that McDonald was looking at indefinitely without anyone knowing."[32]

McDonald found, like the MacKenzie Commission before him, that a police force was not the most suitable type of organization to be carrying out the duties of an intelligence service that has unique needs with regard to understanding domestic and global politics. Commissioner McDonald strongly believed that Canada's interests would be better served by a more sophisticated intelligence service, one which could develop the expertise to recognize genuine threats to the security of Canada.[33] The security service would collect information broadly and inform government, who would then take action if required.[34]

The McDonald Commission recommended that the Security Service be severed from the RCMP and, in its place, a new civilian security intelligence agency be created. The new agency, lacking enforcement powers, could be more responsive to political will and subject to oversight. Its main role would be intelligence collection and assessment. As well, new regimes of accountability and review would further ensure that the problems of the past were not repeated.

The McDonald Commission defined the government's need for intelligence in order to prevent acts of terrorism and espionage and in order to keep the government informed of "…situations which may develop into serious threats."[35] It also talked about the need for the new intelligence agency to meet twin requirements: the requirements of national security and the requirements

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29 Commission of Inquiry Concerning Certain Activities of the Royal Canadian Mounted Police, Freedom and Security under the Law, Secind Report-vol. 2 (Ottawa: Supply and Services Canada, 1981) [McDonald Commission, Freedom and Secuirty under the Law].
30 Testimony of Wesley Wark, vol. 16, March 5, 2007, p. 1434.
31 Testimony of Geoffrey O'Brian, vol. 17, March 6, 2007, p. 1545.
32 Testimony of James Warren, vol. 48, September 19, 2007, pp. 5827-5829.
33 Testimony of Wesley Wark, vol. 16, March 5, 2007, pp. 1434-1435.
34 Testimony of Geoffrey O'Brian, vol. 17, March 6, 2007, p. 1545.
35 Testimony of Geoffrey O'Brian, vol. 17, March 6, 2007, p. 1540.

of democracy.[36] According to Geoffrey O'Brian, all intelligence agencies have four components: mandate, powers, controls and review.[37] The McDonald Commission suggested that mandate and powers, which go towards fulfilling the security mandate, be balanced with controls and review, which fulfill the democratic mandate.[38]

The RCMP Security Service received a written mandate only in 1975. Building on that, McDonald felt it was very important to provide a legal framework for the intelligence function, and a new legal framework for the yet-to-be created CSIS was envisaged. It is important to note that, at the time, there was "…virtually no legislation in the world" for intelligence services. Many countries did not even acknowledge the existence of their intelligence services, let alone provide for them in law.[39]

In separating the security service from the RCMP, the McDonald Commission sought "…a surgical division of mandates." It was felt that, in creating a civilian intelligence service, it was important to invest that intelligence service with a monopoly of responsibility over intelligence collection and assessment. Therefore, the Commission recommended stripping the RCMP of any intelligence role. Collection, assessment and dissemination would all be CSIS duties. The RCMP would have to rely on CSIS for intelligence, which would come in the form of "investigative leads" that the RCMP would need to transform into evidence that could be presented in a court of law.[40] While the two organizations were mandated to work together, the purpose of creating the new organization was not to allow "…the police to do indirectly, what they could not do directly."[41]

Crucially, however, the McDonald Commission did not recommend the complete removal of the RCMP from national security work. Instead, the Commissioner recommended that the RCMP retain responsibility for the prevention and investigation of crimes against the security of Canada.[42] However, the McDonald Commission did not discuss an intelligence-gathering role for the RCMP arising out of everyday crime prevention and the apprehension of criminals.[43]

In summary, the key findings by the McDonald Commission were that:

1. Police deal with facts and evidence, usually after an event, in order to prosecute offenders in court, whereas security intelligence agencies try to anticipate and prevent events;

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36 Testimony of Geoffrey O'Brian, vol. 17, March 6, 2007, p. 1542.
37 Testimony of Geoffrey O'Brian, vol. 17, March 6, 2007, p. 1542.
38 Testimony of Geoffrey O'Brian, vol. 17, March 6, 2007, p. 1542.
39 Testimony of Geoffrey O'Brian, vol. 16, March 5, 2007, p. 1533.
40 Testimony of Wesley Wark, vol. 17, March 6, 2007, pp. 1436-1437.
41 Testimony of Geoffrey O'Brian, vol. 16, March 5, 2007, p. 1576.
42 Commission of Inquiry into the Actions of Canadian Officials in Relation to Maher Arar, *Policy Review: The RCMP and National Security – A Background Paper to the Commission's Consultation Paper* (Ottawa: Public Works and Government Services Canada, 2004), p. 21 [*Policy Review: The RCMP and National Security*].
43 *Policy Review: The RCMP and National Security*, p. 21.

2. A police force should maintain a degree of independence from government control, whereas security intelligence agencies should be under tight control in order to ensure they maintain respect for individual rights, and to ensure that political accountability exists;

3. The activities of a police force are subject to extensive rules through the *Criminal Code* and jurisprudence, whereas security intelligences must employ greater judgement in regards to their activities and to their relation to the mandate;

4. A security intelligence service must keep its government informed of threats to national security, while police work will normally culminate in evidence being presented in court.[44]

The McDonald Commission's key recommendation was the removal of the RCMP SS from the RCMP based on the following factors:

Appropriate Management and Personnel Policies

In order for a civilian intelligence service to be successful it must recruit "… more mature, more experienced, better-educated personnel with a variety of backgrounds."[45] A less authoritarian style of management would be beneficial to a new security intelligence service. Furthermore, past attempts to implement a separate and civilian programme within the RCMP had ended in dramatic failure. Therefore it was considered unlikely that the RCMP could adapt to such a change.

Direction and Control of Government

The separation of a national security intelligence service from the RCMP would allow improved and closer relations between security intelligence and the government, which would facilitate oversight by Parliament, the Solicitor General, and other senior government officials. The Minister responsible for national security intelligence should be actively involved in the service to allow the use of intrusive techniques to be monitored in light of the "…ramifications these decisions can have on Canada's system of government and on its relationship with other countries."[46] In the case of a police force, though, the Minister in charge and the government should only be involved in matters with significant policy implications.

A separate security service would have a better relationship with the government, as compared to the difficulties envisioned in instilling in the RCMP a culture of

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44 Independent Advisory Team in the Canadian Security Intelligence Service *People and Process in Transition: Report to the Solicitor General by the Independent Advisory Team in the Canadian Security Intelligence Service*. Gordon F. Osbaldeston, ed. Canadian Security Intelligence Service (Ottawa: Solicitor General Canada, 1987), p. 5.

45 McDonald Commission, *Freedom and Security Under the Law*, pp. 754-755.

46 McDonald Commission, *Freedom and Security Under the Law*, pp. 756-757.

accountability respecting intelligence. As a separate service, the new agency would more quickly and easily be able to develop a relationship outside of the ingrained traditions that had in the past prevented or delayed changes within the RCMP.

Trust in the RCMP

Due to the low level of public trust in the RCMP following the investigation and revelations revealed by the McDonald Commission, a new and separate security intelligence service would benefit from a fresh start.[47]

Ancillary Benefit

Two separate entities, the RCMP on the one hand and the new security intelligence service on the other, would allow a system of checks and balances to develop between the two organizations. This relationship would be required because the intelligence service would be dependant upon the police force, which alone possesses traditional police powers such as powers of arrest, of warrant execution, and of search and seizure.

Furthermore, at both the operational and the policy level, the Minister in charge would be able to assess one agency by comparing it to the other, in particular with regard to requests for more power.[48]

An Invalid Reason for Separation

A reason sometimes raised for separation of the security intelligence service from the RCMP was based on the argument that, in order to obtain information, intelligence-gatherers must act illegally, and therefore should not be a part of the police force. This argument was soundly rejected as a reason for the separation.[49]

The Security Intelligence Transition Group (SIT Group)

Soon after the tabling of the McDonald Commission report, the government announced that it was accepting the central recommendation, which was to create a separate civilian intelligence service. The Security Intelligence Transition Group (SIT Group) was formed in September 1981 with a mandate to develop a new security intelligence agency and to help transition the RCMP SS into this new agency. A great deal of its time was spent developing the legal parameters which would eventually form the basis of the *CSIS Act*.[50] The SIT Group consisted of a small group of people all reporting to the Solicitor General, the Honourable Robert Kaplan. It was led by Superintendent Archie Barr, a 25-year veteran of the

47 McDonald Commission, *Freedom and Security under the Law*, pp. 758-759.
48 McDonald Commission, *Freedom and Security under the Law*, p. 759.
49 McDonald Commission, *Freedom and Security under the Law*, p. 760.
50 Testimony of Geoffrey O'Brian, vol. 16, March 5, 2007, pp. 1531-1532.

RCMP Security Service.[51] Barr was one of the most senior officers of the RCMP Security Service. Prior to the establishment of the McDonald Commission, he was one of a number of senior officers who had written to the Commissioner asking for a Royal Commission to look into the allegations of misconduct that were emerging and to investigate the appropriate role of the Security Service.[52] A number of the members of the SIT Group also went on to play key roles in the early days of CSIS, including Ted Finn, who became the first Director, Archie Barr, who became the Deputy Director National Requirements, and others, including Jim Warren, Geoffrey O'Brian and Chris Scowen.

The job of the SIT Group was to use the McDonald Commission report as a guide and to analyze the recommendations. The SIT Group advised Cabinet and sought its direction on which recommendations to implement and how to implement them. The SIT Group wrote a report, informally called "the red book," which was roughly 300 pages long and which focused their discussions.[53]

Within 18 months of its creation, the SIT Group drafted what would become Bill C-157, the first piece of legislation tabled in May of 1983.[54]

The Pitfield Committee

In the spring of 1982, the Clerk of the Privy Council, Michael Pitfield, began a Special Senate Committee (the "Pitfield Committee") with a number of senior deputies. Over approximately 20 meetings, they debated the "…appropriate set-up for CSIS, what its relationship to government should be, what its mandate should be, what controls should be on it, how it should be reviewed."[55] They spent ten of the meetings solely on the issue of mandate, the relationship of the new service to government and the relationship of the new service to law enforcement. The Pitfield Committee's observations resulted in a bright line approach to the difference between law enforcement, defined as reactive and resulting in an open hearing of the facts in court, and intelligence, defined as proactive and secret.[56]

In 1983, the Pitfield Committee produced a report that scrutinized the McDonald Commission's findings and the distinction it drew between intelligence and evidence.[57] The Pitfield Committee "…put the final pieces

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51 Testimony of Geoffrey O'Brian, vol. 16, March 5, 2007, p. 1527.
52 Testimony of Geoffrey O'Brian, vol. 16, March 5, 2007, p. 1527.
53 Testimony of Geoffrey O'Brian, vol. 16, March 5, 2007, pp. 1531-1532.
54 Testimony of Geoffrey O'Brian, vol. 16, March 5, 2007, p. 1524-1525.
55 Testimony of Geoffrey O'Brian, vol. 16, March 5, 2007, pp. 1531-1532.
56 See Exhibit P-309, pp. 11-12: Kent Roach, "The Unique Challenges of Terrorism Prosecutions: Towards a Workable Relation Between Intelligence and Evidence" [Exhibit P-309: Roach Paper on Terrorism Prosecutions].
57 Report of the Special Committee of the Senate on the Canadian Security Intelligence Service, *Delicate Balance: A Security Intelligence Service in a Democratic Society* (Ottawa: Supply and Services Canada 1983). See also Exhibit P-309: Roach Paper on Terrorism Prosecutions, for the stark distinction drawn between intelligence and evidence, first espoused by the Pitfield report and seemingly adopted by CSIS and the government from then on.

of the *CSIS Act* into shape."[58] Following the report of this Committee, most of the McDonald Commission's recommendations were accepted. However, one of the recommendations not followed was the McDonald Commission recommendation of a joint Parliamentary committee to review the actions of the intelligence service.[59] To this day that recommendation has not been enacted. However, the Pitfield description of law enforcement as generally reactive and the intelligence service as secretive and information-oriented, with a goal of investigating, analyzing and formulating intelligence, remains influential today,[60] even though it does not seem to correspond to the changed landscape created by terrorism and the legislative means enacted to counter it.[61]

2.2 Failure to Appreciate the Nature and Seriousness of the Threat

The Emerging Threat of Sikh Extremism

In the year preceding the Air India bombing, Canadian government agencies received a mass of information about the emerging threat of Sikh extremism in Canada. There was nevertheless a pervading perception across government agencies that much of the threat information about Sikh extremism was exaggerated. The threats to Indian interests that were circulating through the system were often perceived as merely noise, or "crying wolf", as opposed to any meaningful or menacing signal.

The early 1980s saw the rise of Sikh extremist violence in India. Violence against Hindus in the Punjab was increasing with the growing popularity of the charismatic Sikh fundamentalist, Sant Bhindranwale, whose rise to power was, ironically, largely attributable to political manipulation by Indira Gandhi, the Indian Prime Minister at the time. Bhindranwale initiated a violent campaign for the establishment of the state of Khalistan, and moved armed followers into the Golden Temple in Amritsar, which he proceeded to fortify. Communal violence, including acts of terrorism by Sikh extremists, was an almost daily occurrence.[62] The situation in India in early June 1984 was extremely tense, as an invasion by the Indian army to oust Bhindranwale and his Khalistani followers from the Golden Temple, Sikhism's holiest shrine, seemed inevitable.[63]

During this time, incidents began occurring within the Sikh community in Canada that indicated that the Sikh extremist threat was not just a foreign issue. Republic of Khalistan "Consulates" were established in Vancouver, Winnipeg and Toronto, with "Consul Generals" distributing Khalistani passports, postage stamps and currency to propagandize their cause. In 1981 and 1982, claims surfaced that Sikh extremists were undertaking military training and

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58 Testimony of Wesley Wark, vol. 16, March 5, 2007, p. 1440.
59 Testimony of Wesley Wark, vol. 16, March 5, 2007, p. 1435.
60 Exhibit P-309: Roach Paper on Terrorism Prosecutions, p. 12.
61 See Volume Three of this Report: The Relationship between Intelligence and Evidence and the Challenges of Terrorist Prosecutions.
62 Exhibit P-101 CAB0055.
63 Testimony of William Warden, vol. 24, May 7, 2007, p. 2379.

establishing links with international terrorists.[64] In May 1982, the Indian High Commissioner, upon his arrival at the Vancouver International Airport, was met by a crowd of Sikhs who threw eggs at him.[65] In November 1982, shootings occurred at a demonstration attended by Sikh groups at the Indian Consulate in Toronto.[66] On June 4, 1984, two Sikh men, brandishing swords, stormed the Indian Consulate in Vancouver.[67]

In June 1984, the Indian army stormed the Golden Temple, killing hundreds of Bhindranwale's followers and Bhindranwale himself. Hindu and Sikh communities in the Punjab region reacted in a fit of intercommunal violence that took thousands of lives. The reaction in Sikh communities to the storming of the Golden Temple became an issue that could not be ignored around the world. In Canada, the reaction was unprecedented. The storming of the Golden Temple united Sikhs in grief and anger at the desecration of their holiest shrine.[68] Demonstrations against the Indian government were staged across the country, with protestors burning Indian flags[69] and firing shots in the Indian Consulate in Toronto.[70] Indian diplomatic personnel were subject to harassment and received death threats by telephone.[71] In July 1984, the Acting High Commissioner was assaulted by five Sikh men in Winnipeg.[72]

Government of India Concern with Canadian Response

The Government of India (GOI) considered the Canadian response to the threat of Sikh extremism to be "very inadequate", and maintained that it compared unfavourably to the responses of the US and the UK.[73] The Canadian High Commissioner, William Warden, received the brunt of the Indian Government's frustration and sympathized with it. Between June and October 1984, Warden recalled being summoned to the Indian Foreign Ministry approximately 18 times to receive strong protests about Canada's lack of response.[74] From his post in New Delhi, Warden provided insight into the situation in India, warning against the "naïve" expectation that Bhindranwale's death would resolve the conflict in the Punjab, and instead, presciently predicting that as a "Sikh martyr", he would remain "…a thorn in the side of Mrs. Gandhi and her successors for many years to come."[75]

External Affairs relayed Warden's concerns to the RCMP, to emphasize the need to ensure, not only that all necessary measures be taken to protect Indian diplomats, but also that the protection be "…sufficiently visible to allay the concerns of the

64 Exhibit P-101 CAB0031.
65 Exhibit P-101 CAB0026.
66 Exhibit P-101 CAB0035.
67 Exhibit P-101 CAB0060.
68 Exhibit P-101 CAB0063.
69 Exhibit P-101 CAB0067.
70 Exhibit P-101 CAE0026.
71 See, for example, Exhibit P-101 CAB0068.
72 Exhibit P-101 CAC0222, p. 3.
73 Exhibit P-101 CAC0131, p. 3.
74 Testimony of William Warden, vol. 24, May 7, 2007, p. 2424.
75 Exhibit P-101 CAF0065.

Indian Government." DEA indicated that the situation was disturbing "…from a bilateral relations standpoint," given the important objectives Canada was pursuing with India.[76]

The GOI expressed its view that "Canada is perceived as a dangerous place for official Indians where law is enforced only occasionally and with reluctance."[77] In June 1984, at the same time that Warden was assuring the Indian Foreign Secretary that security was being upgraded for Indian interests in Canada, an armed Sikh walked into the Toronto Consulate, fired shots and slipped away.[78] RCMP Deputy Commissioner Henry Jensen instructed the VIP Security Branch to provide additional protection to Indian diplomats.[79] In August 1984, just days after the Secretary of State for External Affairs (SSEA), the Honourable Jean Chrétien, issued a strongly-worded statement denouncing the "…deplorable incidents against Indian diplomatic personnel and property in Canada"[80], organizers cancelled an event in Montreal to be attended by Indian diplomats, due to the presence of hundreds of Sikh demonstrators.[81] While arrests were made for several attacks on Indian premises and personnel, the prosecutions generally failed[82] or were delayed.[83] External Affairs advocated for prosecution of these matters, but also informed the Indian government that the Canadian government's ability to act was limited by statutory and constitutional realities, including the *Privacy Act* and the federal – provincial division of powers.[84] Eventually, the GOI sent an aide-memoire to External Affairs that made the point that it was "…to say the least … not impressed" with the Canadian government's perceived failures to adequately protect Indian personnel and property from violent acts and threats.[85] At the Inquiry hearings, Warden speculated that the Canadian government was treating the situation as "…just another ethnic thing," in the sense that it believed the issue concerned foreign, not Canadian problems, and therefore tended to take them less seriously.[86]

Prime Minister John Turner sent a letter to Prime Minister Indira Gandhi in August 1984, assuring her that Canada had accorded the highest possible level of security to Indian interests.[87] Prime Minister Brian Mulroney sent a similarly-themed letter to Prime Minister Rajiv Gandhi in May 1985, declaring that Canada remained firm in its resolve to preclude illegal anti-Indian activities.[88] By the

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76 Exhibit P-101 CAC0131, p. 2.
77 Exhibit P-101 CAE0074.
78 Exhibit P-101 CAE0026.
79 Testimony of Henry Jensen, vol. 44, June 18, 2007, p. 5408; Exhibit P-101 CAC0138.
80 Exhibit P-101 CAE0083.
81 Exhibit P-101 CAE0092.
82 Exhibit P-101 CAE0096. The Toronto Provincial Crown dropped charges against the accused, who entered the Toronto Consulate and fired shots, due to the lack of Crown witnesses, after Indian diplomats refused to testify.
83 See Exhibit P-101 CAE0106 for a chronology of Sikh protests and the Government of Canada response from April to September 1984. See Exhibit P-101 CAE0149 for a description of the delay in the Uzi machine gun case due to technicalities in the offence, that is, the two accused were each carrying parts of the gun rather than the whole gun as required under Canadian criminal law.
84 Exhibit P-391, document 44 (Public Production # 3066).
85 Exhibit P-101 CAC0186, p. 2.
86 Testimony of William Warden, vol. 24, May 7, 2007, p. 2412.
87 Exhibit P-101 CAE0095.
88 Exhibit P-101 CAE0170.

end of the summer of 1984, the issue of the adequate level of protection for Indian interests in Canada was receiving attention at the highest levels of the Canadian government.[89] Beyond these high-level representations however, External Affairs found limited success in translating its concerns into responsive action by other government agencies.

Slow Recognition of Threat by Security Agencies

The RCMP Security Service – and, after July 1984, the Canadian Security Intelligence Service (CSIS) – was responsible for assessing threats to national security for the Government of Canada, but was slow to recognize the significance of the Sikh extremism threat in Canada. The general belief was that Sikh extremism was a foreign problem. The Security Service believed that any violence in Canada would be linked to events in the Punjab,[90] and would be due to "uncontrolled outbursts" by persons overtaken by emotion.[91] While the Security Service was aware that Sikhs in Canada were sending money to support action in the Punjab[92], it expressed doubt that they would resort to violence within Canada.[93]

Despite the Security Service's recognition of the sudden growth in Sikh extremism in Canada following Operation Bluestar, few resources were assigned to its investigation into the emerging movement. The lack of resources continued in the newly-created CSIS. The limited resources were mainly utilized for substantiating threat warnings and obtaining information about anticipated demonstrations on a piecemeal, reactive basis, rather than for developing a comprehensive understanding of the radical Sikh movement in Canada. CSIS received the flood of threats to Indian interests and attempted to corroborate the information. However, CSIS's investigation in the critical BC Region suffered from a lack of human sources, physical surveillance units and technical sources, as well as from a dearth of investigators and intelligence monitors to process the collected information. With few investigative resources assigned to the Sikh extremist investigation, investigators were regularly unable to find corroboration (or denial) of the threat information.

From the time of the Golden Temple storming, the threat level against Indian interests was assessed as continuously "high." The TAs warned that there was a "…real and present danger" to Indian interests in Canada.[94] However, these "high threat" warnings appeared to be based on a common sense expectation of consequences, in light of the tense climate in the Sikh community in Canada

89 Exhibit P-101 CAC0207.

90 Exhibit P-101 CAB0080 (June 18, 1984 TA notes that the propensity for problems are directly linked to the Canadian Sikh community's perception of the events in the Punjab. Warns that threat will moderate only if differences in the Punjab resolved). See also Exhibit P-101 CAB0083 (June 20, 1984).

91 Exhibit P-101 CAB0120, CAB0148 (October 22, 1984 TA warns against overlooking the "emotional characteristics of Sikhs"), CAB0197 (February 27, 1985 TA warns emotions still running high within the Canadian Sikh community).

92 Exhibit P-101 CAE0056.

93 Exhibit P-101 CAB0076 (June 14, 1984 in which CSIS tends to question the veracity of a warning of a suicide attack against Air India as relevant to Canada).

94 Exhibit P-101 CAB0092.

and India, rather than on independent investigative support. The "high general threat" warnings were commonly qualified with expressions that the threats could not be entirely discounted,[95] but that there was no independent information to corroborate the high general threat[96] or to indicate a more specific threat.[97] Analysts often tended to view the threats with scepticism, opining that threats made by Sikh extremists were exaggerated, issued more for tactical reasons than as an expression of an actual willingness to carry out violent acts.[98]

By September 1984, CSIS warned that the real threat to Indian interests would come from radical groups within the Sikh community who could take actions not sanctioned by the moderate leadership.[99] CSIS investigators increasingly focused on specific individuals as the source of the threat to Indian interests, notably Parmar, Bagri and Gill.[100] However, CSIS investigators faced challenges in obtaining technical sources and physical surveillance coverage on these targets, as they competed for these scarce resources within an organization focused on transition issues, counter-intelligence targets from the Cold War era and Armenian terrorist targets. CSIS admitted its lack of knowledge about the Sikh extremist movement in Canada, warning in June 1985 that should radical elements "…plan any action, there [was] a good possibility that CSIS will not have any foreknowledge."[101] Throughout this period, CSIS continued to warn of the high, but uncorroborated, general threat to Indian interests, including Air India. Thus, as the time of the Air India and Narita bombings approached, CSIS was an organization that was cognizant of the potentially lethal and serious threat of Sikh extremism and warning others of it, but remained ill-equipped to verify the nature of the threat, or to provide independent insight that the RCMP and other agencies responsible for threat response could use to tailor their actions.

Widespread Skepticism about the Seriousness of the Threat

Despite the "high threat" alarm that was being raised by CSIS, at the upper levels of the bureaucracy, and among some members of RCMP senior management, skepticism about the actual threat posed to Indian missions and personnel was still common within the RCMP and among some Transport Canada officials.

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95 Exhibit P-101 CAB0061 (June 7, 1984), CAB0093 (July 5, 1984), CAB0148 (October 22, 1984).
96 Exhibit P-101 CAB0148 (October 22, 1984).
97 Exhibit P-101 CAB0071 (June 12, 1984), CAB0192 (February 15, 1984), CAB0218 (April 12 , 1985).
98 Exhibit P-101 CAB0061 (June 6 , 1984 TA notes that the BK is a group of malcontents using threats to get attention and some support), CAB0105 (July 10, 1984 TA notes some speculation exists that the hit list is but an idea being used by a small militant group to increase the climate of tension in the Sikh community and to induce moderates to adopt a more extreme stance), CAB0218 (April 12, 1985 TA notes CSIS believes that telephone bomb threats made to Air India offices are probably communicated to continue to cause problems and perpetuate terrorist threats in hopes of causing unrest/retaliatory measures by the Indian Government so as to keep Khalistan alive in the minds of all Sikhs).
99 Exhibit P-101 CAB0137.
100 Exhibit P-101 CAA0105.
101 Exhibit P-101 CAB0249.

The threat warnings and accompanying requests for additional security, sent regularly by Air India, were not always viewed as indicating the existence of a real threat. The agencies developed a perception of an exaggerated volume of threat information being passed on by the GOI. After the bombing, RCMP and Transport Canada officials affirmed that "…almost every flight was preceded by a letter outlining a threat to Air India"[102] originating from either Air India or the GOI. Whether or not this was the case,[103] it seems that the perception that the warnings were numerous and constant was the motivation behind their being questioned. In its report to the Honourable Bob Rae, CSIS indicated that "…the fact that the Government of India issued so many warnings to so many departments and agencies in Canada generated the sense among recipients that they were exaggerating the threat."[104]

Even after the bombing, RCMP and Transport Canada officials continued to believe that the threat information sent by Air India on a regular basis was aimed at obtaining additional security for free.[105] Apparently, the bombing itself was not enough to bring home the fact that the threats to Air India were real. The June 1st Telex, outlining threats to bomb Air India airplanes using time-delayed devices,[106] continued to be perceived simply as a "floater"[107], a piece of information provided "…every time in hopes that security would be increased" and for the purpose of "…gaining more security around the aircraft."[108] Little thought seems to have been given to the question of why Air India would want the additional security if the threat were not real.

Members of the RCMP VIP Security Branch, charged with the protection of foreign missions in Canada,[109] denied being sceptical about the need to provide protection for Indian diplomats.

By mid-1984, a number of violent incidents involving Indian property and personnel had occurred in Canada. These included, *inter alia*, the June 1984 attacks on the Vancouver and Toronto Indian consulates, the July 1984 assault on K.P. Fabian, the Acting High Commissioner of India, and demonstrations in Vancouver that resulted in damage to the Consul General's vehicle.[110] At the hearings, Jensen testified that his impression was that the RCMP members in charge of protection were still not taking sufficiently seriously management's previous directive to increase protection.[111] He concluded, in August 1984, that the RCMP was "…under resourcing in [its] planning for the various public events at which Indian diplomats are present." He was not sure that the RCMP Divisions

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102 Exhibit P-101 CAC0517, p. 2. Sweeney was still of that view when he testified before the Commission: Testimony of Warren Sweeney, vol. 25, May 8, 2007, p. 2585; Testimony of Warren Sweeney, vol. 26, May 9, 2007, p. 2757.

103 See Exhibit P-101 CAA0234, which provides a chronology of the warnings received and does not record a warning before each flight.

104 Exhibit P-101 CAA1086, p. 3.

105 Exhibit P-101 CAC0517, p. 2; Testimony of Warren Sweeney, vol.25, May 8, 2007, pp. 2584-2585.

106 See Section 1.2 (Pre-bombing), June 1st Telex.

107 Testimony of Warren Sweeney, vol.26, May 9, 2007, pp. 2736-2737.

108 Testimony of Warren Sweeney, vol.26, May 9, 2007, p. 2745.

109 Testimony of R.E. Muir, vol. 28, May 15, 2007, p. 2905.

110 Exhibit P-101 CAC0222. See also Exhibit P-101 CAA1099 for a list of "Major Sikh Extremist Events" compiled by the RCMP.

111 Testimony of Henry Jensen, vol. 44, June 18, 2007, p. 5419.

were "…sufficiently sensitized in this regard,"[112] and he felt that they needed to be advised of the possible implications of not providing adequate protection for Indian diplomats. The Director of Protective Policing noted that "…the message is clear – PROTECT."[113]

The RCMP VIP Security branch made repeated attempts to convince DEA to agree to decrease the level of protection provided for Indian missions and personnel in Canada, as it was viewed as a significant and unnecessary drain on RCMP resources. VIP Security management was far more focused on the threat posed to Turkish diplomatic personnel by Armenian terrorists. Armenian extremist groups were described as "…organized worldwide" and as having "…clearly demonstrated their ability to carry out assassinations and murder." By contrast, the threat to Indian diplomatic personnel was described in October 1984 as "… the work of individual Sikh extremists", not "…organized terrorist groups," and as having resulted only in "…minor property damage with the exception of the assault on Mr. Fabian."[114]

VIP Security also appeared to dismiss the September 1984 CSIS warning that "…more radical and younger segments" of the Sikh community often took "… independent and precipitous actions not sanctioned by and outside the control of the moderate leadership", and as such were a "…real threat to Indian interests in Canada."[115] Instead, VIP Security management seized on a CSIS statement that some of the emotion following the assault on the Golden Temple had "…largely subsided" and that "…moderate leadership is expected to increasingly focus their efforts on the political level"[116] to argue for less protection; this despite the fact that CSIS continued to maintain that "…the move towards quiescence in the Sikh community here should not be judged as lessening the potential for problems", and concluded that the threat remained high.[117]

The RCMP also, at times, expressed scepticism about the use made by Indian diplomats of RCMP protective services, and took this as yet another demonstration that the threat was not as serious as was claimed. The fact that RCMP escorts were not consistently used by some of the Indian officials, even when available, was viewed as evidence that RCMP protection was being used as a "convenience" rather than for free security.[118] RCMP officers were of the view that the Indian diplomats sometimes used their police escort as a "chauffeur", and that they showed "…disregard for [their] own security" and appeared "… to enjoy the readily available and expensive services" provided by the RCMP, "… but seemingly for the wrong reasons."[119]

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112 Exhibit P-101 CAC0214, p. 2.
113 Exhibit P-101 CAC0214, pp. 2-3; Testimony of Henry Jensen, vol. 44, June 18, 2007, p. 5418.
114 Exhibit P-101 CAC0222, p. 2.
115 Exhibit P-101 CAA0093, p. 2.
116 Exhibit P-101 CAC0222, p. 3.
117 Exhibit P-101 CAA0093, p. 2.
118 Exhibit P-101 CAC0222, p. 3.
119 Exhibit P-101 CAC0233, pp. 3-4. On October 30, 1984, VIP Security Branch once again wrote to DEA requesting permission to replace RCMP officers with private security guards in Ottawa, Toronto and Vancouver (it would seem the early October request was turned down at the time). This request is referenced in Exhibit P-101 CAC0255. However, due to the assassination of Indira Gandhi on October 31, 1984, it was decided that no lessening of security should occur at that time: Exhibit P-101 CAC0241, CAC0243.

Heightened Attention to Sikh Extremism in May 1985

In the month before the Air India and Narita bombings, the threat of Sikh extremism was given more attention, in light of the enhanced risk surrounding the anniversary of the Golden Temple storming and the US visit by Rajiv Gandhi, the successor to the assassinated Indira Gandhi. The Secretary of State for External Affairs (SSEA), the Rt. Honourable Joe Clark, expressed his personal concern that Canadian authorities accord the highest priority to the Sikh extremist threat. External Affairs formed a senior level interdepartmental working group, to coordinate activities within Canada related to the threat to Indian interests, and participated in a US/UK/Canada tripartite group to share intelligence on Sikh extremism.[120] CSIS issued a comprehensive threat assessment (TA) on the Sikh extremist movement in Canada, and distributed it widely across government agencies in Canada.[121] CSIS HQ tasked the major regions and districts to submit daily situation reports on the threat of Sikh extremism in their areas.[122] As of mid-May, the RCMP was providing enhanced protection for Indian missions and personnel as a result of an upgraded threat assessment.[123] The protection was increased for some of the consulates at the end of the month, at the request of the interdepartmental working group on Sikh terrorism.[124] The RCMP noted that it was aware that "…the next few weeks are crucial vis-à-vis the protection of Indian Missions in this country and we are continually reviewing all new intelligence, and, should the necessity arise, the protective measures will be upgraded as required."[125] In fact, additional protection for the High Commission in Ottawa was implemented on June 3, 1985, to respond to the high threat.[126] Airport officials at Pearson airport initially refused to implement additional security for Air India's operations without cost to the airline.[127] However, the intervention of the Department of External Affairs[128] resulted in a direction from RCMP Headquarters that the level of security at Pearson be raised to the level being provided at Mirabel.[129]

This prioritization of the response to the Sikh extremism threat by some agencies in May and June of 1985 appears to have been a temporary measure, in response to a perceived temporary heightening of the threat due to the anniversary of the Golden Temple storming and the US visit of Rajiv Gandhi, rather than the demonstration of a true appreciation of the long-term significance of the threat. Immediately after Gandhi's departure, the RCMP requested an updated TA from CSIS, noting its assumption that, should the events pass without serious incident,

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120 Exhibit P-101 CAE0174, CAE0178.
121 Exhibit P-101 CAB0236(i).
122 Exhibit P-101 CAB0256.
123 This appears to be referring to a May 16, 1985 NCIB threat assessment (Exhibit P-101 CAC0334) indicating that the assessment of the threat to Indian missions is high due to the situation in the Punjab as well as recent events in E Division and the recent arrest of Sikhs in the United States: Exhibit P-391, document 255 (Public Production # 3388), p. 4.
124 Exhibit P-101 CAE0223, p. 2; Exhibit P-391, document 255 (Public Production # 3388), pp. 4-5.
125 Exhibit P-101 CAE0177.
126 Exhibit P-391, document 255 (Public Production # 3388), p. 5.
127 Exhibit P-101 CAF0041.
128 Exhibit P-101 CAE0181.
129 Exhibit P-101 CAE0181, CAF0010, p. 3.

the threat level (and hence required protection) would diminish.[130] The final CSIS TA before the bombings warned that it would be naïve to think that Sikh extremists had abandoned their cause, and assessed the threat as only slightly less serious.[131] In response, the RCMP maintained the same level of protection at Indian missions and for Air India flights.[132] Despite these late efforts, the Air India and Narita bombings took place on June 23, 1985.

Conclusion

Overall, in spite of some concern expressed by the SSEA, External Affairs, CSIS and senior RCMP officers, the phenomenon of "threat fatigue"[133] and pervasive scepticism about the motivations of Air India and Indian diplomats made it difficult for Canadian officials to appreciate the true seriousness of the threat of Sikh extremism. From his vantage point in India, Warden felt that, had the actions of the Sikh extremists been pursued vigorously by the government early on, by prosecution as well as by investigation, regardless of whether convictions actually ensued, these government responses might have "…taken the wind out of their sails" and thwarted further development of plots like the Air India bombing.[134] Some of the implications of the mistaken perception that the threat was not truly serious would become evident in the failures of the various agencies and departments of the Government of Canada leading up to the events of June 23, 1985.

2.3 Inadequate Preparation for Nature of Threat

2.3.1 Recognition of the Threat of Sabotage and Weaknesses in the Ability to Respond

The Chicago Convention

In 1944, the International Civil Aviation Association (ICAO) was established by the *Convention on International Civil Aviation* ("*Chicago Convention*"),[135] under the auspices of the United Nations.[136] The ICAO became the supreme law-making body with respect to international civil aviation, and provided governments, air carriers, and airport operators with comprehensive sets of best practices and security measures for normal and high risk situations.[137] There are currently 189 contracting states within the ICAO, all of which are signatories to the *Chicago Convention*.[138]

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130 Exhibit P-101 CAE0195.
131 Exhibit P-101 CAB0321.
132 Exhibit P-101 CAE0199, CAE0201.
133 See Section 2.4 (Pre-bombing), Security Culture at Canada's Airports and Section 3.3.4 (Pre-bombing), CSIS Failures in Assessing the Threat.
134 Testimony of William Warden, vol. 24, May 7, 2007, p. 2384.
135 *Convention on International Civil Aviation,* December 7, 1944, 15 U.N.T.S 295 (entered into force on April 4, 1947) .[*Chicago Convention*]
136 Exhibit P-157, p. 15.
137 Exhibit P-157, p. 18.
138 Testimony of Moses Aleman, vol. 35, May 29, 2007, p. 4215.

Flowing from a rash of increasingly sophisticated incidents in the 1960s and 1970s, the hijacking of aircraft was, for a time, perceived as the predominant threat to civil aviation. While the first aircraft hijacking took place in 1931,[139] acts of terrorism against aviation security only became a significant concern after World War II, with the advent of the Cold War.[140] Individuals who found themselves trapped behind the Iron Curtain resorted to hijacking aircraft in desperate attempts to flee to freedom in the West. They were followed, in due course, by Cubans fleeing to the United States following the Revolution.[141] Although these early asylum-seeking hijackers were welcomed to the West as valuable political symbols, other groups began to consider using hijacking for overtly political purposes of their own. This was exemplified by the coordinated and sensational hijackings conducted by Palestinian and Iranian fundamentalist groups in the 1960s and 1970s.[142]

In 1974, the ICAO member nations responded to the hijacking crisis by adopting Annex 17 to the *Chicago Convention*, *Safeguarding International Civil Aviation Against Acts of Unlawful Interference*.[143] Each of the Annexes adopted by the ICAO Council contains standards and recommendations.[144] Signatories are obliged to comply with the international standards. The recommendations are best practices or "desirable" measures, meaning that, while the contracting states were not obliged to implement these measures, the measures were appropriate goals for more advanced and prosperous nations concerned with ensuring that their aviation security regimes were as effective as possible.

Canadian Security Response

It is worth emphasizing that ICAO standards were, and continue to be, *minimum standards*, aimed at "the lowest common denominator" in order to obtain approval from all contracting states. Rodney Wallis, in his testimony, gave the example of a poor country having to choose between having an X-ray machine at an airport and having one at a hospital.[145] As a result, the international standards will necessarily fall below those deemed appropriate, or even necessary, by advanced, prosperous nations. Such nations also have access to up-to-date intelligence about new threats and tactics, and must be expected to respond accordingly. Canada's efforts to satisfy the ICAO standards and to create a comprehensive, safe and responsive civil aviation security program have been examined with these facts in mind.

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139 Testimony of Moses Aleman, vol. 35, May 29, 2007, p. 4211.

140 In terms of sabotage, the first incident of a bomb being placed aboard an aircraft occurred in the United States in 1932. See Testimony of Moses Aleman, vol. 35, May 29, 2007, p. 4252. The first two mid-air bombings of commercial aircraft took place in 1949. The first took place in the Philippines. The second mid-air bombing of a commercial aircraft occurred on September 9, 1949 in Canada, killing 23. See Testimony of Rodney Wallis, vol. 35, May 29, 2007, p. 4207; Exhibit P-147, p. 28.

141 Exhibit P-147: p. 5. Note that following the exodus of 1959-1961, the pattern of asylum-seeking hijackings continued along a different trend, with US aircraft now being hijacked by homesick Cubans seeking to *return* to Communist Cuba.

142 Testimony of Rodney Wallis, vol. 35, May 29, 2007, p. 4207.

143 Exhibit P-151: *International Standards and Recommended Practices – Security: Safeguarding International Civil Aviation Against Acts of Unlawful Interference – Annex 17 to the Convention on International Civil Aviation* – First Edition – August 1974 [Exhibit P-151:Annex 17, 1st ed.).

144 Testimony of Moses Aleman, vol. 35, May 29, 2007, p. 4216.

145 Testimony of Rodney Wallis, vol. 35, May 29, 2007, pp. 4218-4219; Testimony of Rodney Wallis, Vol. 36, May 30, 2007, p. 4285.

Annex 17 directed each contracting state to implement a national civil aviation security program, and to designate an authority in charge of that program. Transport Canada was Canada's representative at the ICAO, and was designated as the authority responsible for Canada's civil aviation security program. Transport Canada continues to hold these roles today.

Pursuant to the first edition of Annex 17, Transport Canada was responsible for developing a program to prevent criminal acts against civil aviation. Annex 17 also included a recommendation that each authority should work to coordinate activities between the agencies, departments, and other organizations responsible for different aspects of that program.[146]

The security measures implemented during the 1970s and early 1980s were clearly intended to minimize the risk of hijacking incidents, with a focus upon preventing potential hijackers from bringing weapons aboard an aircraft, either on their persons or in their carry-on baggage. The *Aeronautics Act* in place at the time of the Air India bombing had been amended in 1973 to enable the development of aviation security regulations that would require operators of aircraft registered in Canada to search people, baggage, and cargo as a condition of flying.

The Act included a "no search, no fly" rule, which prohibited anyone from boarding an aircraft, or placing baggage aboard the aircraft, unless authorized searches had been conducted of their persons and their belongings.[147] Prior to these amendments, no legal authority existed to search passengers and their baggage at airports prior to boarding;[148] initially the carriers voluntarily agreed to screen passengers under the authority of tariff regulations and by virtue of their power to accept or reject passengers and their baggage for transportation.[149] This was the foundation for the system of voluntary compliance with security regulations by air carriers. The *Aeronautics Act* was amended again in 1976 to expand these search requirements to operators of foreign aircraft.

To facilitate passenger screening, Transport Canada established checkpoints and sterile concourse areas at all international airports, and provided and maintained X-ray scanners and metal detectors for inspecting passengers and their carry-on baggage.[150] Despite the progress made, however, a key vulnerability remained. The aviation security measures were not designed for the eventuality that terrorists might instead engage in acts of sabotage, including bombing, which did not require them to board an aircraft at all.[151]

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146 Testimony of Moses Aleman, vol. 36, May 30, 2007, pp. 4271-4272.

147 *Aeronautics Act*, R.S.C. 1970, c. A-3, as am. by *An Act to Amend the Aeronautics Act*, S.C. 1973-1974, c.20, s. 1 [*Aeronautics Act*, R.S.C. 1970, am. S.C. 1973-74], introducing ss. 5.1(3), 5.1(4).

148 Exhibit P-101 CAF0774, p. 19.

149 Exhibit P-101 CAF0643, pp. 1-2: "During 1971-1972 Air Canada and CP Air voluntarily carried out a number of security procedures on international and trans-border flights which included the selective searching of passengers and carry-on baggage under their tariff rules. The screening was carried out by airline employees and CP Air also used the services of the CP Police."

150 Exhibit P-101 CAF0643, p. 3.

151 Exhibit P-157, p. 19.

Beyond these legislated measures, Canada's aviation security program depended greatly on the voluntary cooperation of air carriers and on their compliance with the security requirements in place.[152] The Air Carrier Security Regulations and the Foreign Aircraft Security Measures Regulations, created under the authority of the *Aeronautics Act*, [153] placed responsibility on foreign and domestic air carriers operating in Canada to develop and maintain their own security procedures. Carriers such as Air India were required to establish systems for surveillance and for searching persons, belongings, baggage and cargo by manual, technical or electronic means.[154] The carriers were required to file a written description of their security measures with the Minister.[155]

Neither the *Aeronautics Act,* nor the regulations and orders issued under its authority, provided details concerning the measures to be implemented. They did not direct the Minister to assess, approve or reject the security plans created by the carriers.

In addition to the measures outlined in the aviation security regulations and orders, the carriers were also broadly required to provide a system of identification to prevent unauthorized baggage, goods and cargo from being loaded onto an aircraft. They were, additionally, required to restrict access to their premises at airside, and protect against unauthorized access to the aircraft itself. As well, there was to be no unauthorized access to checked baggage prior to it being loaded aboard the aircraft, and it was only to be accepted by designated agents or representatives of the airline.[156]

International Convention Updated in 1981

Annex 17 was updated in 1981, resulting in some recommendations being elevated to the level of standards. The amendments also incorporated new and more detailed security requirements. For example, as a contracting state, Canada was obliged to "…take the necessary measures to prevent weapons or any other dangerous devices, the carriage or bearing of which is not authorized, from being introduced by any means whatsoever, on board an aircraft engaged in the carriage of passengers."[157]

Significantly, the second edition of Annex 17 specifically recommended that contracting states "…should establish the procedures required to prevent explosives or incendiary devices from being placed aboard an aircraft through baggage, cargo, mail and stores."[158]

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152 Exhibit P-263, p. 40.
153 *Aeronautics Act*, R.S.C. 1970 am. S.C. 1973-74, introducing ss. 5.1(1), 5.1(1.2). .
154 *Foreign Aircraft Security Measures Regulations*, S.O.R/76-593, s. 3(1)(a) [*Foreign Aircraft Security Measures Regulations*].
155 *Civil Aviation Security Measures Order*, S.O.R./ 74-227, s. 3 [*Civil Aviation Security Measures Order*].
156 *Civil Aviation Security Measures Regulations*, S.O.R./ 74-226 [*Civil Aviation Security Measures Regulations*]; *Foreign Aircraft Security Measures Regulations.*
157 Exhibit P-152: *International Standards and Recommended Practices – Security: Safeguarding International Civil Aviation Against Acts of Unlawful Interference – Annex 17 to the Convention on International Civil Aviation* – Second Edition – October 1981, s. 4.1.5 [Exhibit P-152: Annex 17, 2nd ed.].
158 Exhibit P-152: Annex 17, 2nd ed., s. 4.1.14.

As of June 22, 1985, the standard security procedures in place at Canadian airports were limited to metal detection screening of passengers and the X-ray screening of carry-on baggage.[159] There was no mandatory screening requirement for checked baggage. In fact, it was up to individual airlines like Air India to voluntarily include the screening of checked baggage in their own security plans.[160]

Threat of Hijacking Diminishes and the Threat of Sabotage and Bombing Increases

Hijackings in the early 1970s became increasingly violent and lethal,[161] but the anti-hijacking measures appear to have proved effective in controlling and reducing their incidence. In 1979, for example, there were no attempts to hijack any scheduled passenger aircraft in Canada.[162] Transport Canada noted in 1980 that there had not been a single successful hijacking of a scheduled Canadian flight since 1971, and no attempts since 1974.[163] Incidents of hijacking continued around the world, but were on the decline. Of 11 hijacking incidents in the United States in 1979, 10 did not involve real handguns or explosives.[164] By 1982, worldwide hijacking attempts had "decreased dramatically" from the spate of incidents in the 1970s. There were 87 hijacking attempts (both successful and unsuccessful) around the world in 1969, and 83 in 1970. In 1982, that number had fallen to 31 hijacking incidents worldwide.[165]

As the threat from hijacking diminished in the face of tightened security, terrorists naturally began to change their tactics in order to exploit weaker points in the security measures of the day. This was clear not only in hindsight. The Inquiry heard expert testimony that, by 1974, several bombings had firmly established the threat of sabotage.[166] The evidence also clearly shows that Transport Canada formally recognized, as early as 1979, that sabotage would supplant hijacking as the predominant threat to civil aviation security.

In the spring of 1979, senior representatives from Transport Canada, the RCMP, the Air Transport Association of Canada (ATAC) and Canada's major air carriers met to discuss the Review of the National Civil Aviation Security Program.[167] Based on intelligence provided by the RCMP Security Service, the parties agreed that the threat was changing internationally, and that sabotage and bomb threats were a greater concern than hijackings.[168]

In early 1980, Transport Canada's Civil Aviation Security Branch prepared a report entitled the *Evolution of the Canadian Civil Aviation Security Program*. The report

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159 Exhibit P-101 CAF0089, p. 19, CAF0151, pp. 13-14.
160 Exhibit P-101 CAF0089, p. 19.
161 Testimony of Peter St. John, vol.35, May 29, 2007, pp. 4221-4222.
162 Exhibit P-101 CAF0163, p. 5.
163 Exhibit P-101 CAF0766, p. 5.
164 Exhibit P-101 CAF0163, p. 5.
165 Exhibit P-101 CAF0563, pp. 5-6, 8.
166 Testimony of Peter St. John, vol. 35, May 29, 2007, p. 4222.
167 Exhibit P-101 CAF0765.
168 Exhibit P-101 CAF0765, p. 2.

examined recent acts against civil aviation around the world, noting a large decline in hijacking attempts and a new rash of incidents involving sabotage. In one instance in 1979, a bomb concealed in checked baggage exploded on the ramp at John F. Kennedy International Airport in New York (Kennedy) just before it was to be placed aboard an aircraft.[169] Another bomb exploded in the hold of an aircraft during an unscheduled landing at Kennedy. Active bombs were also found at several U.S. airports that year.

Among the report's conclusions was:

> The recent explosions aboard U.S. aircraft and discovery of active bombs at U.S. airports would suggest that events would indicate that acts of sabotage rather than hijacking now post the greatest threat to civil aviation in Canada. It is hypothesized that this changing threat is due to the deterrent value and effectiveness of the passenger screening system forcing the mentally disturbed and criminally minded individuals to look elsewhere for ways and means to commit unlawful acts.[170]

In February 1980, the Joint Study Committee on Civil Aviation Security met and discussed the current intelligence provided by the RCMP Security Service, the RCMP Airport Policing Branch, and the ATAC Security Committee.[171] The Committee members included senior representatives from Transport Canada, ATAC and the RCMP. The Committee continued to accept the conclusion, reached at its meeting the year before, that a review of the intelligence indicated that there was no apparent special risk to civil aviation in Canada at that time, and that there had been no attempted attacks against Canadian airport or aircraft since 1974. Nevertheless, the Committee concluded that terrorist tactics were changing, and that continuing acts of terrorism on the international scene warranted alertness, particularly with regard to Canada's international airports.[172]

Having reviewed the intelligence for that year,[173] the decision record of the Joint Study Committee reflects the following remarkable conclusion:

> The Committee agreed that the nature of the threat was changing and acts of sabotage rather than hijacking were perceived as the main threat to the safety of the air transportation system in the future. As passenger screening procedures have proven to be an effective deterrent to prevent the carriage of unauthorized weapons and explosives in the

169 Exhibit P-101 CAF0766, p. 40.
170 Exhibit P-101 CAF0766, p. 8.
171 Exhibit P-101 CAF0163.
172 Exhibit P-101 CAF0163, p. 2.
173 The RCMP Security Service briefing can be found at Exhibit P-101 CAF0767.

> aircraft cabin there is concern that persons are now attempting to exploit the weaknesses in the security system to place explosives in checked baggage, express parcel shipments, cargo, and mail.[174]

As the evidence amply demonstrates, Transport Canada was aware of the risks of terrorism and sabotage against civil aviation in Canada long before the bombing of Air India Flight 182. The concern was so great that, in the summer of 1980, ATAC requested that Transport Canada begin developing screening techniques and equipment to detect the components of explosives in order to meet the changing threat:

> Further to our recent conversations you will recognize that the serious threat to civil aviation is now perceived to be detection of components of explosives or other incendiary devices as opposed to the metal detection of guns or other similar weapons. We are most concerned that the development and provision of detection equipment in support of the National Civil Aviation Security Programme must meet the changing threat.
>
> We therefore request that the Department of Transport initiate research and development on x-rays and/or other equipment, possibly with "double image" coupled with vapour detector for use in bomb scare or alert conditions. We believe the early development of such equipment is vital to the National Security Programme and the safety of aircraft, crew and passengers.[175]

Aviation Security Concerns in Canada

In 1982, Transport Canada released a report for the National Air Transportation Security Plan. This was a strategic planning framework, describing the existing security situation and outlining the issues that would be facing civil aviation security.[176] The goal of the plan was to develop major policies and strategies for Transport Canada's Air Administration that would foster effective measures to deter and prevent acts of unlawful interference. The issues highlighted included: the lack of regulatory authority to approve air carrier security programs; inadequate supervision of the private security companies at airports; and the absence of penalties against air carriers that violated the *Aeronautics Act*.[177] In terms of the state of aviation security in Canada, the report noted that the anti-hijacking focus of the security regime had yielded good results, and

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174 Exhibit P-101 CAF0163, p. 5.
175 Exhibit P-101 CAF0769.
176 Exhibit P-101 CAF0774.
177 Exhibit P-101 CAF0774, p. 19.

that passenger screening was a visible and effective measure.[178] Nevertheless, the report was frank in its assessment of the ability of the system to withstand acts of terrorism:

> The issue of the 'cosmetic' nature of the security program is evident as is the fact that it provides visible reassurance to the traveling public. While it appears that the deterrent value of the present system is high, it is clear that it is not capable of resisting a serious well-organized terrorist strike.[179]

In October 1982, Paul Sheppard, Director of Civil Aviation Security for Transport Canada, wrote to the RCMP requesting a threat assessment concerning the political threat to Canadian civil aviation targets in light of recent instances of terrorist activities.[180]

The RCMP Security Service provided its threat assessment in December 1982, and a cleared version was distributed to ATAC in March 1983. The threat assessment pointed to recent acts of terrorism in Canada by Armenian extremists, which demonstrated the impact that various political events could have on Canada.[181] It was the opinion of the RCMP Security Service that Canada's international airports were high-risk targets, as were foreign targets within Canada, such as Israel's El Al airlines and offices.[182] The main tactics employed by terrorists were bombings and assassination attempts; hijackings had decreased "dramatically" since the mid-1970s.[183]

The increase in acts of sabotage caused considerable concern regarding the measures in place to ensure baggage and cargo were safe and secure.[184] In light of the changing threat environment, Transport Canada's Management Systems Branch conducted a study in 1982 concerning aircraft cargo and baggage security measures.[185] Its purpose was to determine the adequacy of the existing cargo and baggage security policies and, if these were found to be inadequate, to recommend remedial measures.[186]

Proposed Regulations and Recommendations to Strengthen Aviation Security

A draft report was printed and circulated in June 1983. The report considered the state of the current cargo and baggage security measures, along with the newly drafted Air Carrier Security Regulations which were being circulated to

178 Exhibit P-101 CAF0774, p. 9.
179 Exhibit P-101 CAF0774, p. 22.
180 Exhibit P-101 CAF0561, p. 1.
181 Exhibit P-101 CAF0563, p. 2.
182 Exhibit P-101 CAF0563, p. 3.
183 Exhibit P-101 CAF0563, pp. 5-6. This was echoed in the Report of the *CATSA Act* Review Advisory Panel, which noted that "…[a]s early as 1983, the RCMP Security Service had identified bombs as a bigger threat to aircraft than hijackings." See also Exhibit P-157, p. 49.
184 Exhibit P-101 CAF0776, p. 1.
185 Exhibit P-101 CAF0565.
186 Exhibit P-101 CAF0776, p. 1.

various stakeholders for comment. The regulations were drafted in 1982 to address the weaknesses in the system, but had not yet been implemented.[187] The regulations were included as an appendix to the report.[188]

The 1983 study made a number of important and, as is now readily apparent, prescient recommendations based on the deficiencies identified. Most notably, the draft report indicated that, while the aviation security measures in force were adequate in the low-level state of threat then in existence**,** in high-threat periods, all checked baggage should be manually searched or checked by X-ray.[189] Additionally, at a time when most airlines did not search any checked or interlined baggage, the report recommended that all interlined baggage be searched or scanned by X-ray when the threat was high.

Other recommended measures to be implemented in times of high threat included taking the precautions of sealing all bags once accepted or searched, and refusing unaccompanied baggage unless searched, sealed, and held for a minimum of 24 hours prior to loading.[190] The 1983 report also recommended placing guards in the baggage handling and plane staging areas, and exercising caution when accepting last-minute passengers and their baggage.

The study authors recognized that the aviation security regime at that time placed the largest part of the responsibility for protecting baggage and cargo upon the air carriers, and that these responsibilities would greatly increase under the draft regulations. The report also noted that the lack of terrorism incidents, combined with tight funding, made it "tempting" to relax all forms of security, but emphasized that security measures were required which would ensure that aircraft were protected from bombings and hijackings.[191]

As noted in the report, the problem with making the air carriers responsible for the security and "cleanliness" of checked baggage was that measures for checked baggage varied widely from carrier to carrier.[192] Additionally, air carrier security plans were typically general in nature. They did not contain site-specific measures, but instead contained policies and guidelines for the local site managers to follow. The air carrier security plans themselves were reviewed by regulatory authorities at the regional Transport Canada headquarters. Meanwhile, airport security plans were prepared locally and on-site by airport managers and their security officers, resulting in "…a headless plan lacking any single point accountability for ensuring that the plan is efficient and effective and that the facilities and services provided by [Transport Canada] (which are shared by more than one carrier) are properly used and become a fully integral part of the overall airport security plan."[193]

To increase the security of baggage and cargo under normal alert conditions, the report recommended that security awareness be improved at airports

187 Exhibit P-101 CAF0565, p. 17.
188 Exhibit P-101 CAF0565, p. 41.
189 Exhibit P-101 CAF0565, p. 22.
190 Exhibit P-101 CAF0565, p. 22.
191 Exhibit P-101 CAF0565, p. 7.
192 Exhibit P-101 CAF0565, pp. 16, 18.
193 Exhibit P-101 CAF0565, p. 17.

through mandatory security training programs. This was in recognition of the fact that the training requirements of the time focused only on the necessity of training passenger screening officers.[194] Given that the only regulated measures concerning checked baggage depended on the alertness and knowledge of personnel, including the air carrier ticket personnel, a lack of proper training meant that the risk from checked baggage increased.[195]

The report called for security training programs for anyone involved with patrolling check-in areas, baggage handling areas, and loading areas, as well as all air carrier personnel who processed passenger tickets. Those who were involved in the weighing, tagging, sorting, handling or loading of baggage would be required to take such training courses.[196] As called for in the draft regulations, no personnel would be allowed to perform such duties unless they had completed approved security training courses.[197]

Many of the frontline workers at airports lacked even basic security awareness, and they were frequently under pressure to be very efficient and please customers.[198] It was a harried ticket agent for CP Air who relented to the demands of "M. Singh", that his checked bag be tagged for interlining to Air India Flight 182 without a reservation, in contravention of CP Air's own security plan.[199],[200] The *CATSA Act* Review Advisory Panel wrote about the incident in its report, noting that:

> The passenger M. Singh who presented himself at the CP Air counter in Vancouver exhibited atypical behaviour that might have alerted staff that something was very wrong. Someone paid cash for two international tickets at the last minute; the names on the tickets had been changed; he demanded interlining of his bag to a flight for which he had no confirmed reservation; his manner was extremely aggressive and bullying. These factors should have flagged Mr. "Singh" as a potential risk – if staff had been trained for such signs and to make preliminary decisions based on such indicators. But of course, they had not.[201]

It was revealed during the investigation of the bombing, moreover, that many Burns security personnel performing vital screening duties at Toronto's Lester

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194 Exhibit P-101 CAF0565, p. 19.
195 Exhibit P-101 CAF0565, p. 19.
196 Exhibit P-101 CAF0565, p. 9.
197 Exhibit P-101 CAF0565, p. 9. See also s. 400(a)(2)(iii) of the Draft Air Carrier Security Regulations: Exhibit P-101 CAF0565, p. 67.
198 This is discussed in Section 2.4 (Pre-bombing), Security Culture at Canada's Airports.
199 Exhibit P-157, p. 35. See especially p. 69: "Airline employees were expected to deliver customer service, while security considerations might have figured less prominently in the training of a check-in agent…. In today's environment, we believe that the employee would be more aware of security issues, likely to be better supervised and supported …."
200 Exhibit P-101 CAF0667. This is a compilation of statements given to the RCMP by Jeanne Adams, the CP Air agent who interline tagged Singh's bag.
201 Exhibit P-157, p. 67.

B. Pearson International Airport (Pearson), including those at work on the day of the bombing, had not undergone a training program required by Transport Canada, and that many of those who had taken the program had not received any of the mandatory refresher training.

Despite its knowledge of the looming threat of bombings on airplanes and at airports, Transport Canada failed to take meaningful action to meet this threat. No remedial measures discussed in the 1983 report were in place on June 22, 1985. It is disturbing to see that the weaknesses in the aviation security measures, as well as the risks of sabotage and concealed explosives as a means of attacking civil aviation, were so well-known at least two years before the bombing of Air India Flight 182. These were not speculative risks, but well-understood dangers. In order to address these dangers, new, updated, and considerably stronger security regulations had even been drafted – though nothing had been done to enact them.

Growing Threat of Bombing to Air India in 1984

A year before the bombing of Flight 182, Transport Canada, Air India and the RCMP were again made aware of the threat posed by a bomb concealed in checked baggage. In June 1984, Sikh protests surrounding the attack on the Golden Temple prompted Transport Canada to consult with Air India and the intelligence community to determine whether a threat existed to Air India's operations in Canada, and whether extra security would be required for the Air India 747 at Mirabel International Airport (Mirabel).[202]

On June 11, 1984, the RCMP advised the Civil Aviation Security section of Transport Canada that Sikh extremists might target Air India, due to it being an "easier target" than the Indian diplomatic missions in Canada.[203] On June 12th, the assistant manager for Air India advised Transport Canada of intelligence that 20 to 25 Sikhs in Canada were prepared to become martyrs by blowing up an Air India aircraft. The alleged plot involved an individual boarding the flight and checking a piece of luggage aboard the aircraft with an explosive device inside which would explode in-flight.[204] Neither the RCMP Security Service nor the Department of External Affairs could corroborate that such a plot was in the works, but they agreed that there were "…fanatics within the Sikh community capable of performing such an act."[205]

In response, the Air India station manager implemented a number of measures for the flights on June 16, June 23, and June 30, 1984. These included hand-searching all checked baggage, including interlined baggage, subjecting all passengers and carry-on baggage to secondary searches, and imposing a 24-hour hold on cargo, along with the requirement that all cargo accepted must come from bona fide shippers. Air India also brought in extra security staff to Mirabel and met with the airport general manager, the RCMP, and

202 Exhibit P-101 CAF0161.
203 Exhibit P-101 CAF0639.
204 Exhibit P-101 CAF0161, p. 1.
205 Exhibit P-101 CAF0161, p. 1.

Air Canada security to finalize local arrangements. Transport Canada and the RCMP arranged to make the RCMP explosives detection dog team at Mirabel available during Air India's weekly flights, to search baggage, cargo, the aircraft, and airport lockers for explosives.[206] Air India did not have an X-ray machine to examine checked baggage at this time, though it made arrangements, with the approval of Transport Canada, to purchase such a device not long after these events occurred.[207]

Paul Sheppard noted that Air India was pleased with Transport Canada's cooperation and assistance, and had also requested increased security for the next three flights. Sheppard wrote in a memorandum that close ties were being maintained with Air India, the RCMP, the Department of External Affairs, the Federal Aviation Administration, and airport officials in order to ensure rapid exchange of intelligence and adoption of any security measures required to meet the threat.[208]

It is striking that the measures employed during this threat were so stringent, and the coordination between the different parties so purposeful and effective, when compared with the response to a very similar threat just one year later.

Another similar threat emerged in July 1984, when Air India's assistant manager at Mirabel forwarded another telex to the RCMP and Transport Canada warning of a threat to carry a bomb aboard an Air India flight and to blow it up to draw attention to the extremist group's demands.[209] The telex requested that all Air India stations thoroughly implement anti-sabotage measures, including inspecting checked baggage with X-ray scanners or explosives-detecting equipment, adding that baggage should be thoroughly examined on the slightest suspicion. Air India again requested the assistance of police in providing strict security coverage and implementing appropriate measures to protect their aircraft, passengers and cargo. It is clear from these warnings that the threat of sabotage and the measures needed to respond appropriately were well understood.

Transport Canada Awareness of Aviation Security Weaknesses

Transport Canada was evidently aware of many of the weaknesses in the civil aviation security regime, even before the bombing of Air India Flight 182. Not only was it apparent to Transport Canada that sabotage and the risk of explosives being placed aboard aircraft through unscreened checked baggage were pervasive risks, but Transport Canada's own threat assessment system, alert levels, and response measures were poorly implemented and inadequately defined.

In a March 19, 1985, memorandum, Sheppard reported on plans to increase civil aviation security as needed during a given situation. He indicated that

206 Exhibit P-101 CAF0161, p. 2, CAF0641, p. 1.
207 Exhibit P-101 CAF0645.
208 Exhibit P-101 CAF0645, p. 2.
209 Exhibit P-101 CAA0083, CAA0084.

a significant problem was posed by the need to disseminate any classified intelligence Transport Canada received, as it lacked any secure lines of its own. The only secure line available was through the RCMP network which linked RCMP airport detachments to headquarters. Sending intelligence reports in an emergency was a clumsy affair; Transport Canada had to telephone their security supervisors at the airports and direct them to obtain the needed information through the RCMP network. In light of these difficulties, Transport Canada had asked the air carriers, through ATAC, whether they wanted to re-establish security clearances in order to obtain material directly from Transport Canada, but this proposal was declined.[210]

In addition to the need for a secure communications network, Sheppard identified other weaknesses and concerns, including the need for complete reviews of all airport security plans and air carrier security programs, and the necessity to find a way to force the carriers to regularly update these programs.[211]

Sheppard was very concerned about the limitations of the system in place at the time. Theats had been recently made to Air India, and threats had even been received about specific suitcases containing bombs.[212] The threat required flexible measures far beyond what was then in place. Sheppard wrote:

> Our existing system was never established to prevent determined terrorist groups. What we have is basically an anti-hijack program, as opposed to anti-sabotage. The primary control in the anti-hijack program is handled by poorly-paid private security guards who are there to check for weapons on passengers or carry-on baggage. They are not there to prevent a terrorist attack or even take a weapon away from people. Their role is to use the silent alarm system to call the police.[213]

Most significantly, Sheppard was emphatic about the need to implement the draft regulations. He put it bluntly: "The New Air Carrier and Airport Security Regulations are required and should proceed with or without the new Act."[214] This is a remarkable statement. It makes it clear that, in the opinion of the Director of Civil Aviation Security, the threat of terrorism, as it was then understood, simply could not be met with the regulatory framework that was in place. Putting these new regulations in place ought to have been the highest priority for Transport Canada.

Sheppard reiterated his concerns about the limitations of the aviation security regime in a memorandum dated April 9, 1985. There, he expressed the opinion that aircraft and facilities in Canada could be targeted by terrorists "…with

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210 Exhibit P-101 CAF0083, p. 1.
211 Exhibit P-101 CAF0083, p. 2.
212 Exhibit P-101 CAF0083, p. 3.
213 Exhibit P-101 CAF0083, p. 2.
214 Exhibit P-101 CAF0083, p. 2.

very little if any advance warning,"[215] and emphasized the need for the speedy collection, analysis and dissemination of intelligence-based threat information. Such intelligence-based threats were incompatible with the "specific" and "non-specific" threat categories employed by Transport Canada. The "specific threat" paradigm relied on the premise of a detailed threat being received against a specific airline naming a specific flight and a specific day and time. A very real and imminent threat discerned through intelligence gathering would be unlikely to contain exhaustive and precise details. Instead, intelligence-based threats would reveal a threat of bombing, with an airline such as Air India as a possible target, and would allow those providing security to devote their limited resources to respond to the danger.

Contributing to this deficiency was the problem that the alert levels system, which defined the response to a given threat, was old and had not been updated. It had been developed for the 1976 Olympic Games in Montreal. However, due to the historical lack of specific threats and failures to reference the levels in subsequent planning documents over the years, there was no consistent terminology being applied by Transport Canada or by the air carriers to define threats or alerts. Sheppard observed that there were "…no standard terms or definitions for a government alert system,"[216] so different agencies and parties were instead applying their own definitions and levels.

The alert levels system imposed three alert conditions: normal, standby, and maximum alert. Some airport security plans, such as the plan at Vancouver International Airport, included these government alert levels.[217] Other security plans and emergency procedures, such as those developed at Pearson, made no mention of any security levels at all.[218] This resulted in inconsistent standards and measures across the country.

Weaknesses in Ability to Respond to a Threat

An internal Transport Canada security debriefing at Pearson in April 1985 indicated a number of serious flaws that created confusion and limited the response to a given threat situation. In particular, there was "…no consistent direction from Headquarters to determine the level of threat and procedures to be put in place."[219] This was demonstrated by inadequate and confusing instructions, and directives that conflicted with the judgment of the on-site personnel.

During the Armenian terrorism threat (discussed in the debriefing), Transport Canada Headquarters was unable to send any classified information about the threat to Pearson, as there was no secure phone or telex system in place.[220] This handicap was already known to Transport Canada, and airports like

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215 Exhibit P-101 CAF0084, p. 1.
216 Exhibit P-101 CAF0084, p. 1.
217 Exhibit P-101 CAF0083, p. 1.
218 Exhibit P-101 CAF0585, pp. 2, 7.
219 Exhibit P-101 CAF0585, p. 4.
220 Exhibit P-101 CAF0585, p. 5.

Pearson were forced to rely on the RCMP's system to disseminate intelligence about threats. The problem was that the RCMP often received this information through their own channels well in advance of Transport Canada or the airports and, worse, the RCMP were actually reluctant to pass on such information.[221] An observation repeated throughout this report is that excessive secrecy can often harm security.

At a meeting of the Vancouver Airport Security Committee, held April 30, 1985, it was noted that, although several bomb threats had recently been received, the reporting procedure, as set out in the emergency procedures manual, had not been followed.[222] The result was that Transport Canada officials at the airports were not advised that the bomb threats had been received. Additionally, there was considerable confusion about the procedures for searching aircraft for explosives, even as more bomb threats were anticipated due to labour unrest.[223]

The inability to coordinate a comprehensive response, distribute vital information, and obtain clear instructions were all serious flaws in the aviation security regime in place in June 1985. The reality is that the threat of bombing through checked baggage was anticipated well before the bombing of Air India Flight 182, yet not acted upon. The evidentiary record is replete with pointed and pressing calls to correct many obvious deficiencies in the plans and procedures designed to protect civil aviation from terrorist attacks. What is notably lacking, however, is evidence that these severe deficiencies were being systematically corrected, before the bombing snapped the parties out of a state of complacency and provided a renewed sense of urgency.

Draft regulations which would have remedied many problems (particularly with regard to enforcement) had been circulating since 1982, but were not put into place until after the bombing. The *Aeronautics Act* itself was amended on June 28, 1985. Previous attempts to amend the Act had been unsuccessful, but, considering the nature and extent of the threat, it is striking that more decisive action was not taken sooner. Undue faith was instead placed in technological measures, such as X-ray and electronic explosive detectors, and on the voluntary compliance of the air carriers with security plans which Transport Canada was not legislatively empowered to approve, monitor, or enforce.

After the bombing, the government was put on the defensive when media reports made it known that it had been warned of the threat of sabotage since at least 1982.[224] Talking points were prepared for the Prime Minister's response, including the claim that the threat of hijacking "in the late 1970s and early 1980s" had been evolving, and that security measures had evolved with them. This was simply not the case. The threat of sabotage or bombing was well understood by Transport Canada since at least 1979, as the evidence shows. Nevertheless, there had been no substantive changes to the aviation security regime since the regulatory and legislative updates of the 1970s.

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221 Exhibit P-101 CAF0585, p. 5.
222 Exhibit P-101 CAF0086, p. 6.
223 Exhibit P-101 CAF0086, p. 6.
224 Exhibit P-101 CAF0613.

2.3.2 Failure to Push Through Responsive Regulations

The *Aeronautics Act*

The *Aeronautics Act* was, and remains, the principal Canadian legal instrument governing national civil aviation. In response to increasingly violent and numerous hijacking attempts around the world, amendments were introduced in 1973 which established aviation security provisions for the first time. The amended Act enabled the Minister of Transport to adopt regulations that would require the operators of aircraft registered in Canada (and, in 1976, foreign aircraft operating at Canadian airports) to conduct searches of passengers, belongings, baggage, goods, and cargo before they would be permitted to board an aircraft.[225]

One of the most important 1973 amendments was the "no search – no fly" principle. Under the amended Act, passengers who refused an authorized search by security officers would not be permitted onboard an aircraft.[226] In addition, their bags would not be permitted aboard an aircraft if they refused a search of their person[227] or their baggage and belongings.[228]

The ICAO and the Chicago Convention

Since 1944, the International Civil Aviation Association (ICAO) has been the supreme law-making body with respect to international civil aviation.[229] Each of the 189 member states is a signatory to the ICAO *Convention on International Civil Aviation*, also known as the *Chicago Convention*. In 1974, the ICAO responded to the hijacking crisis of the late 1960s and early 1970s by adopting Annex 17 to the *Chicago Convention*, *Safeguarding International Civil Aviation Against Acts of Unlawful Interference*.[230] The aim of Annex 17 was to introduce consistent goals and measures to enhance international civil aviation security and prevent acts of terrorism. There are currently 18 Annexes to the *Chicago Convention*, each relating to a specific subject area, such as pilot licences, aircraft operation, air worthiness, meteorology, and so on.[231] The Annexes are intended for and directed to the member states exclusively. The ICAO does not provide aviation security guidance directly to airlines.[232] Instead, it lays down the standards by which member states are to require their airlines to operate.

Annex 17 contains standards and recommendations that specify security objectives for the ICAO member states.[233] Annex 17 standards are mandatory. Signatory states such as Canada are obliged to comply with the international

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225 Exhibit P-157, p. 19.
226 *Aeronautics Act*, R.S.C. 1970, am. S.C. 1973-74, introducing s. 5.1(3)(a).
227 *Aeronautics Act*, R..S.C. 1970, am. S.C. 1973-74, introducing s. 5.1(5).
228 *Aeronautics Act*, .R.S.C. 1970, am. S.C. 1973-74, introducing s. 5.1(3)(b).
229 Testimony of Moses Aleman, vol. 35, May 29, 2007, p. 4215.
230 Exhibit P-151: Annex 17, 1st ed.
231 Testimony of Moses Aleman, vol. 35, May 29, 2007, p. 4216.
232 Testimony of Rodney Wallis, vol. 36, May 30, 2007, p. 4276.
233 Testimony of Moses Aleman, vol. 35, May 29, 2007, p. 4216.

standards established by the ICAO in each Annex. If a state was unable or unwilling to comply with one of the ICAO standards under Annex 17, it was required to provide formal notification to the ICAO Council, which would share that notice with the other states. Failing to comply with a standard could result in that state losing access to air services by being blacklisted by other countries or in a loss of insurance coverage.[234]

As noted by experts such as Rodney Wallis, the ICAO standards were designed to ensure that even the smaller and less prosperous contracting states could comply. This minimized the number of states which would have to file a notice with the ICAO that they were not meeting a given standard. Prosperous nations such as Canada were expected to regulate well beyond the minimum standards set by Annex 17. Yves Duguay, the Senior Director of Air Canada Security and Chairman of the International Air Transport Association (IATA) Security Committee, concurred that it was essential for both states and air carriers to surpass the ICAO standards, and for an air carrier to exceed even the requirements of the local jurisdiction in which it was operating.[235]

The ICAO recommendations, on the other hand, were "desirable" measures to which the contracting states "…will endeavour to conform."[236] Contracting states were not strictly obliged to implement the recommended measures, but they were appropriate and desirable goals for the aviation security program for an advanced, prosperous nation like Canada. The first edition of Annex 17 was published in 1974, and contained only a limited number of standards. Key among the first standards was the obligation to designate an authority to be in charge of that state's civil aviation security program.[237] Transport Canada was, and continues to be, Canada's representative at the ICAO, and the authority responsible for Canada's civil aviation security regime under Annex 17. Other early standards from Annex 17 included the requirement to establish an airport security program at each international airport,[238] and the requirement to ensure that any required "supporting security facilities," such as law enforcement, were provided.[239] Annex 17 also obliged states to "…require operators of aircraft … to adopt a security programme and to apply it in proportion to the threat to international civil aviation and its facilities … and shall ensure that such a program is compatible with the prescribed aerodrome security program."[240]

A second edition of Annex 17, published in October 1981 and in force at the time of the Air India bombing, incorporated a number of amendments and new standards. Some recommendations were upgraded to the level of standards, including the requirement that states establish a civil aviation security program

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234 Exhibit P-157, p. 16.
235 Testimony of Yves Duguay, vol. 43, June 14, 2007, pp. 5239-5240.
236 Exhibit P-151: Annex 17, 1st ed., p. 5 : "General Information, 1. Material comprising the Annex proper: a) Standards and Recommended Practices adopted by the Council under the provisions of the Convention").
237 Exhibit P-151: Annex 17, 1st ed., s. 3.2.1.
238 Exhibit P-151: Annex 17, 1st ed., s. 5.1.1).
239 Exhibit P-151: Annex 17, 1st ed., s. 5.1.3).
240 Exhibit P-151: Annex 17, 1st ed., s. 6.1.1).

to protect "…the safety, regularity and efficiency of international civil aviation by providing, through regulations, practices and procedures, safeguards against acts of unlawful interference."[241] As Canada's aviation authority, Transport Canada was charged with this responsibility.

Another important new standard in this edition of Annex 17 was section 4.1.5:

> Contracting states shall take the necessary measures to prevent weapons or any other dangerous devices, the carriage of which is not authorized, from being introduced by any means whatsoever, on board an aircraft engaged in the carriage of passengers.[242]

Building on the more general requirement to prevent weapons and dangerous devices from being placed aboard passenger aircraft, this edition of Annex 17 also recommended more specifically that the contracting states "…should establish the necessary procedures to prevent the unauthorized introduction of explosives or incendiary devices in baggage, cargo, mail and stores to be carried on board aircraft."[243]

In summary, the Annex 17 standards in force in 1985 obliged Canada to implement:

- Measures to prevent weapons and dangerous devices from being taken aboard aircraft (and recommended that Canada adopt procedures designed to prevent the sabotage of aircraft by the detonation of explosives concealed in baggage, cargo, mail and stores);
- A national civil aviation security program to protect civil aviation against acts of unlawful interference;
- An airport security program at each international airport;
- An airport security committee at each airport;
- The provision of "supporting security facilities" to each airport by Transport Canada; and
- The development of air carrier security programs.

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241 Exhibit P-152: Annex 17, 2nd ed., s. 2.1.4.
242 Exhibit P-152: Annex 17, 2nd ed., s. 4.1.5.
243 Exhibit P-152: Annex 17, 2nd ed., s. 4.1.14 .

Canadian Aviation Security Regulations for Air Carriers

Although aviation security had finally become a legislative priority in Canada with the 1973 amendments to the *Aeronautics Act*, the security focus was on inspecting and screening passengers and their cabin baggage. The onus for providing this security, particularly in terms of passenger and baggage screening, fell primarily upon the air carriers themselves. The regulations governing air carrier security were nevertheless quite minimal and featured little government oversight. Principally, both domestic and foreign carriers operating at Canadian airports were merely required to establish, develop and maintain a number of "systems" for accomplishing certain security objectives, such as:

> (a) systems of surveillance of persons, personal belongings, baggage, goods and cargo by persons or by mechanical or electronic devices;
>
> (b) systems of searching persons, personal belongings, baggage, goods and cargo by persons or by mechanical or electronic devices;
>
> (c) at aerodromes where facilities were available, a system that provided for locked, closed or restricted areas that were inaccessible to any person other than a person who had been searched and the personnel of the owner or operator;
>
> (d) at aerodromes where facilities were available, a system that provided for check points at which persons intending to board the aircraft of an owner or operator could be searched;
>
> (e) at aerodromes where facilities were available, a system that provided for locked, closed or restricted areas in which cargo, goods and baggage that had been checked for loading on aircraft were inaccessible to persons other than persons authorized by the owner or operator to have access to those areas;
>
> (f) a system of identification that prevented baggage, goods and cargo from being placed on board the aircraft if it was not authorized to be placed on board by the owner or operator; and
>
> (g) a system of identification of surveillance and search personnel and the personnel of the owner or operator.[244]

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244 *Civil Aviation Security Measures Regulations*. Foreign carriers like Air India were subsequently required to "establish, maintain and carry out" these security regulations under section 3(1) of the *Foreign Aircraft Security Measures Regulations*.

According to Transport Canada's *Civil Aviation Security Manual of Policies, Standards and Recommended Practices*, the regulatory requirements were designed to prevent or deter individuals from carrying weapons, explosives, and other dangerous articles aboard aircraft.[245] In furtherance of the *Act*'s anti-hijacking focus, Transport Canada provided detection devices for passenger screening check points. These devices included walk-through and hand-held metal detectors to frisk passengers, and X-ray machines for examining carry-on baggage.[246] Transport Canada did not provide any equipment for examining checked baggage.

The carriers had very little guidance in developing their security programs. The *Canadian Air Transport Security Authority Act* (*CATSA)* Review Advisory Panel found that these regulatory requirements were not defined, and that the wording of these requirements was vague and open to interpretation.[247] Although the Panel suggested that the ICAO *Security Manual* was available to assist them in developing their security systems,[248] it was, and remains, a restricted document made available only to contracting states. The states themselves are responsible for ensuring implementation of the recommended practices in the *Security Manual* and the international requirements and recommendations passed by the ICAO Council in the Annexes.

In 1973, Transport Canada issued an Aviation Notice that included "…guidance material … provided as assistance to Air Carriers asked to produce a detailed Security program in writing for the approval of the Minister," but these guidelines were limited to a list of topics the plan should address, and were little more than subject headings and restatements of the regulations. The topics to be addressed in air carrier security plans included "…verification of bona fide passengers, handling of passengers refusing inspection and search, inspection of passengers and carry-on baggage," and "…procedures intended to protect against unauthorized access to checked baggage between baggage check-in point and aircraft."[249] No further details or requirements were provided.

The air carriers were required by law to submit their security plans in writing to the Minister of Transport, [250] but the Minister actually had no legal authority or obligation to approve or reject an air carrier security plan on its substantive merits. An acceptable security plan merely needed to describe the carrier's program for carrying out the "systems" of monitoring and surveillance. There was no formal approval or review process set out in the regulations, and even though Transport Canada set a policy of conducting semi-annual inspections of the air carriers' compliance with their security plans,[251] these were not regularly conducted.

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245 Exhibit P-101 CAF0151, p. 13.
246 Exhibit P-165, Tab 10: "A Summary of the National Airport Policing and Security Program."
247 Exhibit P-157, pp. 19-20.
248 Exhibit P-157, p. 20.
249 Exhibit P-165, Tab 8: "Aviation Notice: Air Carrier Security Program," August 10, 1973.
250 Under s. 3 of the *Foreign Aircraft Security Measures Order*, Air India was required to submit "a written description of the security measures it has established, is maintaining and is carrying out or that it intends to establish, maintain and carry out" to the Minister. Domestic air carriers were obliged to submit their written descriptions of security measures by s. 3 of the *Civil Aviation Security Measures Order*.
251 Exhibit P-101 CAF0151, p. 26.

Under this aviation security regime, the standard security measures in place at Canadian airports in 1985 were the metal detection screening of passengers and X-ray scanning of carry-on baggage.[252] Passengers arriving at major airports in Canada were screened, along with their carry-on baggage, by private security officers before they could enter the "sterile" areas of the airport, which included the departure lounges and aircraft gates.

Despite the recognition of the threat to civil aviation posed by sabotage, no legislative mandate existed in June 1985 to subject checked baggage or cargo to any security screening prior to being loaded aboard a passenger aircraft. Checked baggage was moved to a secure holding area within the airport by authorized employees prior to being loaded aboard an aircraft, but unless an airline voluntarily decided that its security plan would include searches of checked baggage (as Air India did), the bags would be loaded without any screening at all.

The Attorney General of Canada emphasized in its final submissions that Canada's civil aviation security program "met or exceeded" the international requirements in place in 1985.[253] This was the opinion of the Canadian Aviation Safety Board in its submissions to the Kirpal Inquiry.[254] Jean Barrette, the Director of Security Operations for Transport Canada, also testified that Canada met or exceeded the standards set by ICAO Annex 17.[255] The Attorney General of Canada conceded that complying with these standards was not enough to prevent the bombing of Air India and that the legacy of the bombing was "…change in Canada's standards and practices and change in standards and practices internationally."[256]

Failure to Respond to the Threat of Sabotage

It is the Commission's view that the Canadian government's response to the threat of sabotage to Air India flights was inadequate. In fact, Canada's government had recognized long before the bombing that although the aviation security regime was consistent with international standards, it was nevertheless outdated, simplistic, and lacking in meaningful measures to respond to a well-understood threat.

It is particularly important to ensure that the system on the ground not only works effectively but is capable of quickly responding to changing threats. Both international and domestic legislative standards will generally lag behind intelligence and tend to focus on threats of the past. Nevertheless, as outlined earlier, Canada had recognized the potential threat of sabotage of aircraft, including the use of explosives concealed in checked baggage, as early as 1979. It was also well understood that in the face of this looming threat, Canada's

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252 Exhibit P-167, p. 18.
253 Final Submissions of the Attorney General of Canada, Vol. II, para. 43..
254 Exhibit P-167, p. 55.
255 Testimony of Jean Barrette, vol. 37, May 31, 2007, p. 4501.
256 Final Submissions of the Attorney General of Canada, Vol. II, para. 45.

aviation security regime, developed in the 1970s to address the rash of political hijackings of the time, had become grossly inadequate.

The ICAO Annex 17 standards and recommendations in place in 1985 tended to focus on hijacking rather than sabotage. The Commission heard evidence, however, that the ICAO expressed growing concern over the dangers of sabotage and that, by the spring of 1985, it was pushing for measures such as passenger-baggage reconciliation in response.[257] The ICAO had also recommended that its member states develop procedures to prevent explosives from being loaded aboard aircraft through baggage, cargo, mail, and stores. Given Canada's recognition of the threat of terrorist acts of sabotage, there was good reason to move quickly and exceed the ICAO's standards by implementing a more responsive security regime.

Proposed Amendments to the *Aeronautics Act*

As the *CATSA Act* Review Panel noted, a number of bills to amend the *Aeronautics Act* had been introduced in Parliament during the 1970s, but all had died on the order paper. No further security amendments would be passed until after the bombing of Air India Flight 182. At the time of the bombing, however, a bill was before Parliament which would have significantly amended the Act and given the Minister of Transport broader powers to regulate with respect to aviation security. The bill, which stemmed from recommendations made by an Aeronautics Task Force in 1978 and a Commission of Inquiry on Aviation Safety in 1979, would have made some security practices mandatory and brought Canadian legislation in line with that of other countries.[258]

Among the most important innovations contained in the bill was a provision to impose fines on corporations convicted of violating a provision of the Act, a regulation or order respecting aviation security.[259] This would have allowed for enforcement measures to be taken against air carriers that did not comply with Canada's aviation security requirements or their own security plans.

The bill, which ironically became law just days after the bombing of Air India Flight 182, had been in the works for some time. The amendments were, in fact, the culmination of a multi-year modernization process, and not directly in response to the bombing.[260] Indeed, a Transport Canada planning document looking ahead to operations in 1985 and 1986 expected that the legislative amendments would be in place sometime in 1984.[261]

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257 Testimony of Rodney Wallis, vol. 35, May 29, 2007, pp. 4254-4255. Wallis gave a presentation to the ICAO in April 1985 emphasizing that: "Sabotage has to remain in the forefront of our thoughts.… Aircraft sabotage poses a greater menace as the loss of the UTA DC8 in N'Djamena last year demonstrates. Use of sophisticated timing and other devices by terrorists or other criminals capable of evading discovery during screening processes will demand responsive action by aviation security specialists and those involved in high-tech detection device development.": See Exhibit P-149, p. 8.

258 Exhibit P-157, p. 20.

259 *Aeronautics Act*, R.S.C. 1985, c. A-2, s. 7.3(5). A corporation convicted of violating a provision of the Act, a regulation or an order respecting aviation security was liable to a fine of not more than $25,000.

260 Exhibit P-263, p. 66.

261 Exhibit P-101 CAF0593, p. 10.

1982 Draft Air Carrier Security and Airport Security Regulations

In anticipation of the amendments to the Act, new Air Carrier Security Regulations and Airport Security Regulations were drafted in 1982. The draft regulations were circulated by Transport Canada to the airports and the air carriers for review and comment but unfortunately remained in draft form for the next three years. Even when the *Aeronautics Act* gained Royal Assent on June 28, 1985, the draft regulations were not put into force. Instead, they remained in draft form, leaving Canada's aviation security in precisely the same anemic regulatory position it had been in prior to the bombing. Transport Canada decided to wait until the publication of the Seaborn Report and its recommendations before further work would be done on the draft regulations. This inaction led to various enforcement failures.[262]

The draft Air Carrier Security Regulations were detailed, and incorporated a number of ICAO standards and recommendations. They applied to both domestic and foreign air carriers operating in Canada, and provided far more guidance to the air carriers in designing and maintaining effective security plans. In fact, the draft regulations specified that air carrier security plans required the review and approval of the Minister of Transport, who would also be able to direct a carrier to modify its plan if it did not sufficiently comply with the security regulations.[263] Had the draft regulations been implemented before the bombing of Air India Flight 182, they would have profoundly improved the weak and inadequate security regulations in place at the time.

Among the most significant changes, the regulations addressed checked baggage security for the first time. For example, section 400(c)(1) stated:

> Air carriers shall prevent the unauthorized carriage on board aircraft of weapons, explosives or incendiary devices aboard checked baggage.[264]

Section 400(c)(2) added a number of minimum requirements for checked baggage. These included accepting checked baggage only from ticketed passengers, providing for personal identification of all pieces of checked baggage, and preventing unauthorized baggage from being placed aboard aircraft.[265] The regulations also included special provisions for either high threat or specific threat situations,[266] and suggested ways in which air carriers could screen checked baggage.[267] In particular, section 400(c)(2)(iv) of the draft regulations stated that carriers should:

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262 See Exhibit P-101 CAF0607, pp. 2-3.
263 Exhibit P-101 CAF0565, pp. 75-76.
264 Exhibit P-101 CAF0565, p. 69.
265 Exhibit P-101 CAF0565, p. 70.
266 See Section 4.3 (Pre-bombing), The Role of the "Specific Threat" in the 1985 Threat-Response Regime for a discussion of the term "specific threat" as it was used in Canada at the time.
267 Exhibit P-157, pp. 57-58.

> …take additional security measures during a specific or high threat situation such as matching all checked baggage to the passenger prior to departure, x-raying or providing a manual search of all baggage using an explosive detection device or delaying transportation of baggage.[268]

Other important new measures contained within the draft Air Carrier Security Regulations included:

- Specific screening instructions concerning the inspection of passengers and carry-on baggage, including the regulatory requirement that law enforcement be notified whenever any weapon, explosive or incendiary device was found,

- An explicit requirement that private security guards inspecting checked baggage and cargo complete the training program developed by Transport Canada, or a program the Minister deemed to be equivalent;

- Increased screening measures during a high threat or specific threat situation, such as hand searching all items, using an explosives detector, or refusing personal possessions to accompany passengers;

- The requirement that air carriers screening cargo must prevent or deter unauthorized carriage aboard aircraft of weapons, explosives or incendiary devices within cargo. This included special measures during periods of high or specific threat such as 24-hour delays in shipping cargo, or searching all cargo by hand or electronic means;

- A requirement that air carriers include specific details in their security plans, such as a listing of the designated security officers providing services for the air carrier and a description of their training, as well as the procedures and guidelines used by the carrier for screening persons, personal belongings, carry-on baggage, checked baggage and cargo;

- Authority for the Minister of Transport to independently request changes to air carrier security plans where such changes were deemed necessary to civil aviation security; and

- A provision that facilitated the monitoring of air carrier security programs by requiring carriers to provide information concerning civil aviation security to the Minister as required.[269]

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268 Exhibit P-101 CAF0565, p. 71.
269 Exhibit P-101 CAF0565, pp. 66-76.

Beginning in 1982, the Airport Security Regulations were also circulated in draft form. Prior to the bombing of Air India Flight 182, Canada did not employ regulations to control security at airports, as airport security could be governed on an operational basis by Transport Canada which owned and operated Canada's major airports. The draft Airport Security Regulations came about as a result of the problems that ensued under this system: first, that the Airports Directorate for Transport Canada regulated itself and weaknesses were not always remedied; and second, that the airports that were not operated by Transport Canada only complied voluntarily with the airport security measures of the time.[270] The draft regulations included a schedule which designated the airports that would be bound by the regulations.

Many of the provisions incorporated in the draft Airport Security Regulations were already in practice at Canada's major airports in 1985. The draft regulations would merely have codified these policies and operational practices into binding regulations for all designated airports and placed them under the control of the Minister of Transport.

Among these requirements was the obligation to create airport security committees, as were already in place at airports such as Pearson, Mirabel, and Vancouver, and conduct regular meetings.[271] The committees were to be composed of members of law enforcement, the air carriers, the airport operator, and representatives of the air navigation services of the airport. The airport security committees would be responsible for developing, implementing and reviewing airport security measures, and would be required to meet at least four times a year.[272] The regulations would also have required airports to take various measures to prevent unauthorized access to restricted airport areas, including signs, fences, barriers, and access control systems such as coded door locks and security passes.

The draft regulations also obliged airport operators to:

- Adopt and maintain procedures and provide and maintain facilities for use in security situations such as bomb threats, hijackings, and bomb disposal actions;[273]

- Submit detailed airport security programs in writing to the Minister of Transport, who would have the power to accept the plans or advise that modifications would be necessary in order to comply with the security regulations;[274] (As with the draft Air Carrier Security Regulations, the Minister also had the ability to request changes to the airport security measures where necessary);

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270 Exhibit P-101 CAF0774, p. 21.
271 Exhibit P-101 CAF0565, p. 47.
272 Exhibit P-101 CAF0565, p. 47.
273 Exhibit P-101 CAF0565, p. 50.
274 Exhibit P-101 CAF0565, p. 55.

- Provide and maintain security checkpoints at which passengers and their belongings could be screened and provide and maintain security equipment such as metal detectors and X-ray scanners;[275]

- Provide covert alert systems such as silent alarms at the security screening checkpoints in order to summon police when their assistance is required;

- Establish sterile areas with restricted access in order to isolate screened passengers prior to boarding aircraft;[276]

- Designate and maintain areas of the airport where checked baggage and cargo could be received for transport by the air carriers and their authorized representatives, and provide restricted areas where this baggage and cargo could be held securely prior to loading aboard aircraft;[277]

- Arrange for a law enforcement response capacity at the airport; and

- Keep a detailed record of all law enforcement actions taken at the airport for at least 90 days.[278]

In light of the frequent security breaches that plagued many airports, a number of remedial security provisions were also included in the draft Airport Security Regulations.[279] The regulations would have authorized airport operators to close, lock or control doors and other access points that were left open or unsupervised, and directed airport tenants to take all practicable steps to prevent unauthorized access to the restricted areas of the airports. The draft regulations also called on airport operators and tenants to keep records of all keys in their possession and record the names of the individuals who were issued airport keys. Anyone to whom keys had been issued would be required to surrender those keys on demand, and would be prohibited from lending those keys to any other person. The draft regulations also made it a duty to close, secure and lock all unmanned doors, gates and other access points when not in use. Finally, the draft regulations prohibited anyone from entering or remaining in a restricted area without possessing and visibly displaying their identification card, unless authorized by the airport operator, and all passes had to be displayed or surrendered upon demand.

Lengthy Delay in Approving Regulations

The security enhancements laid out in these draft regulations were obviously intended to address a number of known security weaknesses, particularly

275 Exhibit P-101 CAF0565, p. 51.
276 Exhibit P-101 CAF0565, p. 51.
277 Exhibit P-101 CAF0565, p. 51.
278 Exhibit P-101 CAF0565, p. 58.
279 Exhibit P-101 CAF0565, p. 59.

the threat of sabotage and the vulnerability of checked baggage and cargo. Unfortunately, as the years passed, the draft regulations were no closer to being put into force. The *CATSA Act* Review Advisory Panel made the same observation, noting that, "Clearly, at the time of the tragedy, Transport Canada had already identified gaps and weaknesses in aviation security and was in the process of making legislative and regulatory changes – a process that was taking considerable time."[280]

Even within Transport Canada, signs of frustration at the failure to amend the Act and implement the new Air Carrier and Airport Security Regulations were apparent. As noted earlier, Paul Sheppard, the Director of Civil Aviation Security at Transport Canada, expressed the sense of urgency in a memorandum written in March 1985. He put it bluntly, writing: "The New Air Carrier and Airport Security Regulations are required and should proceed with or without the new Act."[281] The statement makes it clear that Transport Canada officials understood that the regulations in place were not only insufficient, but also that new ones were urgently needed.

Professor Reg Whitaker, a member of the *CATSA Act* Review Advisory Panel, testified that the amendments were tragically overdue:

> It is a great irony that the amendments to the *Aeronautics Act* were brought – into being just in the immediate aftermath of Air India, but that was not in fact because they put it together as a result of that. It had been in the pipeline for some time, along with all the regulations that followed from the changes to the *Aeronautics Act* and it's quite clear that if those new regulations had been in effect that things might have turned out very differently, but they were not and it's unfortunate that it simply took so long to actually reach that point. The Air India tragedy just happened just before.[282]

While it is apparent that the draft regulations were intended to accompany the amended *Aeronautics Act* when it was enacted, the bulk of the new aviation security requirements could have been implemented under the existing statute. The Act, as it read in June 1985, already authorized regulations governing the observation, inspection and search of persons, personal belongings, baggage, goods and cargo,[283] airport security measures,[284] and the designation of security officers and their training requirements.[285] The amended Act that came into force on June 28, 1985 greatly expanded the Minister's regulatory authority by requiring carriers and airports to adopt "…such security measures as may

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280 Exhibit P-157, p. 21.
281 Exhibit P-101 CAF0083, p. 2.
282 Testimony of Reg Whitaker, vol. 36, May 30, 2007, p. 4314.
283 *Aeronautics Act*, R.S.C. 1970, am. S.C. 1973-74, introducing ss. 5.1(1), 5.1(1.1), 5.1(1.2), 5.1(2).
284 *Aeronautics Act*, R.S.C. 1970, am. S.C. 1973-74, introducing s. 5.1(2).
285 *Aeronautics Act*, R.S.C. 1970, am. S.C. 1973-74, introducing s. 5.1(10).

be prescribed by the regulations or such security measures necessary for those purposes as may be approved by the Minister in accordance with the regulations."[286] Nevertheless, given the longstanding recognition of the existing aviation security regime's inadequacy, and the impatience expressed at the fact that the amendments were overdue, there is no reason that the aviation security regulations should not have been pushed through on their own.

The security measures respecting air carrier security plans and pre-board security screening, including provisions regarding the screening of checked baggage in high threat situations, could have been implemented ahead of any statutory amendments. The security regulations respecting cargo holds and inspections could also have been implemented at any time, as could the regulations setting out security guard qualification and training requirements. While no regulatory enforcement would have been possible against a carrier that did not comply with the security measures until the *Act* was amended, the evidence demonstrates that, on the whole, air carriers made meaningful efforts to comply with and to exceed the regulations already in place. Transport Canada had made a policy of supplying and maintaining the security equipment and airport facilities needed to comply with its screening requirements, and the regulations would have given the air carriers much-needed guidance as to their obligations.

Transport Canada and the Government of Canada failed to push through more responsive regulations designed to ensure that the level of security at Canada's airports was appropriate for the threat of organized terrorism. At the heart of this is the failure to amend the Act quickly in recognition of the increasing threat of sabotage as the main threat to civil aviation in Canada and internationally.

Would Implementation of the Draft Regulations Have Prevented the Bombing?

It is impossible to say with certainty that the draft regulations would have prevented the bombing of Air India Flight 182 had they been in place in June 1985. The *CATSA Act* Review Advisory Panel concluded that Air India met the requirements of the draft regulations for checked baggage in high threat situations, since Air India already examined checked baggage by X-ray scanner and by explosives detection equipment.[287] The Panel also concluded that draft regulations "…left considerable room for air carriers to use measures other than passenger-baggage reconciliation in a 'specific or high threat' situation."[288] Nevertheless, a number of considerations point to the conclusion that the draft regulations were greatly needed well before the bombing and likely could have thwarted it.

There is no dispute that Air India was under a high threat in June 1985. Had the regulations been in force, section 400(c)(2)(iv) would have directed Air India

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286 *Aeronautics Act*, R.S.C. 1970, am. S.C. 1973-74, introducing ss. 4.7(2)(a), 4.7(2)(b), 4.7(2)(c), 4.7(4).
287 Exhibit P-157, p. 21.
288 Exhibit P-157, p. 58.

to take additional security measures, including matching checked baggage to passengers prior to departure, X-raying or manually searching all checked baggage, or using an explosives detection device. While it is true that Air India was already X-raying checked baggage and using the PD4 explosives detection device in the event the checked baggage X-ray scanner was unavailable, the regulatory requirements would have placed Transport Canada in a much different position with regard to these measures and their implementation by air carriers such as Air India.

First, as the owner and operator of Canada's major airports, Transport Canada provided and maintained the X-ray scanners and metal detectors employed by the air carriers in conducting passenger and baggage screening.[289] Had the draft regulations been in place, it is very likely that Transport Canada would have undertaken to provide additional security equipment, such as checked baggage X-ray scanners, to be used as needed under the regulations. By November 1984 – seven months before the bombing – Transport Canada had been seriously considering the purchase of large, mobile checked baggage X-ray units for use as needed.[290] By April 1985, Transport Canada had concluded that it was "evident" that checked baggage X-ray scanners were required at Pearson.[291] Transport Canada would have been responsible for the maintenance of these machines and, presumably, would have taken a less casual attitude towards their movement and calibration than Air India had. Alternatively, Transport Canada might have prescribed basic standards for screening equipment, as it did in 1986.[292] Even if Air India had continued to use its own X-ray scanners, the failure of its X-ray machine at Pearson on June 22, 1985 could have been remedied by the provision of a Transport Canada replacement.

Second, under the proposed Air Carrier Security Regulations, the Burns personnel operating the checked baggage X-ray machine would have been required to be trained and qualified security officers. The evidence presented showed that many of the Burns personnel were untrained and inexperienced; indeed, one guard candidly stated to investigators: "I don't believe I could tell what a bomb looked like if I saw one."[293] Transport Canada designed the training program for security officers conducting passenger screening, and would have been in the position of creating appropriate training programs for security officers screening checked baggage. Had these personnel been trained and qualified officers, they would, in all likelihood, have been more attentive, professional, and capable.

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289 Exhibit P-165, Tab 10, p. 3. Under the National Airport Policing and Security Program, Transport Canada would "…provide detection devices and facilities for passenger security inspection check-points. Provision will also be made for law enforcement response to emergencies at the passenger screening points."

290 Exhibit P-101 CAF0581, p. 2.

291 Exhibit P-101 CAF0585, p. 5.

292 Exhibit P-157, p. 79: "In February 1986, Transport Canada issued the first edition of approved security procedures that were applicable to Canadian and foreign air carriers. They addressed the security of passengers, personal belongings, carry-on baggage, checked baggage, cargo, security equipment and security officers.… As of February 1986, security screening equipment used by the air carries had to meet a basic standard prescribed by Transport Canada."

293 Exhibit P-101 CAF0157.

Additionally, although the draft security measures refer to the use of an explosives detection device to examine checked baggage in a high threat situation, the PD4 device used by Air India had failed two tests conducted by the RCMP in January 1985. The failures of the PD4, which are explored in the next chapter, made it an unacceptable device. Dale Mattson, Transport Canada's Manager of Safety and Security at Pearson Airport, testified that he took no further steps to prevent Air India from using the PD4 to inspect checked baggage because such measures exceeded the basic aviation security measures required by Transport Canada at the time:

> Examining, for example, the checked baggage using the X-ray and the PD4 sniffer was a requirement that Air India had determined they needed to undertake. We did not feel that it was our role – to challenge their requirement there or to monitor their requirement there.[294]

Entirely aside from whether entrusting the safety of Air India's passengers to a device which had proven inadequate to the purpose for which it was being used was an appropriate response to such a tremendous security flaw, it remains that no one took any action after January 1985 concerning the PD4 device. However, if it had had the regulatory authority to monitor Air India's security measures and to request changes to its security plan when a gap was identified, this posture would have changed dramatically. Transport Canada could have directed Air India not to use the PD4 explosives detection device when examining checked baggage and directed it to use other methods instead, such as passenger-baggage reconciliation or X-ray.

Moreover, Transport Canada conducted a study in 1983 concerning baggage, mail and cargo security which made extensive reference to the draft regulations in formulating its security recommendations.[295] For a high threat level, the report recommended that:

- All checked baggage should be searched by hand or inspected by X-ray where equipment was available;
- All bags should be sealed at time of acceptance or search;
- Crew baggage, company mail and flight document bags should be inspected;
- Hand searches or X-ray searches should be conducted of all interlined bags; alternatively, the reconciliation of bags to passenger name, flight number and date should be considered; and

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294 Testimony of Dale Mattson, vol. 29, May 16, 2007, p. 3200.
295 Exhibit P-101 CAF0565.

- Unaccompanied baggage and expedite baggage should be refused unless searched, sealed, banded and held for a minimum of 24 hours before carriage.[296]

It is unknown whether Transport Canada decided to incorporate any of these recommendations into the draft Air Carrier Security Regulations but it is notable that these measures were even more specific in recognizing the weaknesses of baggage and cargo security. It is also unclear whether the other air carriers would have been made aware of the threat to Air India, a circumstance which might have prompted airlines such as CP Air (which interlined the bag left by "M. Singh" to Toronto for loading aboard the *Kanishka*) to take greater care to search the bag or reconcile it to an actual passenger prior to loading it aboard its flight. In any event, had the regulations been pushed through with such amendments, there is no doubt that the aviation security regime in place in June 1985 would have been far more robust in a high threat situation.

Other important factors in the draft regulations include the direction to the air carriers to screen checked baggage to prevent "…unauthorized baggage from being placed aboard aircraft."[297] The additional requirement in high threat situations to consider options such as matching all checked baggage to passengers prior to departure is much stronger than the direction contained in the regulations that were in force. The existing regulations merely required air carriers to develop "…a system of identification that prevents baggage … from being placed on board aircraft if it is not authorized to be placed on board by the owner or operator."[298] Air India complied with the existing regulation via section 4.1.1 of its security plan, which stated that "…unaccompanied baggage must be associated with a *bona fide* passenger and his documents before it is boarded."[299] Air India did so by comparing the number of boarding passes issued against the passengers who boarded, and off-loaded the "unaccompanied baggage" of those who did not board the flight.

T.N. Kumar of Air India testified that the bag checked aboard CP Air Flight 060 by "M. Singh" and interlined directly to Air India Flight 181 in Toronto was an "unauthorized bag" because Air India had no information concerning this passenger and had never confirmed a ticket or issued a boarding pass for him. The bag, which infiltrated the system because it carried an interline tag from CP Air to Air India's final destination in Delhi, was screened by Burns International Security personnel working on behalf of Air India, and loaded aboard the aircraft by the Air Canada ground handling crew, but Air India never knew it was aboard. Actual passenger-baggage reconciliation, in which a bag is matched to a passenger before it is placed aboard the aircraft, was not widely in practice in 1985. This practice was, however, recommended by experts such as Rodney Wallis at the time, and was later emphasized as the "…cornerstone of defence against the baggage bomber" by the president of the ICAO.[300]

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296 Exhibit P-101 CAF0565, p. 22.
297 Exhibit P-101 CAF0565, p. 70.
298 *Civil Aviation Security Measures Regulations*, s. 3(1)(f) and *Foreign Aircraft Security Measures Regulations*, s. 3(1)(f).
299 Exhibit P-284, Tab 68, p. 16.
300 Testimony of Rodney Wallis, vol. 35, May 29, 2007, pp. 4236-4237, 4255-4256.

The above discussion may help to understand the wide gaps in aviation security in 1985, and the extent to which the legislation had become outdated. The more robust security requirements within the draft regulations might well have made a difference had they been in force. The Commission can only speculate that, if the statutory amendments and the draft regulations had been in place in June 1985, the bombing could have been prevented.

Weaknesses Continue after the Bombing

Even after the Air India disaster, the weaknesses in Canada's aviation security laws continued to hinder efforts to enhance civil aviation security. Immediately following the bombing, Transport Canada issued a directive imposing strict emergency security measures upon all flights departing Canadian airports to Europe and Asia.[301] All checked baggage was to be physically inspected or X-rayed, all cargo was to be held for 24 hours except for perishables sent by known shippers, and all passengers and carry-on baggage were to be fully screened.

One airline decided not to comply with these measures. The minutes of a meeting of the Airport Security Committee at Mirabel held in October 1985 revealed that Lufthansa Air was refusing to conduct searches of checked baggage.[302] The airport manager refused to allow the aircraft to take off. Transport Canada examined the question of whether any enforcement actions could be taken against Lufthansa, but concluded that no action was possible because the emergency measures had no legal effect. They were not part of a regulation or an order made under the authority of the Act, although the Act itself had been amended by this point to allow for fines against corporations convicted of such breaches. Had the security regulations been pushed through prior to, or with, the June amendments to the Act, Transport Canada would have been in a position to exert far more authority over errant airlines.

The enforcement investigations following the bombing of Air India Flight 182 resulted in similar conclusions. CP Air had failed to follow its own security plan when it interlined the bag belonging to "M. Singh" past Toronto and directly to Air India's destination at Delhi, despite the fact that he did not have a reservation for that flight.[303] Nevertheless, Transport Canada had no choice but to conclude that:

> Although C.P. Air violated its own security program, as did Air India, neither carrier is subject to enforcement action because the applicable security regulations did not require Ministerial approval of the Air Carrier's Security programs. In effect, since their promulgation in the mid-1970s, the Security Regulations created a security system based on the Air Carrier's voluntary compliance with its own standards.[304]

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301 Exhibit P-101 CAF0594.
302 Exhibit P-101 CAF0608, p. 5.
303 Exhibit P-101 CAF0554, p. 3.
304 Exhibit P-101 CAF0554, p. 3.

It was recommended, as a consequence, that all air carrier security plans should require the express approval of the Minister, and that compliance with the plans be mandatory, but it was noted that this step would require regulatory amendments.[305] The regulations would not be updated until December 1985, owing to delays resulting from the consultation process and the decision to await receipt of the Seaborn Report recommendations.

Conclusion

By neglecting to update the regulations before the bombing, and delaying these amendments for months after it had occurred, Transport Canada failed to take timely steps to ensure that the appropriate aviation security measures were in force. Transport Canada had no meaningful enforcement mechanism to hold air carriers responsible for the security breaches that contributed to the disaster and the breaches that followed.

Even best practices and legislated standards will eventually become inadequate because the nature of the threat will constantly change. The advent of suicide bombers who could not be detected by otherwise highly effective measures such as baggage reconciliation bears out this important point. What is required for the future is a supple system that is informed by intelligence and also prepared to go beyond minimum existing standards, which lag behind current threat assessments and suffice merely to "fight the last war".

2.3.3 Over-Reliance on Technology

> *Good security requires an amalgam of ideas – an amalgam of approaches if you're going to be truly effective. There is no one way to stop the terrorist.*
>
> - Rodney Wallis, May 29, 2007.[306]

Introduction

Due to the threat posed by hijacking and sabotage to its flights, Air India instituted additional security measures, designed to prevent weapons or explosives from being brought aboard its aircraft. In 1985, Air India's security plan required the use of X-ray scanners and PD4 electronic explosives detection devices to inspect checked baggage for concealed explosives.[307] In doing so, however, Air India unduly relied on inadequate technological tools to protect its passengers, rather than using proven methods that had been highly effective in the past, such as passenger-baggage reconciliation.

Air India began operating a scheduled commercial air service between Canada and India in 1982. From October 1982 until the end of 1984, Air India's

305 Exhibit P-101 CAF0554, p. 3.
306 Testimony of Rodney Wallis, vol. 35, May 29, 2007, p. 4258.
307 Exhibit P-101 CAF0119.

operations in Canada were limited to a weekly flight to Delhi from Mirabel. Prior to commencing operations, Air India filed a security plan with the Minister of Transport.[308] Pending some very minor revisions, Air India's standard security measures complied with Canada's regulatory requirements of the time, and included the requirement that all passengers and their carry-on baggage be security screened prior to boarding an aircraft.[309] The screening was accomplished with the assistance of X-ray scanners, as well as with walk-through and hand-held metal detectors, which were purchased, installed and maintained by Transport Canada. Burns International Security personnel were contracted to search passengers and their baggage using this equipment at the passenger screening checkpoints at major airports such as Mirabel and Pearson.

Airport Security Technology in 1985

The passenger screening process at a major Canadian airport in June 1985 was not dissimilar to what the travelling public experiences today, although the equipment used was comparatively primitive. A passenger at a security checkpoint would be directed to walk through a metal detector archway while his or her baggage was examined by a security officer using an X-ray scanner.[310] If the metal detector sounded an alert, a security officer would scan the passenger with a hand-held metal detector unit to ascertain the location of the metal object and to identify it. The carry-on baggage, meanwhile, proceeded down a conveyer belt through the X-ray scanner, typically a Linescan System One fluoroscope, which displayed a black and white image of the bag's contents on a small monitor.

Such equipment works by using an X-ray source to send a beam of X-rays. Depending on the density of the object, X-rays will either pass through the object or be absorbed to a varying extent. X-ray detectors receive the X-rays that have passed through the item and produce an image on a monitor based on the varying penetration of the X-rays. Metal items such as a gun or knife would appear as opaque, dark shapes, but given the resolution of the image and the overlapping objects within a typical bag, the images often required careful attention and some interpretation.[311] The *CATSA Act* Review Panel noted that:

> …for both systems, detection was dependent upon the mass of the object and the skill of the operator. The X-ray equipment would not have been able to identify most explosives, but a trained and skilled operator may have been

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308 Exhibit P-284, Tab 68. Air India wrote and filed a security plan with the Minister of Transport in December 1982 following a written request from Paul Sheppard, Director of Civil Aviation Security. Air India did so voluntarily, as it was not yet named in the schedule to the *Foreign Aircraft Security Measures Regulations* and was thus not an "owner or operator" of a foreign aircraft within the meaning of the Regulations. See Exhibit P-101 CAF0778.

309 Exhibit P-284, Tab 68, pp. 5-6.

310 Exhibit P-157, p. 24.

311 Examples of X-ray images of carry-on baggage items can be found at p. 7 of Exhibit P-101 CAF0806, produced during an RCMP assessment of the effectiveness of different X-ray fluoroscopes at Ottawa International Airport in 1985.

> able to detect metallic wiring and timing hardware associated with a detonation device. This X-ray equipment was very different from the type in use today, which can detect different materials, is far more sophisticated, and can produce colour and enhanced images, as well as greater image resolution.[312]

The detection equipment used for passenger and baggage screening enabled relatively quick and non-intrusive searches, saving time and money. It also had the value of being a highly visible security measure, deterring those who might attempt to bring weapons and other dangerous articles aboard an aircraft, while reassuring the travelling public. However, this equipment was only as effective as the individuals operating it, and there are many examples in evidence of poorly trained and unmotivated security officers conducting rushed, improper scans and failing to take appropriate action when a suspicious result was obtained. Nevertheless, the travelling public widely accepted the security screening process, even in its early days, and pre-board screening was credited with virtually eliminating hijacking attempts in Canada.[313]

Growing Threats to Air India

Air India's initial flights in Canada proceeded without incident but, as political tensions in India escalated, so too did the threat to Air India. Civil aviation is a singularly tempting target for terror, and, as a state-owned airline, Air India was closely connected to the Government of India in a time of internecine fury. The threats increased in frequency and intensity as extremists fomented violent sentiments in Sikh communities in Canada and around the world. In February 1983, for example, Air India advised the RCMP of a general threat of hijacking or sabotage to its flights, followed by a further threat report, in October 1983, that Sikh extremists were threatening to hijack an Air India aircraft.[314] Air India reported another hijacking threat to the RCMP on April 7, 1984.

On June 5, 1984, the threat erupted. Political turmoil in the province of Punjab had culminated in a tense standoff between Sikh militants and the Government of India. Seeking to eliminate the militants, the Indian army assaulted the Golden Temple in Amritsar, regarded by many Sikhs as their holiest shrine. Hundreds of civilians were killed in the process. Sikhs all over the world were outraged by the violence of Operation Blue Star, as it was known, and the attack incited violent rhetoric and waves of bloody retaliation.

On June 12, 1984, Air India reported another hijacking threat. The RCMP at Mirabel instituted its highest security measures for Air India for that month as a consequence. On June 15, 1984, a caller to Air India's sales office in Toronto reported that the June 16th flight would be bombed. As noted below, Air India

312 Exhibit P-157, p. 25.
313 Exhibit P-101 CAF0774, p. 9.
314 Exhibit P-101 CAA0234, p. 1. The threat was considered serious enough that the RCMP raised the security level for Air India at Mirabel to level three, based on its threat-response grid.

responded by implementing a number of effective "low-tech" security measures to respond to the threat in this instance. Another plan to bomb an Air India aircraft in flight was reported on June 30, 1984. Air India reported at least seven more threats of bombing and hijacking to the RCMP before the end of 1984.[315]

By the summer of 1984, Air India was concerned enough by the threat of sabotage that it proposed to acquire and install its own X-ray scanner for the purpose of screening checked baggage before loading it onto its flights at Mirabel.[316] Telexes sent by Air India's head office in Bombay earlier in the year had directed that its stations around the world use X-ray scanners and explosives detecting devices to examine checked baggage to respond to sabotage threats.[317] Ashwani Sarwal, Assistant Airport Manager for Air India, contacted Transport Canada to discuss the prospect, and Transport Canada approved the idea. On August 8, 1984, Sarwal wrote to confirm that Air India would be going ahead with its plan to purchase an X-ray scanner as soon as possible, and enclosed a brochure for Transport Canada's review. He asked that Transport Canada advise him if it required any further details regarding Air India's proposal to put the machine into use by September 1st. Air India leased the device and put it into service at Mirabel that fall.

In light of the growing and persistent threat, Air India modified its security plan for operations in Canada to include X-raying checked baggage as a standard measure.[318] Accordingly, when Air India planned to expand its operations to include flights at Toronto's Pearson airport commencing in January 1985, it also decided to acquire an X-ray scanner to examine checked baggage.[319] Technology allowed for faster and more efficient responses to threats. As noted in Section 1.11 (Pre-bombing), The Cost of Delay – Testimony of Daniel Lalonde, Air India was very concerned about the expenses caused by security delays or inefficient operations.[320]

On January 8, 1985, Air India met with Transport Canada and RCMP personnel to discuss the application of Air India's security program at Pearson.[321] As at Mirabel, Air India would be relying on security officers provided by Burns International Security to conduct pre-board screening of passengers and their carry-on baggage, using metal detectors and X-ray equipment, as well as searching checked baggage by X-ray. All checked baggage would be screened by X-ray prior to being loaded into containers and placed aboard the aircraft.

Air India was concerned about the number of threats that would be received at Pearson. Mahendra Saxena, Air India's senior security officer based out of JFK International Airport in New York, indicated that, due to Toronto's larger

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315 Exhibit P-101 CAA0234, pp. 2-4.
316 Exhibit P-101 CAF0645.
317 Exhibit P-101 CAF0575, p. 2.
318 Exhibit P-101 CAA0119, p. 1.
319 Exhibit P-101 CAA0118, p. 2.
320 See Section 1.11 (Pre-bombing), The Cost of Delay – Testimony of Daniel Lalonde.
321 Exhibit P-101 CAA0118.

Sikh population, he expected more security problems in Toronto than were currently being experienced at JFK International Airport, where Air India managed three threat situations a day. Because of the threat situation, Air India also requested that an RCMP explosives detecting dog be called in to inspect the checked baggage for each flight. Transport Canada refused to provide this service, stating that the dog would only be called where suspicious articles were found.[322] Furthermore, Transport Canada's position was that any additional police assistance would only be provided at a cost to Air India.

Air India leased a Linescan System Two unit for checked baggage inspection, but the device could not be delivered and installed in time for the first flight out of Pearson on January 19, 1985. In its place, Air India's security measures called for the use of the Graseby Dynamics PD4C explosives vapour and trace detector (the "PD4") to inspect checked baggage,[323] and, accordingly, Saxena decided that the device would be used exclusively in the absence of the X-ray unit.[324] The X-ray machine was installed and became operational on February 2, 1985.[325] Once the X-ray machine was installed, Burns employees were instructed to use the PD4 in the event that anything suspicious appeared on the X-ray monitor.

A Flawed Device: The PD4

The PD4 explosives vapour detector was a hand-held device that appeared on the market in 1982. It was designed to detect "…explosive substances containing nitrated organic molecules," a group including nitroglycerine and TNT.[326] When activated, the PD4 drew in and tested air samples for the presence of explosive materials. It made a slow ticking noise while in normal operation. If explosives were detected by the "sniffer" device, it alerted the operator with a light and a high-pitched tone that increased with the relative concentration of explosive vapour.[327]

The PD4 proved to be a singularly flawed device, and unfit for the purpose for which it was used. On January 18, 1985, a group of officials from Air India, Transport Canada, Peel Regional Police and the RCMP met for a further discussion of security and a demonstration of the PD4 sniffer. Ashwani Sarwal and Herb Vaney represented Air India at the demonstration,[328] and Sarwal displayed the PD4 device to those present. One of the RCMP members in attendance was Constable Gary Carlson who, along with his bomb-sniffing dog Thor, provided explosives detection services at Pearson. According to Carlson's statement,[329] he tested the PD4 with an open vial of gunpowder. The vial was first placed inside a garbage container, and an Air India representative activated the PD4 and attempted to locate the gunpowder in the container. The PD4 failed to detect

322 Exhibit P-101 CAA0118, pp. 4-5.
323 Exhibit P-101 CAA0119, p. 1.
324 Exhibit P-284, Tab 17.
325 Exhibit P-101 CAF0010, p. 1.
326 Exhibit P-410, pp. 20-21.
327 Exhibit P-410, p. 4.
328 Exhibit P-101 CAA0369, p. 2.
329 Exhibit P-101 CAC0268.

it. Carlson then took the vial and placed it on top of the garbage container lid. The PD4 was gradually moved closer and closer to the vial, but it was not until the conical "nose" probe of the device was placed into the vial and just one inch from the gunpowder sample that it sounded to indicate the presence of explosive material.[330]

Carlson told the Air India representatives that "…this was not an effective method of checking suitcases for explosives," adding that he and his dog were available at any time to check suspicious items.[331] Staff Sergeant Robin Ward, another RCMP officer present at the demonstration, indicated in his affidavit evidence to the Kirpal Inquiry that "Mr. Sarwal was advised at time that we had no faith whatsoever in this device and we did not see how it would be effective in detecting an explosive inside a suitcase."[332]

In his testimony before the Commission, Carlson confirmed that the RCMP personnel present at this demonstration were shocked by its ineffectiveness. Conversely, the Air India representatives seemed indifferent.[333]

Detective Fred Lemieux of Peel Regional Police was also present at the January 18th demonstration. In a letter to the RCMP Air India Task Force, dated January 2, 1986, he wrote that the machine's performance made it "…quite evident to all present that the detector failed to perform its function in this demonstration." He felt that only three conclusions were possible: first, that the operators were unfamiliar with the equipment; second, that the device was faulty; or third, that the explosives were not capable of being detected by the PD4. He added, "…in any case, it was suggested that pre-board screening should not rely solely on the PD-4 detector."[334]

According to T.N. Kumar, Air India's General Manager for Legal Affairs, no report of this test was made to Air India Headquarters.[335] Instead, Air India relied on data provided by the manufacturer in concluding that the device was effective. In essence, Air India uncritically accepted the manufacturer's claims about the usefulness of the PD4.

The first Air India flight from Pearson was scheduled for January 19, 1985 – just one day after the failure of the PD4 to detect the gunpowder. While on foot patrol at the airport, Carlson and Ward attended the baggage handling area to observe Burns security personnel examining checked baggage for the flight. Despite the troubling results of the previous day's demonstration, the Burns employees were using the PD4 scanner to do so. Carlson was curious about how the PD4 would perform with a different compound, and he provided a sample of "Det sheet" plastic explosive in order to test the PD4.[336]

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330 Exhibit P-101 CAA0369, p. 2, CAC0515, pp. 2-3.
331 Exhibit P-101 CAC0268, p. 2.
332 Exhibit P-101 CAA0369, p. 2.
333 Testimony of Gary Carlson, vol. 28, May 15, 2007, pp. 2995-2996.
334 Exhibit P-101 CAC0515, p. 3.
335 Testimony of T.N. Kumar, vol. 37, May 31, 2007, pp. 4456-4457.
336 Exhibit P-101 CAC0268, p. 2.

Carlson explained during his testimony that the Det sheet (also known by the trademarked name "Detasheet"[337]) is:

> …a military grade explosive, green in colour. It would be three inches by four inches. It was very safe to carry around, so I would use that for training of my dog. And I used that to determine if the PD4 would alarm to that type of explosive.[338]

The device did not alarm even when it came into direct contact with the "Det sheet".[339]

Transport Canada officials were informed of this second failed test on January 21, 1985, during a debriefing of Air India's security operations for its inaugural flight.[340] No Air India personnel were present at this meeting. Moreover, Air India had not been told about the second failed test on January 19th,[341] and no information regarding this failed test was provided to Air India before the bombing.[342]

There is no evidence that either Transport Canada or the RCMP (or, for that matter, Air India) conducted a thorough examination of the functional reliability and sensitivity of the PD4 in either laboratory or field conditions. Nevertheless, considerable evidence exists to support the conclusion that great caution was warranted in relying on the PD4 to detect explosives concealed in checked baggage. This information was available to Canadian authorities.

Evolution of Explosives Detection Technology

In the late 1970s and early 1980s, explosives detection technology was in its infancy. Assessments of the vapour detectors at this time were uniformly poor. Transport Canada had evaluated two explosives detection devices, in collaboration with the National Research Council, in 1979.[343] Tested were the Pye Dynamics PD3[344] and the Ion Track Instruments Ultratek. Both devices were designed to detect vapours released by different explosives. The review of the devices indicated that they had severe shortcomings. Tests showed that both devices were temperamental and unreliable. The devices were tested by placing

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337 This rubberized explosive, similar to plastic explosives, was originally manufactured by DuPont under the trademarked name "Detasheet," but it is also variously referred to by experts and law enforcement officers as "Det sheet," "Deta sheet" and "detasheet. Unless quoting a written document that indicates otherwise, the Commission uses the form "Detasheet."

338 Testimony of Gary Carlson, vol. 28, May 15, 2007, p. 2998.

339 Exhibit P-101 CAA0369, p. 3.

340 Exhibit P-101 CAA0121, p. 2.

341 Exhibit P-101 CAC0528, pp. 33-34.

342 Transport Canada's monitoring and enforcement failures are discussed in further detail in Section 4.7 (Pre-bombing), Transport Canada Policy Gaps and Implementation Deficiencies.

343 Exhibit P-101 CAF0549.

344 To avoid confusion, it should be noted that Pye Dynamics, listed as the manufacturer of the PD3, and Graseby Dynamics, the manufacturer of the PD4C, were related UK companies. Following in the footsteps of the PD1 military explosives detector and the PD2 commercial explosives detector, the PD3 was the predecessor of the PD4.

an explosive substance in a suitcase and, after 60 minutes, passing the detectors along the edges of the case. The study author noted that "[f]or unexplained reasons it was difficult to reproduce on a day-to-day basis the results obtained from the detectors using identical flow rates, temperatures and procedures. The PD3 was particularly difficult."[345]

The shortcomings of the devices that were listed in the study included inadequate sensitivity, a limited range of explosives that could be detected, and a high sensitivity to common, non-explosive vapours that would result in false alarms. These flaws made the devices unsuitable for use at airports or with aircraft. The study concluded that the devices would only be suitable for use in areas where the expected vapour concentration was high. This ruled out using the devices to examine closed containers such as checked baggage at an airport.

The RCMP had also been evaluating explosives detection devices. A July 1985 report indicated that the Explosive Disposal and Technology Branch of the P Directorate had, "…during the past several years, been keeping current with the development of a number of explosive-detection 'sniffers.' None were found which were considered effective."[346] The report did not specify which devices had been reviewed. The blunt assessment indicates, however, that the state of the art of explosives detection technology left much to be desired in 1985.

Prior to 1991, Nick Cartwright served a term as Chief Chemist and Manager of the Canadian Police Research Centre and Officer in Charge of the Science and Technology Branch in the Forensic Laboratory Services Directorate of the RCMP. He testified that the RCMP had evaluated the PD4 and found it to be unreliable. He told the Commission that there were other devices available as of 1985, but they were also unreliable. He said that they were more lab prototypes than they were totally functioning units.[347]

The National Research Council spent several years developing a new explosives detector, the EVD-1.[348] This was a much more complicated device than the PD4, and could detect traces of explosives in concentrations of less than five parts per trillion.[349] Cartwright said that a part per trillion was analogous to "one second in 32,000 years," or "one shot of scotch in Lake Superior."[350] The EVD-1 was not yet in mass production at the time of the bombing, but pre-production models were quickly put into service to assist in examining checked baggage at Canadian airports in the days following the bombing.[351]

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345 Exhibit P-101 CAF0549, p. 6.
346 Exhibit P-101 CAF0680, p. 1.
347 Testimony of Nick Cartwright, vol. 42, June 13, 2007, pp. 5108-5109.
348 See Exhibit P-101 CAF0675.
349 Exhibit P-101 CAF0808, p. 1. The RCMP had required an operational sensitivity of five parts per trillion, and the production models they obtained actually exceeded this standard.
350 Testimony of Nick Cartwright, vol. 42, June 13, 2007, pp. 5153-5154.
351 Exhibit P-101 CAF0675, p. 1. Transport Canada released four pre-production EVD-1 models for use at major airports on June 23, 1985. This release prompted internal warnings against any false sense of security, since the devices had not yet been systematically tested in field conditions and no operator training or maintenance programs were in place. As of June 28, 1985, operators of the EVD-1 at Toronto's Pearson Airport had no training in its use at all.

The EVD-1 rapidly became the world standard[352] because of its advanced capabilities. But it too proved to have some difficulties. The RCMP tested a production unit in July 1985 and concluded that it was actually "somewhat disappointing." It could only detect a limited number of different explosives, and was slower and less sensitive than an explosives detection dog. Air samples had to be obtained with a hand-held device and then brought back to the unit to be analyzed. Once an individual air sample was placed into the EVD-1, it required two minutes of processing before a result could be obtained. Finally, the machine was prone to technical problems and to breaking down. Further tests were planned in field environments, but the device was nevertheless considered to be of only "limited utility" until that time.[353]

The EVD-1 illustrates the difficulties faced in the early stages of explosives detection technology. Nonetheless, the developmental work eventually led to success. Dr. Lorne Elias, who was instrumental in the development of the EVD-1, was called the "father of vapour and trace detection technology" by Nick Cartwright. In fact, Elias played a major role in developing the technology now employed successfully in explosives trace and vapour detection.[354]

In light of the primitive state of explosives detection technology at the time, Air India's proposal to rely on the PD4 should have raised greater alarm. The Commission is unaware of any Transport Canada evaluation for the PD4. Based on the informal tests conducted at Pearson, however, neither Transport Canada nor the RCMP considered it fit for use.

Technology Failures on June 22, 1985

On June 22, 1985, all the bags checked in at Toronto for Air India Flight 181/182, as well as the interline bags from connecting domestic flights, were sent to the international baggage area for examination by X-ray.[355] At approximately 2:30 PM, security screening of this checked baggage commenced at Pearson airport. Three Burns guards were on duty that afternoon in the checked baggage area.[356] Naseem Nanji, one of the guards, loaded suitcases onto a belt that fed bags through the device. Another Burns employee, James Post, examined the black and white images that appeared on the monitor as each bag was scanned, endeavoring to identify any suspicious objects contained within. A third Burns employee, Samynathan Muneeswaran, handled the scanned bags as they emerged from the X-ray scanner.

At approximately 4:45 PM, the Linescan System Two X-ray machine, leased by Air India to examine checked baggage, broke down.[357] At that point, somewhere between 50 and 75 per cent of the bags had been examined by X-ray. The X-ray scanner could not be restarted and, since it was a weekend, there was

352 Testimony of Jean Barrette, vol. 38, June 1, 2007, p. 4564.
353 Exhibit P-101 CAF0680, pp. 2-3.
354 Testimony of Nick Cartwright, vol. 42, June 13, 2007, pp. 5115-5116.
355 Exhibit P-157, p. 37.
356 Exhibit P-101 CAF0143, p. 2.
357 Exhibit P-157, p. 37.

no possibility of obtaining repair service. John D'Souza, the Air India security officer, learned of the malfunction while making his rounds. He directed the Burns officers to use the PD4 to screen the remainder of the checked baggage for explosives.[358] D'Souza also provided an extremely brief demonstration of how the PD4 operated, lighting a match and holding it close to the device. Having detected the burning match, the device emitted a shrill noise, which has been described as sounding "…like a kettle going off."[359]

Aside from this cursory demonstration, the Burns employees had not been trained in the use of the PD4 and were unfamiliar with its operation. The sound made by the PD4 when it detected explosives changed in intensity, depending on the perceived concentration of explosive vapours.[360] Clearly, a lit match held up to it caused a strong reaction. The employees were not shown how it would react to a lower vapour concentration, such as might be detected along the edges of a suitcase containing a concealed explosive device. This is important because there is evidence that the device may have reacted to one or more bags during the continuing screening of checked baggage.

In her statement to the RCMP after the bombing, Nanji indicated that while Post was using the PD4 to examine the checked baggage, it emitted a "beep" when it was passed along one bag's zipper. Post used the PD4 again to check this bag, and it "…beeped low in volume when it was passed near the [zipper's] lock. But the beeper wasn't making a long whistling sound like it had when John the Air India man demonstrated the 'sniffer' to us. So we let the bag pass." Nanji stated that no one told Air India about this, due to the fact that "…no one told us to call them if the 'sniffer' gave a short beep."[361] Nanji testified about her observations during the trial of Ripudaman Singh Malik and Ajaib Singh Bagri, and Justice Josephson summarized her testimony in his 2005 reasons for judgment.[362]

Muneeswaran also provided a statement to the RCMP shortly after the bombing, in which he stated that one bag in particular caused the PD4 to react. Although the device "would not stop" alarming, this bag was tagged and put through with the rest of the baggage.[363] Antonio Coutinho was a station attendant loading and unloading baggage for the flight. He was working at the baggage conveyor belt and observed the demonstration of the PD4 and its use with the checked baggage. In a statement given after the bombing, he informed the RCMP that a large burgundy bag set off the PD4 when it was run across the bag's lock.[364] The bag was checked again with the PD4, and the scanner "buzzed" again. Coutinho also testified at the trial of Malik and Bagri, and Justice Josephson summarized his testimony:

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358 Exhibit P-101 CAF0531, p. 3.
359 Exhibit P-101 CAF0142, p. 7.
360 Exhibit P-410, p. 19. See also *R. v. Malik and Bagri*, 2005 BCSC 350 at para. 30. According to an expert, Timothy Sheldon, the PD4 emitted a slow ticking noise when in operation that accelerated to a "high pitched whine," depending on the level of explosive vapour detected.
361 Exhibit P-101 CAF0159, p. 3.
362 *R. v. Malik and Bagri*, 2005 BCSC 350 at para. 27.
363 Exhibit P-101 CAF0143, p. 5.
364 Exhibit P-283, Tab 35.

> Mr. Coutinho subsequently observed a large reddish brown suitcase with a "heavy baggage" tag trigger beeps from the PD4C Sniffer each time it was passed over the bag. The bag had been checked in at Toronto and was destined for Bombay. To Mr. Coutinho's surprise, security personnel suggested that the lock on the suitcase was triggering the device and allowed it to pass through security. Because the Bombay baggage containers were already full, this particular bag was placed on an excess baggage cart for loading into the bulk cargo compartment at the rear of the aircraft.[365]

Similarly, a statement given by Barry Higgins, who was also working in the baggage area on June 22nd, indicates that he saw the AI representative, D'Souza, explain to a security guard how to use the hand scanner. Once it was put into use examining checked baggage, the scanner was brought near a bag which caused it to start "…buzzing on and off." A sticker was put on the bag and it was sent on its way.[366]

During his interview with the RCMP, Post was asked about the noises made by the PD4. He stated that it was his understanding that the PD4 would emit a "piercing scream" if it detected explosives, and that the only noises it made during the examination of the checked baggage was a "…beep when turned on and a beep when turned off."[367] He was convinced that the PD4 had not detected any explosives.

The Burns supervisor, Michael Ciuffreda, stated that he did not believe Post had used the PD4 before, and he had never trained Post in its use.[368] Ciuffreda had seen the PD4 demonstrated by an Air India representative on several prior occasions in 1985. He stated that, although it did occasionally emit a clicking noise while in use, he never heard it whistle or beep.

The PD4 device would be in start-up mode for 10 seconds after being turned on, during which time it would "auto zero" to ambient conditions.[369] This meant that the device would use the air around it to establish a baseline against which detected concentrations of explosive vapours could be assessed. The machine's red indicator light would be on and the PD4 would begin emitting a slow ticking sound. Once the start-up was complete, the red indicator light would go out. The ticking noise would continue.

The instruction manual makes no reference to the device sounding a "beep" when turned on or off.[370]

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365 *R. v. Malik and Bagri*, 2005 BCSC 350 at para. 29.
366 Exhibit P-283, Tab 36.
367 Exhibit P-101 CAF0156, p. 2.
368 Exhibit P-101 CAF0142, p. 6.
369 Exhibit P-410, p. 9.
370 See Exhibit P-410, pp. 9, 19. At p. 19, its outputs are listed: "1. Audio – An audio tone of constant amplitude from an internal transducer which is varied in frequency from near zero to 1 KHz in relation to the perceived explosive vapour level; 2. Visual – LED lights when the audio output frequency exceeds a preset value; 3. Earphone Jack – When the earphone is plugged into the jack socket the internal transducer is muted; 4. Battery Low Indication – Audible alarm at a fixed frequency of approximately 2 KHz."

There is no way to know whether the checked bag belonging to "M. Singh," interlined from CP Air Flight 060, was examined by X-ray before the machine malfunctioned, or whether it was examined by PD4 afterwards. Even if the bag was X-rayed, factors, such as human error and the difficulty in detecting concealed explosives, suggest that it might not have been found. The PD4 was so unreliable, moreover, that no conclusions can be drawn about its apparent reaction to a particular checked bag. What is certain is that, due to the Burns employees' inexperience with the PD4, and the cursory manner in which its operation was demonstrated, their examination of the remaining checked bags was effectively a useless exercise. They were so unfamiliar with the device that the sounds it made during the screening of checked baggage were interpreted differently by different screeners. Any opportunity to flag a potentially dangerous bag was wasted because the Burns personnel lacked the training and initiative to take action, such as reporting the noises to a superior[371] or to an Air India official, before the bag was loaded and the plane departed. Instead, they only spoke of the noises made by the PD4 in hindsight and with conflicting recollections.

Air India was under high alert in June 1985. Air India's operations worldwide had been directed to ensure the "…meticulous implementation of counter sabotage measures for flights at all airports," in a telex dated June 1, 1985.[372] As the *CATSA Act* Review Advisory Panel noted, the June 1st Telex emphasized random physical searches of checked baggage as a "first priority."[373] This was to be done particularly where other means, such as explosives detection devices or explosives detection dogs, were not available. At Pearson, however, Air India relied solely on the X-ray machine until it broke down. Air India had no backup X-ray machine. D'Souza then directed that the screening personnel use only the PD4. No random physical searches of checked bags were conducted, despite the clear direction in the telex to do so.

Contradictory Evidence on the PD4

T. N. Kumar testified that the PD4 was "the best available" at the time. He also contended that that the PD4 failures during the tests conducted on January 18th and 19th made it look less reliable than it really was,[374] arguing that its poor performance was caused, at least in part, by the fact that neither Transport Canada nor the RCMP were familiar with the device, and because there was no evidence that the PD4 instruction manual was followed properly during the tests.

In a similar vein, Air India argued in its final submissions that there was no suggestion that a one-time informal test should have caused Air India or Transport Canada to conclude that the device was useless or ineffective and

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371 See, for example, Exhibit P-101 CAF0142, p. 7. Burns Supervisor Michael Ciuffreda had no idea even after the bombing that the PD4 used by Post might have reacted to one or more bags.

372 Exhibit P-101 CAA0185.

373 Exhibit P-157, p. 63.

374 Testimony of T.N. Kumar, vol. 37, May 31, 2007, pp. 4411, 4428-4429. Kumar stated: "…yes, there could have been limitations with the PD4 but it was not all that bad as … it appears to be."

that its use should be discontinued. According to Air India, neither Transport Canada nor the RCMP was familiar with the device and its use elsewhere, and neither Transport Canada nor the RCMP suggested Air India should discontinue its use as part of its security program.[375] Kumar testified:

> The PD4 instrument was not available in Canada. I have all my doubts that the RCMP and Transport Canada who used the instrument didn't know the instrument. The instrument comes with a sample pack. It needs to be first tested with the sample pack and activated. Then it needs to be simulated or it needs to be adjusted or calibrated with certain kind of things. It was used for about seven explosives, basically nitroglycerine.[376]

Kumar conceded that he had no evidence that the device was not properly calibrated when it was being used by Air India and the RCMP on January 18, 1985.[377] In fact, the instruction manual for the PD4, which was disclosed by Air India, makes no reference to calibration. Instead, the device requires 10 seconds on start-up to calibrate itself, based on the ambient air conditions. The sample pack was used to confirm that the device was operational, but no further adjustment or calibration was required.[378]

Kumar testified that he was nevertheless satisfied that the device was properly calibrated and operated by John D'Souza on June 22, 1985, before it was used by otherwise untrained Burns International Security personnel to inspect the checked baggage going onto the *Kanishka*. This is despite the fact that D'Souza himself did not follow the set-up procedures set out under section 3 of the instruction manual.[379]

Kumar testified that Burns was contractually responsible for deploying the PD4 and for training its personnel on how to use the device.[380] This seems contrary to evidence that the PD4 was under the control of Air India.[381],[382] There is, in fact, no mention of such a contract anywhere in the evidence. Air India itself made no reference to such a contractual responsibility in its final submissions concerning the PD4. To the contrary, Air India's final submissions stated:

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375 Final Submissions of Air India, para. 26.
376 Testimony of T.N. Kumar, vol. 37, May 31, 2007, p. 4428.
377 Testimony of T.N. Kumar, vol. 37, May 31, 2007, p. 4456.
378 Exhibit P-410, p. 9.
379 Testimony of T.N. Kumar, vol. 37, May 31, 2007, p. 4460.
380 Testimony of T.N. Kumar, vol. 37, May 31, 2007, pp. 4457-4458.
381 See, for example, Exhibit P-284, Tab 60. In a letter dated May 31, 1985, Holger ("Nick") Kordts of Burns International Security wrote to Sarwal to explain a baggage handling error. The letter notes that when the Burns security officer in the checked baggage handling area finished for the day, he returned the PD4 sniffer to the Air India security officer at Pearson.
382 See Exhibit P-101 CAF0139, p. 3. When the X-ray scanner at Pearson malfunctioned on June 22, 1985, the Burns International Security supervisor, Michael Ciuffreda, asked John D'Souza of Air India whether he wanted the checked baggage screeners to use the PD4 "sniffer." D'Souza instructed Burns to do so, and demonstrated its use to the Burns guards present with a lit match, which caused the PD4 to alarm.

> Except for any on the spot training on the use of the PD4 explosive detection device, Burns was to provide all training for the security agents it provided to Air India under its contract to provide security services. For the PD4, which accompanied an Air India security employee from New York to Toronto and on to Montreal, training was provided by the Air India Security Officer on the spot, demonstrating the use of the device after he had calibrated and tested it.[383]

The Commission believes that Mr. Kumar was mistaken on this point. Even assuming he is correct, however, it necessarily follows that on January 19, 1985, when the PD4 was being used by Burns employees to inspect checked baggage for explosives, and was tested again by the RCMP, it must have been properly calibrated.[384] Conversely, if Air India was responsible for deploying and training the Burns screeners on the use of the PD4, then the Air India security officer was responsible for calibrating the device and demonstrating its use. It still failed to detect the explosive material, even when placed in direct contact with the Detasheet.

It appears that Air India itself was unfamiliar with the operating strengths and weaknesses of the PD4. On June 28, 1985, an extraordinary meeting of the International Air Transport Association (IATA) Security Advisory Meeting was convened.[385] Representatives from Transport Canada, Air India, and IATA were among the many industry members present. Mahendra Saxena and R.C. Puri represented Air India.[386] Saxena wrote to Air India's Chief Vigilance and Security Manager in Bombay and provided his accounting of the meeting. In light of the disaster, Saxena sought IATA's opinion on the effectiveness of the PD4 "…in detection of explosives hermetically sealed or wrapped in any air tight containers and the advisability of using the PD4 in general." According to Saxena, the acting chair of the meeting replied that no explosives detection device in the world had been recommended and certified by any government as 100 per cent effective.[387] Rodney Wallis, who was at this meeting as an IATA official, testified that "…indeed, these instruments were not in general use around the world."[388] Saxena remarked that it was "…high time IATA organized a technical committee to get into the testing of various security equipment [*sic*] and to recommend the same for use by airlines."[389]

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383 Final Submissions of Air India, para. 54.

384 Testimony of T.N. Kumar, vol. 37, May 31, 2007, p. 4459. In cross-examination by Sandy Graham, Counsel for Transport Canada, Kumar said that Burns Security personnel were provided with instructions and that he could "…certainly assert that they did" follow the prescribed start-up protocol every time the device was used.

385 Exhibit P-101 CAF0441.

386 Saxena was the Senior Security Officer for Air India at John F. Kennedy International Airport in New York, and Puri was the Manager of Canadian Operations.

387 Exhibit P-163, pp. 2-3.

388 Testimony of Rodney Wallis, vol. 37, May 31, 2007, p. 4493. It should be noted as well that Wallis and Saxena differed on several points concerning recollection of the events of the meeting, particularly with respect to the appropriateness of Air India's security measures. Wallis testified that no one in the meeting was in a position to approve (or otherwise) of Air India's program, certainly not himself. See Testimony of Rodney Wallis, vol. 37, May 31, 2007, pp. 4488-4493.

389 Exhibit P-163, p. 3.

It cannot be disputed that, when the PD4 was finally tested by an expert, those tests confirmed that it was an ineffective device that should not have been relied upon by Air India. In his reasons for judgment in the trial of Ripudaman Singh Malik and Ajaib Singh Bagri, Justice Josephson observed that Timothy Sheldon, an expert in evaluating explosives detection equipment, had testified that the PD4C Sniffer had not distinguished between explosives and dummy packages during testing he had conducted in 1988, leading him to conclude that it was not effective as anything other than a deterrent.[390]

Similarly, the report of the Kirpal Inquiry also noted that the effectiveness of the PD4 was "highly questionable" and recommended that "…it is not advisable to rely on it."[391] Air India decided to rely on the PD4 sniffer as the sole backup to X-ray scans of checked baggage, even though senior members of the airline had witnessed troubling demonstrations indicating that the device was unreliable. Given Air India's own assessment of the threat it faced, this was an unacceptable decision.

X-Ray Searches: Skilled Operators Required

Only two airlines were routinely using X-rays to search checked baggage at Canadian airports in 1985 – Air India and El Al. As primitive as the technology was, the checked baggage inspections were a positive development in aviation security, and one that was long overdue in Canada. The threat of sabotage, and the corresponding need for checked baggage security measures, was well-recognized by Transport Canada and the airlines by 1985. [392]

As with the PD4, the X-ray equipment used to scan checked baggage in 1985 suffered from technical limitations and was rendered less effective if the operators lacked the necessary skill and good judgment to diligently monitor and correctly interpret the images of scanned baggage.[393] X-raying checked baggage in 1985 was something of an art as well as a science. The X-ray machines of the period were primitive and in "an immature area of development" compared to the devices in service today.[394] The X-ray machines employed only a low energy X-ray source and displayed a black and white image, composed of light and dark areas on a low or medium-resolution monitor. Cartwright explained the challenges of searching for explosive devices with this equipment:

> It wasn't really a detection system in and of itself. What it did is it provided an image of what was present in the object that was being X-rayed and then it was up to the operator to be

390 *R. v. Malik and Bagri*, 2005 BCSC 350 at para. 30.
391 Exhibit P-164, p. 173.
392 This is illustrated in Section 2.3.1 (Pre-bombing), Recognition of the Threat of Sabotage and Weaknesses in the Ability to Respond.
393 Professor Kathleen Sweet wrote in a paper prepared for the Commission, "Simple x-ray systems rely on humans to serve as pattern recognition devices; in the absence of advanced computer pattern recognition techniques, they are very dependent on human factors. This boils down to the proper training and competency of the screener.": Kathleen Sweet, "Canadian Airport Security Review" in Volume 2 of Research Studies: Terrorism Financing Charities and Aviation Security, p. 277.
394 Testimony of Nick Cartwright, vol. 42, June 13, 2007, p. 5079.

> able to interpret that image and to identify if there were things which were suspicious, of a suspicious nature or unresolvable. You know, there are various categories that the individual would be trained to say, okay, I'm not comfortable with letting this bag go. Therefore, it needs to be opened up or other things need to be done with the bag.[395]

While a weapon, such as a knife or gun, had a distinctive shape, operators had to learn to identify wires and shapes that might indicate an explosive device. The machines demanded operators who were diligent and well-trained but, in practice, they were operated by individuals who were frequently unmotivated and who lacked essential training. Having tested X-ray machines and their operators in the weeks following the bombing, the RCMP concluded that the major weakness in the X-ray system was "…the capability and vigilance of the operator in detecting suspicious items."[396] The paucity of training and the assessments made of airport security following penetration tests at airports are discussed in detail in Section 2.4 (Pre-bombing), Security Culture at Canada's Airports.

An evaluation conducted by the RCMP of X-ray machines and explosives detection devices in July 1985 was remarkably reserved about their prospects for effective checked baggage security.[397] The machines were not capable of revealing sophisticated or specialized bombs on their own. Their operators required additional training along with the assistance of computer-aided pattern recognition. In tests of carry-on baggage screening conducted at Ottawa International Airport, the Burns X-ray operator was unable to distinguish between a bar of soap and C4 plastic explosives packed in an identical box along with a blasting cap.[398] The operator also failed to notice a subsequent improvised explosive device consisting of the C4, a blasting cap, and a pager. The RCMP concluded it was also unlikely that an RCMP explosives technician would have observed these items. It was felt that only a very experienced explosives technician conducting a hand search would have determined that the bar of soap had been replaced by plastic explosives.

In a subsequent letter to Transport Canada's Inspector General of Transportation Safety, Assistant Commissioner J.A.R. Roy wrote that:

> …in our opinion, these reports suggest that both the X-ray/fluoroscopes and explosive sniffers have severe limitations in detecting sophisticated explosive devices. These limitations are even greater when large numbers of articles are to be checked. In the case of the X-ray/fluoroscope, it may be totally ineffective for such an application.[399]

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395 Testimony of Nick Cartwright, vol. 42, June 13, 2007, p. 5081.
396 Exhibit P-101 CAF0683, p. 2.
397 Exhibit P-101 CAF0682.
398 Exhibit P-101 CAF0806, pp. 4-5.
399 Exhibit P-101 CAF0682, p. 1.

The RCMP intended to conduct more tests, as these results were strictly preliminary. Nevertheless, the RCMP had "…serious reservations about the effectiveness of the X-ray/fluoroscopes to detect explosive devices in baggage,"[400] concluding that there was no perfect system, and that X-rays should not be used as the sole means of screening checked baggage.[401] Instead, the RCMP suggested that a combination of the existing security systems and procedures would be more likely to increase confidence in screening out dangerous articles. This would include the use of X-ray machines and metal detectors, matching bags to passengers prior to takeoff, and the presence of explosives detection dogs to respond to specific threat situations. The Report also recommended the use of the new EVD-1 explosives detectors to check the aircraft cabin prior to departure. The EVD-1 was found to be reliable for detecting explosives like dynamite when an air sample from the aircraft cabin was taken and analyzed over the two-minute period required by the device. [402]

Similarly, the recommendations of the Kirpal Report stressed that X-ray scanners had limitations and might in fact provide a false sense of security if relied upon alone.[403] The Kirpal Report also recommended passenger-baggage matching as an essential component of checked baggage security.

In contrast, today's machines use dual energy systems that can differentiate between the various materials contained within baggage.[404] They display colourized images on high-resolution screens, and have extensive computer enhancements that assist in zooming in on target areas and providing pattern recognition capabilities. Modern X-ray machines can highlight areas of concern that resemble the components of an explosive device,[405] and can even distinguish between metallic and organic materials. This is an important feature because the presence of organic materials may signify the presence of explosives. The machines are also capable of randomly superimposing images of weapons or explosive devices onto the image of a bag being scanned, or replacing the image of the scanned bag with an image of a bag containing dangerous items, in order to keep screeners alert and motivated.[406]

X-Ray Searches: Malfunction of Air India's X-Ray Machine

The Linescan System Two X-ray machine leased by Air India had malfunctioned on at least one other occasion before June 22, 1985. On June 8th, the machine broke down and the Burns personnel inspecting checked baggage were forced to rely on the PD4 exclusively.[407] The device was serviced by Corrigan Instrumentation Services Ltd., the local Scanray dealer, on June 13th. A complex series of events had left the machine only half-functional, providing only a fuzzy image on its monitor.

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400 Exhibit P-101 CAF0682, p. 1.
401 Exhibit P-101 CAF0683, p. 4.
402 Exhibit P-101 CAF0683, pp. 2-3.
403 Exhibit P-164, p. 173.
404 Testimony of Nick Cartwright, vol. 42, June 13, 2007, p. 5082.
405 Testimony of Nick Cartwright, vol. 42, June 13, 2007, p. 5087.
406 Testimony of Nick Cartwright, vol. 42, June 13, 2007, pp. 5088-5091. When the threatening item is detected, the machine displays a message to the screener "congratulating" them on their vigilance.
407 Exhibit P-101 CAF0159, p. 1.

What was apparent was that the machine was not being well-treated. Pentti Makela, Corrigan's Manager of Engineering, came to the airport to repair the machine. He discovered that a wire under the machine's footmat had been severed,[408] which activated a series of interlocks in the machine that prevented it from generating X-rays. Meanwhile, someone had opened the locked service panel of the machine and set it into a diagnostic mode.[409] This bypassed the interlocks so that the machine once again generated an X-ray beam, but without producing a clear, refined image since it was not in its normal operation mode. Makela replaced the wire, but noted that it had been cut and repaired on two other occasions by unknown persons. The wire was being cut when the machine was moved into and out of position from its storage area some 40 feet away.[410]

After the malfunction on June 22, 1985, Makela again came to Pearson to examine the X-ray machine and to ascertain the cause of its breakdown. He tested it and found it to be working properly. Joe Corrigan, the company's president, wrote to Herb Vaney of Air India to inform him of their findings. In his letter, Corrigan emphasized that the footmat cord was being pinched when the machine was moved into and out of its storage area each Saturday, causing it to fray and split. Corrigan stated that the movement of the machine was "unwise at best," and was likely causing intermittent problems with the machine.[411]

The treatment of the X-ray scanner at Pearson must be considered a possible cause of the malfunction on June 22, 1985 – misuse or excessive movement of such a large and delicate piece of equipment would likely cause significant problems. The RCMP made a note during their investigation of the bombing that the machine was not being calibrated on a regular basis.[412] In light of the apparent tampering by persons unknown, Corrigan also recommended that careful control be exercised over the keys to the machine's access panel to prevent unauthorized access to the internal electronics of the machine.

"Low-tech" Security

In June 1984, Air India provided the RCMP and Transport Canada with intelligence that Sikh extremists were planning to become martyrs by blowing up an Air India aircraft.[413] The alleged plot involved an individual boarding the flight and checking a piece of luggage containing a concealed explosive device aboard the aircraft. The bomb would detonate while the aircraft was in flight, destroying it in mid-air. In response to the threat, the Air India Station Manager at Mirabel implemented a number of strict security measures. Air India's operations at Mirabel did not make use of X-ray scanners for checked baggage at that time,[414] but, rather, used "low tech" solutions. These included manually opening and

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408 Exhibit P-101 CAF0798, pp. 9-10.
409 Exhibit P-101 CAF0529, p. 2.
410 Exhibit P-101 CAF0798, p. 9.
411 Exhibit P-101 CAF0529, pp. 2-3.
412 Exhibit P-101 CAA0235, p. 2.
413 Exhibit P-101 CAF0161, p. 1.
414 Exhibit P-101 CAF0161, p. 2.

searching all checked baggage, subjecting all passengers and carry-on baggage to secondary security searches prior to boarding, and imposing a 24-hour hold on cargo and a requirement that it come from *bona fide* shippers. The searches were supplemented with the use of an explosives detection dog. Additionally, extra security staff were brought to Mirabel, and Air India coordinated with Mirabel's General Manager, the RCMP, and Air Canada security to finalize the local arrangements.

These measures, although slower to implement, had the advantage of being comprehensive and requiring little additional equipment. Although Air India was understandably concerned with costly delays, speed and efficiency must nevertheless be balanced against the need for thorough, proven security. There was good reason to doubt the effectiveness of the PD4, particularly if it was used as the sole backup whenever the X-ray malfunctioned. Cartwright's opinion was that using the PD4 when the X-ray malfunctioned was "…certainly better than not doing anything,"[415] but he added that because of the high threat level, it would have been wise, at a minimum, to add some other measures.

While manual searches of bags were no guarantee that a concealed explosive device would be found, the assistance of the explosives detection dog in searches made this measure more effective. Even with the absence of the explosives detection dogs on June 22, 1985, Air India had many viable alternatives to supplement or replace the use of the PD4 to screen checked baggage. As will be discussed, another "low-tech" security measure, passenger-baggage reconciliation, would have been the single most effective strategy Air India could have implemented to protect the passengers of Air India Flight 182, far surpassing any machine in use at the time.

Wallis testified that, in his opinion, the technology in use at airports was much too primitive to be reliable in 1985, and that other effective, practicable security measures were available instead. In his opinion, passenger-baggage reconciliation was "…the best defence we had" in 1985.[416] He told the Commission that he had warned of the dangers in using the technical equipment available at the time, such as X-rays and vapour detection systems, and had pushed instead for passenger and baggage reconciliation. With respect to vapour detection systems, Wallis added: "I think most experts in those days would have taken a good dog, a good bomb detecting dog over a piece of equipment any day. They might still today."[417] Wallis stated that the early X-rays were not designed as bomb-detecting pieces of equipment, but rather as a means to provide images, and should not have had a role to play in bomb detection whatsoever:

> If you were successful in hiding an image, then the screener wouldn't pick it up. That's always assuming the screener had been trained to pick up images and was conscientious in his program.
>
> ….

415 Testimony of Nick Cartwright, vol. 42, June 13, 2007, p. 5152.
416 Testimony of Rodney Wallis, vol. 35, May 29, 2007, pp. 4255-4256.
417 Testimony of Rodney Wallis, vol. 35, May 29, 2007, p. 4256.

> I mean throw the X-rays away. They're valueless; had no role to play whatsoever. And in those days, of course, the images were poor. I mean there has been massive development in technology since those days, but in the '80s, the X-ray was cosmetic more than effective. The sniffers were new technology and I've already said people would have preferred to have worked with dogs, but passenger and baggage reconciliation could be achieved easily.[418]

Even today, caution must be exercised when utilizing technology to provide security. Cartwright cited the example of the "ALPHA Molecular Locator," a device that, by design, did not actually work. The device consisted of an empty plastic body with an extendable pointer. Surprisingly, the device was sold to a number of customers, doubtless because of an unwarranted reliance on the claims of the manufacturer regarding its effectiveness. The device lives on, and is presently in its eighth generation; Cartwright testified that it now includes a flashing LED light, and some internal electronics that have not been connected. It has periodically changed names and been marketed from different countries. It is a device incapable of performing any function other than a cosmetic one, yet it remains in use today.[419]

This example highlights the important lesson that "…technology has to be looked at and has to be evaluated very carefully to ensure that it does what you think it will do and it is appropriate for the circumstances in which you propose to deploy it."[420] According to Cartwright, "…technology is not always the answer. Technology doesn't always work."[421]

A Proven Solution: Passenger-Baggage Reconciliation

Technology was given priority because it was seen as both cheaper and more efficient than other comparatively time-consuming and costly methods, such as passenger-baggage reconciliation. It is ironic that, if less faith had been placed in technology, and more tried-and-true methods like passenger-baggage reconciliation had been used to ensure checked baggage security, the suitcase containing the bomb would almost certainly have been removed.

Section 4.1.1 of Air India's security plan required that "…unaccompanied baggage must be associated with a bonafide [*sic*] passenger and his documents before it is boarded."[422] The emergency measures of the Air India security plan, intended for a high threat level, also required that:

> c) All unaccompanied baggage shall be held over for 24 hours prior to dispatch [sic] or shall be subjected to 100% examination.

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418 Testimony of Rodney Wallis, vol. 35, May 29, 2007, pp. 4256-4257.
419 Testimony of Nick Cartwright, vol. 42, June 13, 2007, pp. 5174-5175.
420 Testimony of Nick Cartwright, vol. 42, June 13, 2007, p. 5175.
421 Testimony of Nick Cartwright, vol. 42, June 13, 2007, pp. 5174-5175.
422 Exhibit P-284, Tab 68, p. 17.

> d) Checked-in baggages [*sic*] belonging to "No Shows" shall not be loaded into the aircraft.
>
> e) All unaccompanied baggage shall be inspected physically or held for 24 hours prior to forwarding.[423]

These directives appear to draw a distinction between a bag belonging to a "no-show" passenger and an unaccompanied bag. A "no-show" passenger is a passenger who has a confirmed seat allocation or reservation, or has been issued a boarding pass, but has failed to board the aircraft.[424] According to Wallis, "unaccompanied baggage" referred to checked bags that were flown separately from the owner but which were nevertheless associated with a travelling passenger.[425] This would include mishandled bags that were sent to the passenger's destination on a later flight.

Air India identified "no-show" passengers by comparing the number of passengers who checked in at the airport against the number of passengers who boarded the aircraft. Rajesh Chopra explained that, if the number of flight coupons that had been collected from the boarded passengers did not match with the number of boarding passes issued at the gate, they would ascertain which passenger was not present and would off-load that passenger's bags.[426]

It was the common position among the experts who testified that, with respect to Air India Flight 181/182, "M. Singh" was not a "no-show" passenger.[427] Accordingly, the bag he checked aboard CP Air Flight 060 with an interline tag to Delhi did not come under the "no-show" rules. Nor was the bag apparently considered "unaccompanied." Kumar testified that this was because unaccompanied bags are checked bags that are associated with a travelling passenger. As Air India had no record or reservation for "M. Singh" aboard Flight 181/182, his bag was unauthorized.[428] It had infiltrated Air India's baggage system.

Unfortunately, in June 1985, Air India employed no means of identifying an "unauthorized bag," although there is evidence Air India had used this measure earlier. The bag checked at Vancouver International Airport by "M. Singh" was considered to be such a bag. "M. Singh" did not have a reservation aboard Air India Flight 182 and, as he did not check in at Pearson Airport, Air India had not issued a boarding pass. His checked bag, interlined from CP Air to Air India, was accepted by Air Canada, Air India's ground handling agents at Pearson, when CP Air Flight 060 arrived. As it had a tag indicating that it was to be loaded aboard the Air India flight, the bag was delivered to Air India's baggage handling area and examined by Burns security personnel, either by X-ray or by PD4. It was

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423 Exhibit P-284, Tab 68, p. 21. The emergency measures of Air India's security program were applicable in June 1985. See, for example, Testimony of T.N. Kumar, vol. 37, May 31, 2007, p. 4406.

424 Testimony of Chern Heed, vol. 36, May 30, 2007, p. 4341.

425 Testimony of Rodney Wallis, vol. 37, May 31, 2007, p. 4408.

426 Testimony of Rajesh Chopra, vol. 43, June 14, 2007, p. 5336.

427 "M. Singh" *was* a "no-show" with respect to CP Air Flight 060.

428 Testimony of T.N. Kumar, vol. 37, May 31, 2007, pp. 4406-4407. See also Testimony of Rodney Wallis, vol. 37, May 31, 2007, p. 4408.

then loaded aboard the aircraft. Air India had no idea that the bag was aboard the aircraft or that it belonged to a passenger who had failed to board the interlining flight.

Chopra's characterization of the bag as "unauthorized" is understandable, but it also suggests an after-the-fact rationalization. The fact that the bag was not authorized to be in Air India's baggage system does not absolve Air India of responsibility for the bag. It does not answer the question of why there were no procedures in place to identify and isolate such unauthorized bags. The *Foreign Aircraft Security Measures Regulations*[429] required carriers like Air India to develop systems of identification to prevent baggage from being placed aboard aircraft if not authorized by the owner or operator. The bag was accepted at Pearson and sent to Air India's baggage area by Air Canada, Air India's ground handling agent. Air India's contracted security provider, Burns International Security, scanned the bag belonging to "M. Singh". For Air India to say that the bag was placed aboard Air India Flight 181/182 without authorization was no answer, as this was just the sort of act that its security plan was meant to prevent.

A much more effective system, and one that almost certainly would have identified the "unauthorized bag," was passenger-baggage reconciliation, a measure that required that every checked bag be matched to a confirmed passenger before being loaded aboard the aircraft. Although this measure was not practised widely in 1985, it was certainly understood to be an effective measure, and had been practiced in Canada prior to the bombing. It was an ideal tool to meet the threat of sabotage through explosives concealed in checked baggage.

The simplest form of passenger-baggage reconciliation was practiced in airports in developing countries that did not have the money for technology. As Wallis described it:

> [Y]ou line the bags up on the tarmac, you say to the passengers, "Identify your bag". He identifies his bag or her bag; you put it on the airplane. Anything that isn't so identified doesn't go on. Very, very, very effective way of reconciling passengers and bags and we had two instances in the subcontinent where bags didn't go on and blew up. So therefore, we knew what would have happened to the airplane had they been on the aircraft.[430]

Passenger-baggage reconciliation had been used effectively on a number of occasions prior to the bombing. This measure had been used successfully in Spain to prevent a bombing, and Lufthansa employed it periodically at Frankfurt.[431] Wallis gave the example of a bomb that was intended to be interlined to a Pan American flight out of Rome.[432] The bomb was to be placed aboard the

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429 *Foreign Aircraft Security Measures Regulations*.
430 Testimony of Rodney Wallis, vol. 35, May 29, 2007, p. 4257.
431 Testimony of Rodney Wallis, vol. 37, May 31, 2007, p. 4478.
432 Testimony of Rodney Wallis, vol. 37, May 31, 2007, p. 4412.

originating flight in a piece of interlined checked baggage. At the Yesilkoy Airport in Turkey, where the originating aircraft was taking on passengers, the basic, but highly effective, reconciliation technique described above was used: prior to boarding, the checked bags were lined up, and passengers were asked to identify them. One bag was not identified, and so it was not loaded aboard the aircraft. It contained the bomb.

Passenger-baggage reconciliation had also been successfully used in Canada before 1985, and Transport Canada was aware of its potential. A Transport Canada audit of CP Air's security, conducted in 1984, indicated that CP Air was regularly conducting passenger-baggage reconciliation during various threat situations.[433] Transport Canada considered it an effective and worthwhile measure for high threat situations, noting:

> …recently the CP Air and KLM staffs in Toronto (KLM is handled by CP Air) successfully developed and applied a passenger-baggage match system. They found it worked very well and there was definitely no bag put on the aircraft unless the passenger was on the aircraft. It caused some slight delay but it would not be an impossible situation to tolerate in the event that we did run into high threat situations in Canada.[434]

As the threat of sabotage and checked baggage security became of increasing concern in Canada, airports and airlines struggled to balance effective security against good customer service. Confirming that all checked bags were associated with travelling passengers required additional time before a flight could depart. In November 1984, Sheppard wrote a memorandum concerning the feasibility of acquiring and deploying X-ray machines to scan checked baggage at airports during general and specific threat situations. From the content of the memorandum, it is apparent that passenger-baggage reconciliation had been utilized on multiple occasions to respond to various threats, but that it was causing delays to flights and was thus a source of concern. Air India in particular was under such a high threat that it was frequently engaged in passenger-baggage reconciliation at Mirabel, but Sheppard felt that "…[b]aggage matching was so time consuming and leading to loss of confidence on the part of passengers that Air India has leased a large scan ray unit for Mirabel."[435]

Passenger dissatisfaction was likely the result of delays that passenger-baggage reconciliation caused to departing flights, along with what was likely an increase in baggage mishandling. There is no evidence that passenger-baggage reconciliation itself was ever considered ineffective. Owing to efficiency concerns, however, Transport Canada was considering X-ray inspections as an alternative. Sheppard wrote that "[m]any, many bomb threats against aircraft" had caused delays of hours at airports due to "…evacuation, baggage matching

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433 Exhibit P-101 CAF0637, pp. 6, 18.
434 Exhibit P-101 CAF0637, pp. 18-19.
435 Exhibit P-101 CAF0581, p. 1.

and opening."[436] Given the general emphasis on speed, efficiency, and customer satisfaction in an era when baggage mishandling was endemic, even when passenger-baggage reconciliation was not utilized, it is clear that Transport Canada viewed X-ray technology as something of a panacea.

Despite the concern that passenger-baggage reconciliation was time-consuming and thus inefficient, it was, ironically, the single most effective checked baggage security measure available at the time. Professor Reg Whitaker expressed its utility with respect to Air India Flight 181/182:

> Well, I think evidently that passenger baggage reconciliation carried out with any degree of diligence should have identified that bag as unidentified – as unaccompanied and had it removed.
>
> And, however that was dealt with subsequently, it would have been off the flight. I mean, that's clearly the point. Once you reach this stage where the bag had actually gotten onto the CP flight and had landed at Pearson. All the other security measures that were – additional security measures that had been taken around flight 182 all turned out to be superfluous, the additional police and so on because in effect, they were directed towards the wrong – in the wrong direction.[437]

Recommendation 4.1.5 of the IATA Aircraft / Airport Security Procedures stated: "…ensure that all baggage boarded (except expedite baggage) belongs to passengers who are travelling on the flight."[438] This was as much a customer service measure as it was a security measure, given how many bags were put onto the wrong flight at the time. When asked how one could comply with that recommendation without reconciliation of passengers and baggage, however, Wallis replied: "With great difficulty, I would suggest."[439]

Due to the large amounts of baggage moving in a major airport, however, it would not be possible to routinely have passengers identify their lined-up checked bags. Baggage mishandling was "endemic" in 1985.[440] Automation – computer assistance – was required. This is certainly an area where technology can be of immense value. Computers can manage vast amounts of data, facilitating the sorting and tracking of the thousands of bags that cross through a busy airport each day. Technology can be exceedingly useful. What is important, however, is to resist the temptation to rely too much on that technology or to overestimate the effectiveness of any one device or tool. Following the bombing of Air India Flight 182, IATA undertook to develop and promote means of automating the process of passenger-baggage reconciliation.

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436 Exhibit P-101 CAF0581, p. 1.
437 Testimony of Reg Whitaker, vol. 36, May 30, 2007, pp. 4351-4352.
438 Exhibit P-158: Aircraft/Airport Security Regulations, s. 4.1.5.
439 Testimony of Rodney Wallis, vol. 37, May 31, 2007, p. 4413.
440 Testimony of Rodney Wallis, vol. 37, May 31, 2007, p. 4413.

Failure to Learn from the Air India Bombing: Pan Am Flight 103

On December 21, 1988, a bomb aboard Pan American World Airlines (Pan Am) Flight 103 exploded in mid-air over Lockerbie, Scotland.[441] The aircraft came apart in the violence of the blast and the subsequent rapid depressurization. The explosion and crash of the Boeing 747 killed 270 people, including all 259 persons aboard the aircraft and 11 townsfolk on the ground below. The *modus operandi* of this bombing was identical to that used in the bombing of Air India Flight 182: the bomb was concealed in a piece of unaccompanied checked baggage that was loaded aboard the plane after being delivered to the airport as an interline bag from a different connecting flight.

Just as in the Air India tragedy, passenger-baggage reconciliation might well have identified the bag and prevented the bombing. Unlike the Air India tragedy, however, passenger-baggage reconciliation was a required security measure for this flight. Unfortunately, an overriding concern for expediency and cost-effectiveness resulted in the decision to bypass this measure altogether, in favour of cheaper, technological solutions. Wallis summed up the incident in his book on the disaster:

> It was a tragedy that should never have happened. Investigations were to show that the methodology used by the terrorists was a known one. It had been used to bring down an Air India jumbo jet, the *Kanishka*, three years earlier, and counter-measures to prevent such bombings existed. Furthermore, prior warning of an attack on Pan Am had been received directly by US authorities. The warning detailed the route of the aircraft and the intended timescale of the attack. Pan Am 103 was destroyed and 270 people died as a result of avoidable human failures and irresponsible corporate decision-making. A court in New York was to hear later that the airline had abandoned the passengers and crew on board the [747 named] "Maid of the Seas" to the worst ravages of international terrorism.[442]

By 1988, the Federal Aviation Administration (FAA) required that all bags interlined to American carriers must be matched to travelling passengers as well as security screened before they could be loaded aboard the aircraft.[443] Additionally, the FAA had designated the Frankfurt airport as a high risk airport, given its assessment of the threat of terrorism, making passenger-baggage

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441 Exhibit P-166, p. 1.
442 Rodney Wallis, *Lockerbie: The Story and the Lessons* (Santa Barbara Greenwood Publishing Group, 2001), pp. 1-2.
443 Exhibit P-166, p. 3.

reconciliation essential.[444] Officials within Pan Am's Frankfurt office were concerned about cutting costs, however, and decided that passenger-baggage reconciliation was too expensive a security measure. To save money, Pan Am instead set up a subsidiary company called Alert Management and bought new X-ray machines for screening checked baggage. Alert would provide the pared-down security services for Pan Am in Frankfurt. Pan Am incorrectly concluded that this arrangement relieved it of the FAA-mandated duty to match passengers and baggage.[445]

The bag containing the bomb began its journey aboard an Air Malta flight destined for Frankfurt. It had been placed aboard the flight by a Libyan security officer, who had access to the baggage tags used by the airline as well as access to the baggage handling area.[446] He tagged the bag containing the explosive device for interlining so that it would be flown to Frankfurt and transferred to the Pan Am flight to London.

At the Frankfurt airport, the bag was run through an X-ray machine and cleared by security. The X-ray machines were no more advanced than those in operation in June 1985. They still displayed black and white images and lacked high-resolution displays. The security officer operating the X-ray machine for Pan Am's checked baggage at Frankfurt was inexperienced, had poor eyesight, was not wearing his glasses, and had not been trained. As Wallis explained, only two or three months before the bombing "…he'd been a cleaner somewhere and was now an X-ray specialist. So he missed it and the bag went onto the Pan American flight, just as the bag went on to the Air India Flight."[447]

The Pan Am flight proceeded to Heathrow Airport in London. Unlike Air India Flight 181/182 which changed its flight number from 181 to 182 upon leaving Montreal but did not change the actual aircraft, Pan Am Flight 103 changed aircraft at Heathrow. A Boeing 747, *Maid of the Seas,* was waiting at Heathrow, and would be making the transatlantic flight to the United States as Pan Am Flight 103. All connecting passengers would have to disembark from the plane arriving from Frankfurt and board the *Maid of the Seas*. All baggage destined for the United States would also have to be transferred from one aircraft to the other.

Conclusion

There is no one-size-fits-all solution for aviation security. A successful security strategy consists of multiple security measures, and the ability to deliver appropriate responses depending on the threat assessment. One of the critical components of any aviation security program will be technology: X-ray machines, metal detectors, and computer systems which are part of the airport experience of thousands of travellers in Canada each day. With the assistance of technology, some degree of efficiency within a busy international airport

444 Testimony of Rodney Wallis, vol. 37, May 31, 2007, p. 4518.
445 Exhibit P-166, p. 5.
446 Testimony of Rodney Wallis, vol. 37, May 31, 2007, p. 4516.
447 Testimony of Rodney Wallis, vol. 37, May 31, 2007, p. 4517.

can be maintained. Nevertheless, effective security also depends on the ability to anticipate a threat, including sabotage, and to design reliable methods for combating it.

When the *Kanishka* departed Pearson for Mirabel on June 22, 1985, it carried an explosive device that had not been detected by any of the modern equipment in use. This was the culmination of a number of tragic failures. Air India placed undue faith in the X-ray machine, given the lack of training of its operators. It also placed undue faith in the PD4, and its failure at the test on January 18th demanded an alternate response. Transport Canada and the RCMP had serious doubts about the effectiveness of the device, and yet took no action to alert Air India of the second failure of the PD4 following the test on January 19th. The device was put into the hands of inexperienced private security guards after a fleeting demonstration. The safety of all 329 passengers and crew aboard Air India Flight 182 rested on the twin assumptions that the device would work properly and that it would be used properly.

Air India placed undue faith in the abilities of both X-ray machines and the PD4 in protecting the safety of its passengers, crew, and aircraft. It did so despite having good reason to question and re-examine their effectiveness, and despite the existence of viable alternatives such as physical searches of checked bags and true passenger-baggage reconciliation. Technology will always have practical limits, and these limits will be compounded when unskilled, inexperienced, or poorly trained operators are involved. Transport Canada and the RCMP, meanwhile, expressed doubts about the PD4, while failing to take any action to inform Air India of a subsequent failed test or to formally recommend that Air India not rely on the PD4 for checked baggage security.

2.4 Security Culture at Canada's Airports

Burns Security – little training, low pay and no motivation say it all.
- Minutes of Meeting, Department of Justice, January 7, 1986.[448]

Despite the extensive evidence surrounding the threat of sabotage to civil aviation in the early 1980s, the evidence is that, at the same time, the "culture of security" at Canada's major international airports was surprisingly lax. Canada was not alone in having a lax security culture; the *CATSA Act* Review Advisory Panel concluded that there was no "security awareness culture" in North America in 1985, writing that:

> The air carriers paid more attention to competitive pressures, and security did not loom as large. For example, screeners hired by airline companies received only the most rudimentary training. The primary concerns of air carriers were to please customers and reduce costs. The reason for the human error: people and systems are reluctant to pay the price for what is not seen as an urgent need until the gravity of the threat becomes unmistakable.[449]

448 Exhibit P-101 CAC0517, p. 5.
449 Exhibit P-157, p. 72.

Although Europe had become increasingly focused on aviation security since the 1960s, Canada had not experienced a major incident against aviation security in the 1980s and this fostered a general culture of complacency. There were many dedicated and hard-working individuals who strove to ensure the safety of air travel, but there were nevertheless individuals within Air India, Burns International Security, and the RCMP who were "…going through the motions" of providing basic security without necessarily being focused on preventing acts of terrorism. The absence of a purposeful security focus was reinforced by the anemic regulatory structure governing carrier operations, the lack of meaningful inspections and sanctions, and an undue focus on the vanishing hijacking threat posed in the 1970s.

As noted by the *CATSA Act* Review Panel, there existed no specific protocol for government agencies, such as Transport Canada and the RCMP, to provide security assistance to the air carriers. Instead, security was seen as "an individual company issue."[450] Private commercial interests were responsible for protecting the public interest. This protection was provided by poorly-trained private security personnel and unmotivated airport personnel, paid minimum wage.

The air carriers' supervision of the contracted security companies was inadequate. Transport Canada's Civil Aviation Security Branch considered the fact that security companies were generally under the direct supervision of an air carrier's customer service section (as opposed to their security section) to be a significant security issue. This was perceived to be a problem due to the fact that the air carriers' customer service focus would often be in direct conflict with security priorities. For example, there were occasions when contracted screening companies were urged to speed up the passenger screening process and get passengers through as quickly as possible.[451] One such incident involving Air India is found in the written statement of Burns branch manager Holger ("Nick") Kordts, who informed the RCMP after the bombing that Air India would have security "…rush through three or four older persons," if pressed for time.[452]

Designating and Training Security Officers

A 1982 Transport Canada report outlining issues facing the development and implementation of the National Air Transport Security Plan noted that:

> Employees of the private security agencies hired by the air carriers are generally not of a high calibre in terms of educational level, experience or permanence. They are located at a low point in the wage structure … and due to low salaries agencies are frequently unable to attract 'the best

450 Exhibit P-157, p. 72.
451 Exhibit P-101 CAF0774, pp. 18-19.
452 Exhibit P-101 CAF0538, p. 8. See also Exhibit P-283, Tab 27, p. 1: The minutes of an Air India/Air Canada debriefing following the initial Air India flights out of Pearson centred around delays being caused by throngs of well-wishers and lagging passengers. Air India was concerned about being "…an 'off-sked' departure – looks unprofessional; get a bad reputation." It was recommended that Burns deploy a "firm, male security guard" who would take a "tougher approach".

> people'. This presents a difficult situation, as the employees are not hired by Transport Canada but they do represent the first line of defence in T.C.'s security program. It is interesting to note that in the USA standards are being developed to ensure that these employees can both see and read (This may indicate the prior level of performance on the job). While the contracting of private security companies is not a Transport Canada responsibility, it does raise questions which should be addressed in the context of this planned exercise. Is passenger screening being provided in the most effective manner? Should these private guards not be security cleared by the RCMP?[453]

The *Aeronautics Act,* as it stood at the time of the bombing, limited the designation of "security officers" to properly qualified personnel.[454] Prior to 1984, however, there were no criteria specifying what attributes would make a security company employee "properly qualified."[455] In 1984, Transport Canada issued a set of criteria that would be required for qualification as a security officer. Transport Canada also developed new training programs which were issued to the carriers, who bore responsibility for training their security personnel. No private security officer could screen passengers and their baggage and personal belongings at an airport without successfully completing the initial and refresher training mandated under the security measures set by the Minister of Transport.

The program materials were audio-visual presentations utilizing slide show carousels and audio cassettes. Along with courses on the use of X-ray and metal detection units for passenger and carry-on bag screening, the materials included courses such as "Don't Pocket Your Protection," designed to familiarize airport personnel with their restricted area passes and their proper use, and "It Doesn't Happen Here," which utilized actual incidents of hijacking and missile attacks against Canadian targets to solicit the support of airline personnel in maintaining alertness and countering the threat.[456]

Burns International Security Services Limited Personnel (Burns) was the private security company that provided the bulk of passenger and baggage screening services at the major airports in Canada in 1985. Burns was under contract with Air Canada and Air India to provide security officers at Mirabel International Airport [457] and Lester B. Pearson International Airport. At Pearson, Burns provided security services under several different contracts. It was under contract with CP Air, which managed the domestic flight operations for itself and 26 other airlines at Terminal I, and was also under contract with Air Canada,

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453 Exhibit P-101 CAF0774, p. 19.

454 *Aeronautics Act*, R.S.C. 1970, am. S.C. 1973-74, introducing s. 5.1(9): "The Minister may designate as security officers for the purposes of this section any person or class of persons who, in his opinion, are qualified to be so designated."

455 Exhibit P-263, p. 48.

456 The catalogue of Transport Canada training programs can be found at Exhibit P-101 CAF0647.

457 Exhibit P-101 CAE0249, p. 17. According to the RCMP, "In Canada, Air India contracts its passenger security services to Air Canada, which in turn contracts its passenger security to Burns Security."

which managed the international flight operations for itself and 18 other airlines at Terminal 2.[458] Additionally, when Air India prepared for its new operations at Pearson in January 1985, it also contracted with Burns to provide additional security for its weekly flights on the recommendation of Air Canada's security manager.[459] A letter from Burns to Air India, dated January 23, 1985, confirmed the contract to provide 11 security officers and two security supervisors each week to X-ray checked baggage, guard the aircraft and conduct secondary screening of passengers and carry-on baggage.[460]

As of 1984, Transport Canada required that security officers:

- Be 18 years or older;
- Be in good general health without physical defects or abnormalities which would interfere with the performance of duties;
- Be licensed as a security guard and in possession of the licence while on duty; and
- Meet the training standards of Transport Canada consisting of successfully completing the Transport Canada passenger inspection training program, attaining an average mark of 70 per cent, and undergoing refresher training within 12 months from previous training.[461]

The security companies under contract with air carriers would themselves have to meet Transport Canada requirements providing that a company:

- Was licensed in the province;
- Used a comprehensive training program which had been approved by Transport Canada and was capable of being monitored and evaluated;
- Kept records showing the date each employee received initial training and/or refresher training and the mark attained; and
- Provided supervision to ensure that their employees maintained competency and acted responsibly in the conduct of searching passengers and carry-on baggage being carried aboard aircraft.[462]

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458 Exhibit P-101 CAF0603, p. 5.
459 Exhibit P-283, Tab 5, p. 3.
460 Exhibit P-284, Tab 23, p. 2.
461 Exhibit P-101 CAF0089, p. 18.
462 Exhibit P-101 CAF0089, p. 18.

Weaknesses of Private Security Firms

In practice, however, the security companies responsible for hiring and training these security officers were awarded contracts on the basis of being the lowest bidder.[463] The security officers were paid minimum wage, poorly trained, and subject to low or unspecified performance standards. As a result, there was high employee turnover and low security motivation.

The employees of the carriers working at airports across Canada were not subject to criminal record checks or credit checks. Private security officers were put to work screening the public, and aircraft groomers went aboard aircraft, without any security clearance.[464] Transport Canada required its own employees to undergo background and criminal record checks in order to obtain security clearance. In the 1970s, Transport Canada had considered creating a program to conduct similar security checks for all private sector airport and airline employees with restricted area passes and access control passes. The conclusion reached in 1979, however, was that Transport Canada lacked the authority to require fingerprints and personnel history forms from airline and airport personnel, and that the RCMP (including the Security Service) lacked the authority to provide Transport Canada with information obtained through security checks. As such, it was decided that the aviation industry companies themselves would bear responsibility for any reliability checks.[465]

Mr. Chern Heed, who served as the Airport General Manager at both Vancouver and Pearson Airports, testified about the great ease with which a restricted area pass for an airport could be obtained under this system in 1985. According to Heed, "…basically the security pass, or the airport restricted security pass was issued on the face of the company. So if your employer said you worked for ABC company, and referred the application to the airport manager, he was issued a restricted area pass."[466] That is to say, if the employer, which did not conduct security checks of its employees, requested a pass granting that employee access to the restricted areas of the airport, then it would be issued.

Examples of Security Failures

As a consequence of this system, the very personnel charged with security or screening functions were frequently unmotivated, improperly trained, unprofessional, or incompetent. This is exemplified in a December 1982 letter written to the airport manager at Pearson by a member of the travelling public concerning the conduct of the screening staff. The letter described an experience of going through security at Terminal 2, the international terminal at the airport. The traveller's carry-on baggage was sent through without being examined by the screeners, who were conversing amongst themselves "…in a most joyous mood." Curious to see what might actually get a reaction from the

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463 Exhibit P-157, p. 55.
464 Exhibit P-157, p. 55. See also Testimony of Brian Simpson, vol. 32, May 23, 2007, p. 3649.
465 Exhibit P-364, pp. 5-6.
466 Testimony of Chern Heed, vol. 38, June 1, 2007, p. 4640.

distracted security personnel, the traveller walked directly past the checkpoint, bypassing the metal detector entirely, and attracting no attention from the guards. He wryly told an Air Canada attendant that he could have gone through the security checkpoint with a shotgun without notice, concluding that as a person "…who frequently commutes that route for business reasons and being quite aware of what is happening around the world, I must admit that being one of the 250 passengers that night**,** this incident really scared the hell out of me."[467]

Paul Sheppard, the Director of Civil Aviation Security at Transport Canada, was concerned enough to write a response to Air Canada's Director of Security. Air Canada contracted with Burns to provide private security guards. Sheppard stated that the air traveller's observations "…come as no surprise,"[468] pointing out that, in his experience, the security at Pearson's international terminal had been of much lower quality than the domestic terminal at the same airport. He was concerned about the fact that the security screeners were inadequately supervised, as this resulted not only in a very poor image, but also in poor security.[469]

Transport Canada designed the training courses and materials used by the private security companies to train security officers, and had a responsibility to evaluate the training of screening personnel by the air carriers.[470] Sheppard conducted tests of the security personnel at both of Pearson's terminals in 1983, and was very concerned about the results. The tests disclosed that both the Burns security officers and the RCMP had improperly responded to critical threats.[471] The Burns employees, in particular, were poorly trained and unprepared to diligently respond to threats and unexpected situations.

Penetration tests were conducted to assess the Burns employees' responses when a weapon was hidden in carry-on baggage. A briefcase containing a weapon was taken through the security checkpoint where passengers and carry-on baggage entering the departure area of the terminal were screened by X-ray and metal detectors. The weapon was not otherwise concealed or obscured in any of the tests, and it showed up clearly on the X-ray screen used to screen carry-on baggage. According to the screener training which all private security officers were required to complete, the proper response when a weapon is found is to leave the briefcase in the machine, or set it aside, and call the police with a silent alarm.

At Terminal I, the domestic terminal at Pearson, the screeners identified the weapon and then became flustered. Sheppard, posing as the traveller carrying the weapon in his briefcase, claimed to know nothing about it. The screener left to call for a supervisor, giving Sheppard the opportunity to pick up the briefcase

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467 Exhibit P-101 CAF0559.
468 Exhibit P-101 CAF0560.
469 Exhibit P-101 CAF0560.
470 Exhibit P-138, p. 17.
471 Exhibit P-101 CAF0566.

and take the weapon.[472] Ultimately, the RCMP were signaled and responded four minutes later. The RCMP members attended, but they did not approach in a way that would enable the second officer to provide backup to the first.

At Terminal 2, the weapon was again identified and Sheppard again pleaded ignorance. The guards ran the briefcase through the scanner again to show their supervisor, who proceeded to press him as to whether he had authorization to carry the weapon on board and insisted that he open the case. Exasperated "…that they were going to continue to [hassle] me and never call the RCMP," Sheppard broke off the test and identified himself.[473]

Sheppard asked the Burns guards why they did not use the silent alarm to summon the police, and they replied that they had been told to only use the silent alarm when their lives were in danger. As he noted, their lives certainly were in danger, given that he could have seized the weapon when asked to remove it from the briefcase. Sheppard asked the RCMP whether they had indeed instructed the Burns personnel not to summon them, even when they positively identified a weapon. According to Sheppard's report, the response given to him by the RCMP special constables was that the Burns personnel had been using the silent alarm far too often for trivial matters, such as oversized bags and jokes involving weapons, and so they had been instructed not to use the silent alarm "…unless their lives were in danger or they found a weapon or a bomb**."** Unfortunately, as Sheppard observed, "…[t]he latter part of the communication was apparently lost along the way by all concerned."[474]

Sheppard's review included a checklist for security matters found to be satisfactory or unsatisfactory. It included the question, "Have the contract security or air carrier personnel received adequate training regarding the air carrier security program, requirements, their authorities and responsibilities, especially in respect of removal of weapons and dangerous objects from passengers?" The form is checked "No," followed by the handwritten annotation "Nor the RCMP."[475]

Other findings worthy of note from the inspection checklist included the fact that the item "Is baggage checked only on the flight for which the passenger has a ticket?" is checked "No", with the handwritten annotation "Standby bags shipped." Additionally, the item "Is unaccompanied baggage cleared and, if necessary, examined by a responsible employee of the air carrier prior to being loaded aboard the aircraft?" is checked "No." Finally, the item "Date air carrier last tested the passenger screening system with simulated weapons. Results satisfactory?" is checked "No."[476]

Sheppard expressed his concern about the lax security posture in a letter to the Manager of Safety and Security at Pearson Airport, writing, "Obviously a lot

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472 Exhibit P-101 CAF0566, p. 1.
473 Exhibit P-101 CAF0566, p. 1.
474 Exhibit P-101 CAF0566, p. 2.
475 Exhibit P-101 CAF0566, p. 5.
476 Exhibit P-101 CAF0566, pp. 6-7.

of work remains to be done, particularly with the air carriers and the private security guard company holding the contract."[477]

General Complacency about Airport Security

The difficulties in maintaining vigilant and competent security at airports were by no means limited to the private security officers working for the air carriers. Throughout the major Canadian airports, many employees of airlines, and other airport tenants, resisted adopting a focused, purposeful awareness of security issues. They contributed to the security failures through simple acts and omissions such as leaving security doors propped open or unlocked, or failing to display their security passes in restricted areas. In a larger sense, the low motivation and the disregard for security measures meant that the army of airport workers could not truly be expected to act as eyes and ears on the ground to alert authorities to suspicious activity. Along with high staff turnover, low pay, and minimal training, the relatively incident-free years of the early 1980s bred a sense of complacency and engendered faith in the idea that "it couldn't happen here."

A May 1984 Transport Canada memorandum to its Dangerous Goods and Civil Aviation Inspectors addressed areas of security requiring considerable improvement at the larger airports. A number of security lapses caused concern for the Civil Aviation Security branch, including the failure to verify that only *bona fide* passengers entered the screening areas and sterile areas, and the failure of personnel to display their identification cards when inside secure areas. The memorandum stated that "…[w]e have been concerned that an attitude of complacency was developing within some areas of aviation security, indeed it was expected to develop. This is just one example of how it would surface."[478]

The inspectors were directed to monitor the larger airports in their respective regions and alert the carriers to any observed shortcomings in their security systems. Unfortunately, such inspections would not be frequent. There were only 11 inspectors across Canada to conduct such reviews for the roughly 70 carriers operating at the dozens of Canadian airports across the country,[479] 19 of which were major Class I or Class II airports.[480] As the *CATSA Act* Review Advisory Panel noted, they were "…thinly stretched for the tasks and breadth of the industry they were responsible for monitoring."[481]

Security at an airport relies on more than being able to detect weapons in carry-on baggage or a timely response by police. Whenever airport staff are inattentive, or cut corners, or cease to pay regard to security requirements, such as prominently displaying their identification badges when accessing restricted parts of the airport, some of the most effective defences against unauthorized access and criminal activity are disabled.

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477 Exhibit P-101 CAF0567.
478 Exhibit P-101 CAF0570.
479 Exhibit P-157, p. 22.
480 Exhibit P-101 CAF0638, p. 2.
481 Exhibit P-157, p. 22.

1984 Security Inspection at Pearson Airport

In April 1984, a security inspection was conducted at Pearson airport. Transport Canada provided comments with respect to security deficiencies that required action, and the review was discussed at a meeting of Pearson's Airport Security Committee on June 14, 1984. Sitting on the committee were representatives of the airlines operating out of Pearson, along with Transport Canada and the RCMP. All present were given a copy of the airport security review and asked to provide comments.[482] Among the issues highlighted at that meeting was the fact that carrier personnel were leaving the security doors to the departure lounges and aircraft bridges unlocked or propped open, allowing anyone unfettered access to passengers and aircraft. All present were reminded that it was the airlines' responsibility to ensure that doors were closed after a flight.[483]

This issue of security lapses was again the theme at the meeting of the Airport Security Committee held on September 13, 1984, when Dale Mattson, who chaired the meeting, reported that departure area doors continued to be found unlocked. Also of concern was the fact that incomplete and invalid security passes were being issued by the carriers. At the same meeting, Mattson noted that he had not received any comments concerning the report of the Airport Security Review held in the spring, and asked that it be given everyone's immediate attention, adding that responses were expected by the end of October.[484]

The ten Class I airports in Canada in the 1980s (the eight international airports plus Ottawa and Dorval airports) each had Transport Canada safety and security officers who reported to that airport's general manager. They were required to conduct annual security surveys to assess the airport's security measures and make recommendations.[485] Transport Canada felt that the reviews had a great deal of value, but acknowledged that they were not without weaknesses:

> If there is a fault to be found in these surveys, it is that they may not have the "teeth" to correct the problems when holes are identified in the system. An example of this was one airport which had many faults which were identified year after year but efforts at correcting the problems were held up due to other more pressing priorities.[486]

It is not surprising, then, that at the next Pearson Airport Security Committee meeting, held in December 1984, Mattson once again pointed out that no one on the committee had submitted any comments or responses to the Airport

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482 Exhibit P-101 CAF0079.
483 Exhibit P-101 CAF0079, p. 5.
484 Exhibit P-101 CAF0080, pp. 2-3.
485 Exhibit P-101 CAF0654, p. 5.
486 Exhibit P-101 CAF0654, p. 5.

Security Review.[487] He emphasized that, since a number of the recommendations would impact carrier operations, he would like to receive the comments of the committee members as soon as possible.

General Inattention to Security Issues

One of the realities of a busy international airport is that some day-to-day operational matters will take precedence over others. Clearly, however, the inattention to fundamental questions of security was a deep and pervasive failing on the part of many individuals, and changed little with time. It was a theme repeated at airports across the country.

In April 1985, at a meeting of the Vancouver Airport Security Committee, the Chairman expressed his concern over the use of Restricted Area Passes at the airport, and cited the example of an employee who had pasted a picture of the Pope on his pass and attempted to use it to gain access. On another occasion that employee had pasted the picture of a cartoon character on his pass. The pass was confiscated, and all representatives at the meeting were warned to explain to their employees the serious consequences of abusing the pass system. At this meeting, it was also observed that security gates at the airport were being left open and unattended.[488] The security measures intended to prevent unauthorized access to restricted and vulnerable sections of the airport were being ignored.

The security picture was no different at Mirabel International Airport (Mirabel) in 1985. As outlined in the testimony of Daniel Lalonde, the security officers employed by the air carriers at Mirabel were poorly trained and poorly paid. This was despite the fact that the tasks with which they were charged, such as properly operating X-ray scanning equipment, required attention, skill, and diligence. Lalonde testified that most of these people were not particularly focused on security, and he included himself in that assessment. With no prior security experience, no training in screening checked baggage, and only one hour of prior training for screening carry-on baggage using a different X-ray machine, Lalonde was asked to help scan the checked baggage for Air India on June 22, 1985. He did not know what to do, or whom to contact, when suspicious articles of checked baggage were found.[489]

Brian Simpson provided illuminating testimony concerning the continuing problems affecting the security culture at Pearson in June 1985. He testified that, in general, the airport employees on the ground were simply not concerned about security. Neither he nor his colleagues among the Air Canada airport staff had any respect for airport security; they also viewed the private security officers as "a joke." The consensus amongst airport workers was that the private security guards were neither authoritative nor good at their jobs. The RCMP special constables were held in the same low esteem.

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487 Exhibit P-101 CAF0082, p. 2.
488 Exhibit P-101 CAF0086, p. 5.
489 The full details of his story can be found in Section 1.11 (Pre-bombing), The Cost of Delay – Testimony of Daniel Lalonde.

Security was simply not part of the daily routine for the airport crews. They were not given any security training or motivational training that would encourage them to make the security and safety of the airport and aircraft a part of their jobs. Simpson testified that he himself was delinquent in displaying the identification pass indicating that he was authorized to work in restricted parts of the airport and aboard aircraft. He would put it in his pocket so that he did not lose it while working. Nevertheless, he had been asked to show his pass only twice in nearly 20 years of employment at Pearson.[490]

In the prevailing security environment, nothing systematically prevented airport workers from entering any part of the airport or going aboard almost any aircraft, whatever their intentions. No records were kept of who went aboard an aircraft or entered a restricted area, or why they did so. Simpson testified that he boarded Air India Flight 182 on a whim on June 22, 1985, and, not only was he not challenged or hindered in any way, but he would not have been concerned had anyone, even his own supervisor, caught him doing so. There was no stigma in breaking the rules, and certainly no fear of consequences for any breaches. Simpson testified "I could have gone on every aircraft on every gate that day and any other day and no one would bat an eye."[491]

Simpson also confirmed that secure airport doors were occasionally left open at Pearson, and that door lock codes were frequently written on the walls. Anyone attempting to enter a secure area, even if they had no business there, might well see the code written on the wall that would enable their entry. In addition, the door codes were changed infrequently and were easy to guess. For example, the bridge doors could be opened by punching in the number 4 followed by the gate number.[492]

April 1985 Inspection of Air Carrier Security at Pearson

Airport management at Pearson were concerned enough by the exceedingly lax security that, in April 1985, they conducted an inspection of air carrier security. The tests focused on the passenger screening points for both the domestic and international terminals, which were staffed by Burns security officers. The inspection, which was also conducted to provide reference material for the pending Papal visit, revealed that the security headaches at the airport continued. It is revealing in itself that among the report's findings and conclusions was the recommendation that testing of security screening personnel be done on a monthly or bi-monthly basis.[493]

The inspection report indicated that a number of problems resulted from inadequate and inconsistent staffing at passenger screening checkpoints. Without an adequate number of screeners at the checkpoints, the screeners were distracted and forced to hurry through their duties, particularly at peak

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490 Testimony of Brian Simpson, vol. 32, May 23, 2007, pp. 3650, 3681, 3697.
491 Testimony of Brian Simpson, vol. 32, May 23, 2007, pp. 3649, 3694.
492 Testimony of Brian Simpson, vol. 32, May 23, 2007, pp. 3643, 3677, 3682.
493 Exhibit P-101 CAF0603, p. 8.

periods. For example, body scans of passengers conducted with hand-held metal detectors were hurried and incomplete, averaging less than three seconds per person.[494] At one screening point in Terminal 2, only one security screening guard out of three was actually working when the inspection was conducted. Of the other two, one was reading a newspaper and the other was using a pay phone.

Penetration tests conducted during the inspection revealed that inattentiveness and rushed searches by passenger and carry-on baggage screeners continued to result in significant security deficiencies at both terminals at Pearson. For example, although the inspector conducting the test presented an invalid boarding pass at the passenger screening point at Terminal 2, the security officers allowed him to proceed without even a cursory examination of its details. As the inspector walked through the metal detector, it sounded an alarm indicating that there were metal objects concealed on his person. He offered to empty his pockets, but received no response. Instead, he was quickly examined by the hand-held "wand" type metal detector; this device also beeped, but he was not searched further. During the subsequent briefing about the test, the guards acknowledged not hearing the noises made by the wand.[495]

At the passenger screening point at Terminal I, the inspector's boarding pass was once again not examined, and when the walk-through metal detector reacted with an alarm as he walked through it, he again volunteered to empty his pockets but received no response.[496] He was again scanned by a "wand" type metal detector which beeped in response to the keys in his pocket, but he was not searched further or asked to remove anything from his pockets.

The weapon concealed in the inspector's carry-on briefcase was, fortunately, detected when it passed through the X-ray scanner at the security screening checkpoint. Unfortunately, the silent alarm for that unit had not been installed, meaning that the security officer turned away to activate the alarm on another unit. In the confusion that ensued, the inspector moved into the sterile area, and the screener lost track of both where the briefcase had gone, and whether the "suspect" was the inspector or the passenger behind him.[497] The screener then left with the RCMP in a futile search for the suspect in the sterile area and departure rooms, while the inspector left the sterile area altogether and returned to the main terminal. He then joined a line of passengers at the next passenger screening point and conducted a further penetration test.

The final penetration test at Terminal I was more thorough. This time, the RCMP were successfully summoned and arrived after three minutes, along with the security officer from the first passenger screening point. Unfortunately, the security officer was unable to identify the inspector as the suspicious passenger or even the briefcase as the one with the concealed weapon in it.[498]

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494 Exhibit P-101 CAF0603, p. 6.
495 Exhibit P-101 CAF0603, p. 8.
496 Exhibit P-101 CAF0603, p. 9.
497 Exhibit P-101 CAF0603, p. 9.
498 Exhibit P-101 CAF0603, p. 10.

Professor Peter St. John of the University of Manitoba is an expert on aviation terrorism, and was critical of the security in place at Canadian airports, even before the bombing of Air India Flight 182. He testified that, after witnessing an assassination attempt against the Indian High Commissioner in downtown Winnipeg, he became aware of the threat of violence posed by some radicals within the pro-Khalistani movement.[499] As he learned more about the violent potential of the movement, which was well-funded and whose extreme members were outspoken in their fervent hatred of the government of India, St. John suspected that increasingly ambitious and sensational attacks lay ahead.

With the growing threat of violence from extremist members of the Sikh community coming to the fore, and the history of terrorists targeting civil aviation, the lax aviation security in Canada made airlines operating in Canada a possible target for hijacking or some other threat. When asked to provide an example of his observations of airport security during this period, St. John testified:

> I had a student working in [passenger] screening and the Prime Minister of Canada went by him but he was so drugged [*sic*] after about half an hour working that he didn't recognize the Prime Minister of Canada standing in front of him. And there were little indicators like this that airport security was going through the motions but that it wasn't really good security.
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> [T]he ticket counter people were not really seriously asking you questions about security, not even looking you in the eye. There was just a concern about little things like that, that people were breaking rules.… I don't want to exaggerate because I developed – these perceptions over a long period of time, and I began to look much more sharply at airport security, but at this time I was concerned about this because I thought it was really lax.[500]

St. John testified that Canada's poor security was such a concern to him that, in 1985, he began organizing a conference to be held in January 1986 to discuss the challenges facing Canada's aviation security system. According to St. John, Transport Canada was dismissive of the idea for a number of reasons, including the fact that "Nobody else was having an airport security conference." The conference went ahead in any case and, in an ironic twist, a hijacking took place at Winnipeg airport while the conference was in full swing. The RCMP took over ninety minutes to respond to the incident, which could have "…blow[n] the whole front of the airport away, which was all glass, and it would have injured a lot of people if it had happened."[501]

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499 Testimony of Peter St. John, vol. 35, May 29, 2007, p. 4230.
500 Testimony of Peter St. John, vol. 36, May 30, 2007, p. 4290.
501 Testimony of Peter St. John, vol. 35, May 29, 2007, pp. 4232-4233.

Post-Bombing Security Still Lax

In the aftermath of the bombings, a July 1985 security audit of Mirabel, Vancouver and Pearson International Airports conducted by Transport Canada revealed that the security breaches and lax security posture continued.[502] As was the case before the bombing, these security failures were caused by inattention, complacency, incompetence, and low security awareness.

In Toronto, the security measures designed to prevent unauthorized access to sensitive areas of the airport were in shambles. The conclusion reached was that many areas of the airport were vulnerable to determined or even accidental entry. For instance, thousands of the identification passes that had been issued to personnel, and which allowed access to restricted parts of the airport, had been lost, stolen, or never returned, and could not be accounted for.[503] The access codes for security doors with combination locks had not been changed since the day they were installed, as Simpson also noted in his testimony, and the codes themselves were written on many of the doors. It was found that credit cards could open locked access doors at the airport, that access to security keys was not well controlled, and that the keys could be easily duplicated. The perimeter fencing at the airport was also not up to standards,[504] with barbed wire having been improperly installed, and parts of the ground underneath the fence washed away by a creek, with the result that it was possible to penetrate the fence and get into the airport.

Access control to the warehouse areas of the airport was also found to be weak. Consequently, cargo and mail could be accessed with relative ease, and the RCMP noted that "substantial losses" were incurred each year as a result of theft.[505] Of particular concern was the inadequate control of access to the aircraft parked at the airport. The audit report noted that "…the ability to control restricted access is highly suspect and instances have been noted where unauthorized access to aircraft has occurred," and "…the access of caterers, cleaners, etc. to the aircraft is not closely monitored."[506] The aircraft were also parked adjacent to airport security fencing due to space constraints.

Operationally, the Airport Security Plan had not been updated since 1981, and did not provide for a stepped response to specific threat situations.[507] Of significant concern was the fact that it did not assign specific responsibilities within the Canadian Air Transportation Administration (CATA) for various security tasks and a monitoring function. Additionally, the Airport Disaster Plan also did not define responsibilities of CATA and the air carriers under various alert situations. This caused so much confusion that, during a recent hijacking

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502 Exhibit P-101 CAF0555, CAF0695; Exhibit P-457.
503 Exhibit P-101 CAF0555, p. 4.
504 Exhibit P-101 CAF0555, p. 5.
505 Exhibit P-101 CAF0555, p. 7; Exhibit P-457, p. 18.
506 Exhibit P-457, p. 20. See Section 1.9 (Pre-bombing), Mr. Simpson's Visit to the Air India Aircraft for an example of this lax monitoring.
507 Exhibit P-101 CAF0555, p. 4.

threat, the airport took 36 hours to reach full alert status while both RCMP and CATA headquarters worked to determine the necessary responses. The state of readiness at the airport was also called into question during this situation, as no explosives detection dog was available and airport workers were unable to properly interpret the readings given by the explosives detection device used instead.

Moreover, it was found that follow-up to the regulatory inspections at Pearson was "inadequate."[508] The Security Committee had not followed up on its 1984 security survey, and there was a lack of day-to-day monitoring of carrier and airport security measures. Incident reports compiled by Burns Security and RCMP officers were also not being routinely reviewed, analyzed, and acted upon, and various penetration tests conducted had established that even the screening of passengers and carry-on baggage did not guarantee that airport sterile areas were completely secure.

Other problems highlighted included the fact that contracts with Burns Security did not specify performance standards, meaning that the contract was silent on the objectives and requirements that Burns needed to satisfy in order to fulfill its contractual obligations to provide thorough and competent security services.

There were also prominent lapses at Vancouver International Airport, where gates were left open and unguarded, and the perimeter fencing that surrounded the airport was inadequate to prevent unauthorized persons from entering.[509] In some areas, the fencing was shorter than required, or lacked barbed wire. In other areas, the fencing had been damaged, and unauthorized individuals would have no difficulty in moving underneath it. In another area, a large quantity of soil had been piled up near the perimeter fencing making it easy to climb the hill and get over the fence. Meanwhile, aircraft parked at the airport were left unlocked and unsecured and "…unguarded during all hours of the day and night."[510] RCMP patrols had identified this problem and brought it to the attention of air carriers on numerous occasions, but the security failure persisted.

Other security problems at Vancouver International Airport included the fact that there had been no motivational or security training for personnel, resulting in complacency and a lax security posture at the airport. There had not been a proper test of the airport's security and emergency plan in at least four years. Although an exercise had been conducted in June 1985, it was only a partial exercise as not all participants were available, and the exercise tested emergency responses to a simulated crash, and not a bomb threat or other security threat. Additionally, inspections of air carriers did not survey or address any of their security measures, and, as a consequence, faults in the design or implementation of carrier security programs did not come to the attention of responsible personnel.[511] Finally, as in Toronto, no formalized procedures existed to monitor airport security measures on a daily basis.

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508 Exhibit P-101 CAF0555, pp. 4-6.
509 Exhibit P-101 CAF0555, p. 1.
510 Exhibit P-457, p. 7.
511 Exhibit P-101 CAF0555, pp. 1, 3.

At Mirabel, the security audit revealed that RCMP special constables and commissionaires were not examining airport passes thoroughly. Access to the cargo area was easily obtained. Airport personnel were not regularly wearing their passes, and control over the security passes themselves was ineffective, with the result that passes were not being returned and were not accounted for, with some even being taken out of the country. Meanwhile, annual security surveys and quality reviews were not being conducted, the security plans and emergency procedures were out of date, and there was no integrated day-to-day monitoring of security measures.[512] One air carrier was operating without meeting its regulatory obligation to develop and file a security plan.

Even after the bombing of Air India Flight 182 drove home the reality that terrorism "can happen here," these lapses continued. Ed Warrick, the Airport General Manager at Pearson in 1985, wrote a stern letter concerning the security inspections conducted after the bombing. The August 1985 letter noted that employees at Pearson were not closing bridge doors, were leaving the doors unsecured, were setting off alarms, and were writing the codes to bridge doors on the walls. Not surprisingly, Warrick stated, in no uncertain terms, that these breaches were "…totally unacceptable from a security viewpoint and must cease immediately."[513]

As it turned out, the casual disregard for basic security procedures continued unabated at the airport. A meeting of the Airport/Airline Operators' Committee in September 1985 included the warning from the Committee chairman that "Airport Management is concerned with the increasing number of incidents where aircraft bridge doors and Departure room doors are being left open and door alarm systems turned off." All present were urged to increase employee security awareness and ensure that their employees kept restricted area doors secured at all times. Failure to do so would result in Transport Canada having all doors guarded by commissionaires, with the cost being charged to the carriers.[514]

In November 1985, Warrick published a circular that was sent to all the air carriers at both terminals, and all the ground handling agencies. It expressed his continued frustration at the intolerable security situation.[515] In the bulletin, he noted the persisting security breaches at bridge doors and emergency exits, and placed the blame squarely at the feet of air carrier and ground handling agency personnel. He underscored the importance of continual vigilance, and explained that:

> Transport Canada has increased Airport Policing and Security Detail resources in an effort to improve the level of security at Lester B. Pearson International Airport. However, without the

512 Exhibit P-101 CAF0555, pp. 8, 9.
513 Exhibit P-101 CAF0141, p. 1.
514 Exhibit P-101 CAF0609, pp. 2-3.
515 Exhibit P-101 CAF0610.

> active support and participation of all Airport Agencies and their personnel in the Airport Security Program, there is no doubt, regardless of the number of security personnel who are employed, we will be unable to achieve and maintain an acceptable level of security at this facility.[516]

Such porous security was especially undesirable in light of the fact that the media, which expressed considerable interest in aviation security following the bombing of Air India Flight 182, had just conducted a penetration exercise at Pearson in September 1985. The successful infiltration of the airport by the CBC in September 1985 did nothing to reassure the public that security had improved. According to the minutes of the subsequent meeting of the Pearson Airport Security Committee, the airport administration was so embarrassed by the incident that it increased the number of security guards inside the terminal buildings. The reporter had been able to infiltrate the sterile areas of the airport terminal through an unguarded security door being used by passengers of an arriving flight.[517] According to the minutes, Mattson observed:

> …[o]ur security system was never designed to repel terrorism however media reports such as this, put us all in a bad position. The chairman stated that it is the responsibility of all airport employees to participate in the overall airport security program. He stated that Transport Canada are preparing training/information programs, however, these may not be ready for some time.
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> He requested that all agencies should make an effort to inform all their employees that our increased security posture can only be attained if all participate. He furthered that Transport Canada are open to any comments or recommendations to improve security.[518]

At the meeting of the Airport Security Committee, Mattson was very concerned about the lack of control being maintained over the access points by the air carriers, adding that the screening personnel employed by the air carriers should have been paying attention to the security doors while they were in use.[519] A carrier representative pointed out that at other airports, the exit doors adjacent to the screening points were monitored by commissionaires or other security guards, but Mattson replied that there were insufficient resources or personnel available to cover all the doors being used by passengers from arriving flights.

In April 1986, airport security again proved to be an embarrassment to Transport Canada and the air carriers, when members of the press successfully penetrated the security at Mirabel and Dorval airports with concealed weapons

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516 Exhibit P-101 CAF0610.
517 Exhibit P-101 CAF0704, pp. 3-4.
518 Exhibit P-101 CAF0704, pp. 3-4.
519 Exhibit P-101 CAF0704, p. 4.

and explosives. These very public episodes understandably "heightened the urgency" to improve aviation security measures at Canada's airports,[520] particularly in light of the weaknesses identified in the July 1985 security audits at Vancouver, Pearson, and Mirabel International Airports.

Initial Steps to Enhance Airport Security

In July 1986, funding was approved by the Treasury Board for the implementation of immediate, short-term enhancements to the identified security weaknesses, with long-term measures to be identified later. The approved priorities included acquiring new X-ray equipment, increasing the number of commissionaires at airports, providing expanded security training and awareness programs to airport employees, and retaining the RCMP deployments at the eight domestic airports from which they were previously scheduled to be withdrawn.[521]

While any attempt to increase meaningful security must be commended, the timing of these improvements faced criticism even then. Coinciding with the April 1986 submissions to the Treasury Board for expanded funding for security was a spring 1986 memorandum with an annex that asked a number of critical questions about these security enhancements.

> Many of the gaps in airport security were well known before the Air India crash. What accounts for the delay in plugging these gaps? Why does it take a media test penetration of airport security (April 1986) to move DOT to enhance further its security measures?
>
> …
>
> Why is the Pearson International Airport pass system only now being reviewed when it was known last year that many passes were missing, etc.?[522]

The Continuing Problems of Complacency and "Threat Fatigue"

There were many factors contributing to the frequent security breaches and the lax attitude towards airport and airline security that even the bombing of Air India Flight 182 had failed to eliminate. Arguably, the most significant of these included the failure to create a true culture of security awareness through regular and thorough training and testing at all levels of aviation security, and the inexperience, low pay, and high turnover of airport personnel and security officers.

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520 Exhibit P-101 CAF0553, p. 1.
521 Exhibit P-101 CAF0553, p. 1.
522 Exhibit P-101 CAF0635, p. 2.

One closely related factor was the "threat fatigue" that sets in when one is called upon to be exactingly vigilant at all times. Yves Duguay, Senior Director of Air Canada Security and Chairman of the International Air Transport Association (IATA) Security Committee, testified that, when staff are kept at a very high level, in terms of security measures, for extended periods of time, complacency sets in because this level then becomes the norm.[523] Instead of being vigilant, airport workers resume "going through the motions," due to the perception that the high-level measures are not producing results and are unnecessary. As Duguay explained:

> [I]f you want to have a really good security system, you cannot rely on the security part alone. [W]e have to have the buy-in of our employees, that's very important, and they have to be part the solution. [W]hen they don't believe that a measure actually brings any value to the system, you have to start thinking that they might not be complying [with] the measure ….[524]

For these reasons, Duguay testified he was strongly in favour of security awareness programs and training being delivered to anyone working at an airport.[525] He believed that a broad culture of security awareness was an essential part of any functional security system.

Many of the experts who testified before the Commission were worried about the impact of complacency on aviation security. Aviation security expert Rodney Wallis testified that complacency was an ever-present problem, particularly with front line security.[526] This attitude was a product of the small number of security incidents that actually took place for the average worker, leading to inattention and an expectation that serious security threats were unlikely to emerge. According to Wallis:

> [C]an one really live with that sort of a job where nothing ever happens? So somehow the role of the Security Manager is to keep up the level of attention. A screening team which was originally recommended by ICAO comprises of five or sometimes six people. They work in a shift and they rotate.
>
> Sometimes they're operating the walk-through magnetometer. Sometimes they're observing the screen. Sometimes they're controlling the baggage flow through the machine, but you have to keep rotating them in order to maintain their attention. You also have to start introducing artificial means of keeping them on their toes.

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523 Testimony of Yves Duguay, vol. 43, June 14, 2007, p. 5264.
524 Testimony of Yves Duguay, vol. 43, June 14, 2007, p. 5276.
525 Testimony of Yves Duguay, vol. 43, June 14, 2007, p. 5279.
526 Testimony of Rodney Wallis, vol. 37, May 31, 2007, p. 4541.

> For instance, you can screen into the VDUs an image of a weapon or an image of something that really requires further looking to see if they're with you, but you've got to be monitoring all the time.
>
> It's very difficult, you know … the routine nature of that job is soul destroying and the task, the challenge set for governments, set for airlines, set for airports managers, is somehow to keep people motivated and you have to continually devise programs to do that.[527]

Frontline workers benefit from being kept informed with intelligence and threat assessments.[528] This involvement facilitates a sense of purpose, making their jobs more meaningful and contributing to heightened vigilance. The fact that most of those on the front lines did not comprehend the threat prior to the bombing of Air India Flight 182, and acted without purpose or focus in performing their duties, is illustrative of the fundamental connection between providing good information and maintaining effective aviation security.

Minimal Consequences for Security Breaches

As noted, this was a period where there were few consequences for lapses in security. Most responsibility for aviation security had been placed with the air carriers and private security companies, whose interest in executing meaningful security measures was constantly balanced against budget numbers and customer relations.[529] The prevailing attitude was that, so long as there were no major incidents and customers were happy, business could continue as it always had.

The *Aeronautics Act* made it a summary conviction offence for any individual who refused an authorized search of their person, belongings and baggage to board an aircraft. It was also an offence punishable on summary conviction to breach the regulations made pursuant to the Act.[530] The penalties that could be imposed on an air carrier upon conviction were relatively insignificant, however, and there were no civil penalties, such as large fines, that could be imposed upon air carriers as deterrents against breaches of the regulations and orders. There was also no legal requirement for air carriers to comply with their own security programs. As the Director of Civil Aviation noted in a meeting held

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527 Testimony of Rodney Wallis, vol. 37, May 31, 2007, pp. 4541-4542.

528 As discussed in further detail in the present-day context in the Volume Four of this Report: Chapter III, Section 3.4, Use of Intelligence in Aviation Security.

529 See, for example, Testimony of Rodney Wallis, vol. 37, May 31, 2007, p. 4494. He testified that when he joined the International Air Transport Association his role was "…to keep the commercial operation going but to ensure that it operated securely." He sought to ensure that passenger service aspects of the airlines were not being adversely impacted by security measures by balancing the two goals carefully. The happiness of their customers was, understandably, very important. It was only as the threat became more pronounced that security concerns took the predominant role it has today.

530 *Aeronautics Act*, R.S.C. 1970, am. S.C. 1973-74, introducing s. 5.1(11). Punishment upon conviction could result in a fine of up to $5,000, imprisonment for up to one year, or both.

after the bombing of Air India Flight 182, even if an inspection uncovered a security issue, there was "…no authority to take any action (nothing between written reprimand and death penalty)."[531] These issues are discussed in detail in Section 4.7 (Pre-bombing), Transport Canada Policy Gaps and Implementation Deficiencies.

Poorly Trained "Security Officers"

Following the bombing of Air India Flight 182, the Government of India announced it would hold a judicial inquiry into the disaster, headed by Justice B.N. Kirpal (Kirpal Inquiry). The Canadian Aviation Safety Board (CASB) prepared extensive submissions to the Kirpal Inquiry containing its analysis of the evidence. The evidence included information obtained by the RCMP investigation, along with the cockpit voice and flight data recorders and the forensic examinations of the recovered bodies and wreckage. With respect to the level of security provided by Burns, the CASB submissions referred to the RCMP investigation, stating:

> The statements taken from Burns security personnel in Toronto indicated that a significant number of personnel, including those handling passenger screening, had never had the Transport Canada passenger inspection training program or, if they had, had not undergone refresher training within 12 months of the previous training.[532]

As noted earlier, under the statute and associated regulations in place at that time, individuals who had not successfully completed the training program developed by Transport Canada were ineligible for the designation of "security officer," and should not have been screening passengers or baggage at the airport. Although the training program was rudimentary, it was nevertheless part of a consistent national standard for screening personnel. The Burns supervisors at Pearson interpreted the requirement that screeners be trained and qualified to mean that guards who had not received the Transport Canada security officer training would do other jobs instead, such as working "downstairs" examining checked baggage by X-ray.[533] Such duties arguably demanded personnel at least as qualified as a formally designated screening officer. In practice, however, the distinction between a trained and designated security officer and an untrained guard was not well maintained. Burns charged Air India the same rate for "security officers" and "guards," and apparently used the terms interchangeably.[534]

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531 Exhibit P-101 CAC0517, p. 5. The "death penalty" refers to the revocation of an air carrier's operating privileges in Canada, meaning its aircraft could no longer take off or land at Canadian airports.

532 Exhibit P-101 CAF0089, p. 9.

533 Exhibit P-101 CAF0801.

534 See, for example, Exhibit P-284, Tabs 23, 24, 34, 35, 39. Holger ("Nick") Kordts, the Burns Branch Manager for Etobicoke, referred to Burns providing security officers or security guards interchangeably and paid Burns $6.90 (originally $7.00) per hour per employee.

Many employees were merely shown the ropes by more experienced employees and were expected to learn on the job. The statement obtained from Mohnaz Khan indicated that he had received no training whatsoever in his four months with Burns as a security officer, aside from "on the job" training as he worked.[535] Lalonde had testified about similar ad hoc "on the job training" when he started with Burns at Mirabel.[536] Another Burns employee, Gregory Balaze, indicated he had not taken the Transport Canada passenger screening course, and had been instructed "…just to stand there and look for anything suspicious or anyone suspicious who might be carrying something he isn't allowed."[537] He had, however, been shown how to use the X-ray scanner on the job early one weekend and assisted in the examination of checked baggage.

Naseem Nanji, a Burns security officer who actually conducted X-ray screening of the checked baggage due to be loaded aboard Air India Flight 182 at Pearson on June 22, 1985, had received no training in the operation of either the X-ray scanner provided by Transport Canada for screening carry-on baggage or the larger X-ray scanners used to screen checked baggage. She stated, "I didn't receive any instructions on how to look for a bomb. I was told to look for funny wiring or connections." The only training she received from Burns consisted of courses in first aid and CPR.[538]

Abufazal Khan, a security officer conducting passenger and baggage screening at Pearson who had worked on Air India flights on a number of prior occasions, provided a candid statement about his own lack of training and competence:

> When I first started work with Burns Security I didn't receive any instruction or training about the job. After a couple of months they (Burns) gave us an hour of classroom training and showed us slides of what to look for in baggage, our dress code, types of bombs to look for and also guns to look for. I don't believe I could tell what a bomb looked like if I saw one. I have worked about 275 hours in the past 8 months with Burns. I had no previous security experience prior to working for Burns Security.[539]

Refresher training for Burns personnel was particularly sporadic and inconsistent. Ann Marie Jackson, who had worked for Burns since 1983 and carried out passenger screening duties for Air India on June 22, 1985, had not received any refresher training in two years. She recalled taking a written test when she was first employed, but once she started working at the airport she simply learned

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535 Exhibit P-101 CAF0158.

536 Testimony of Daniel Lalonde, vol. 29, May 16, 2007, pp. 3116, 3131. When asked about how he learned to operate the X-ray scanner used to examine carry-on baggage, he testified "Well, other officers showed me how to activate it. It's pretty simple. It was forward and back and that was it. Specific training, no, I don't recall that."

537 Exhibit P-395, p. 57.

538 Exhibit P-101 CAF0159, pp. 1-2.

539 Exhibit P-101 CAF0157.

on the job. Another Burns guard, Jack Prosser, informed the RCMP that he had taken a security test in 1982 when he worked for a different security company, but only received formal training from Burns after the bombing.[540]

In his September 1985 statement to the RCMP,[541] Holger ("Nick") Kordts, the branch manager for Burns at Pearson, said that employees did not receive the refresher training that was mandated by Transport Canada for security officers after twelve months. Instead, they were given pop quizzes on the job by their supervisors. Kordts was not even aware of the 12-month refresher course requirement, and he informed the RCMP that records had not been kept about any refresher training or pop quizzes until just before he gave his statement.[542]

Employee Security Checks

As discussed earlier, the airport and airline employees at the very front lines of security at airports across Canada were not subjected to criminal record or security screening prior to being hired and being issued a restricted area pass and identification card. It would not be until after the bombing, with the publication of the Seaborn Report, that the matter of security checks would be revisited. The Report made the recommendation that:

> [I]t would be desirable for all Canadian airside employees and others with regular access to particularly sensitive areas of the airport and to aircraft to be subject to security and criminal indices checks as a condition of employment…. Clearly visible and controlled identification should be worn at all times. Airport management and the air carriers must make it a continuing priority to inculcate in all workers the need to maintain a high level of security awareness throughout the airport and on the airfield.[543]

The recommendation that security checks be a condition of employment at an airport was eventually implemented in 1987. Air Canada, for example, now conducts criminal record checks for every new employee, and those requiring restricted access at airports are also subjected to a security check going back five years.[544] In general, a company desiring a pass for its employee is now required to submit his or her fingerprints and a personal history form to Transport Canada. With this information, the RCMP conducts a criminal indices check, and CSIS conducts a security check.[545] Transport Canada initially conducted a credit check during this process, but discontinued that practice in 2007. Members of the *CATSA Act* Review Advisory Panel have expressed considerable concern about the security consequences of this decision.

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540 Exhibit P-395, pp. 39-40, 45-46.
541 Exhibit P-101 CAF0538.
542 Exhibit P-101 CAF0538, p. 11.
543 Exhibit P-101 CAF0039, p. 8.
544 Testimony of Yves Duguay, vol. 43, June 14, 2007, pp. 5287-5288.
545 Testimony of Chern Heed, vol. 38, June 1, 2007, pp. 4640-4641.

The lack of security clearance checks for airport and air carrier employees proved to be more than a theoretical security risk. A similar security problem existed at Vancouver International Airport, where the bags containing the bombs were placed on an aircraft on June 22, 1985. At that airport, Dynamic Maintenance had been contracted to clean the premises. Following the bombing of Air India Flight 182, CSIS checked the names of 159 Dynamic employees at the airport to assess security risks. They found that multiple individuals among the airport janitorial staff, who had wide access to the airport and could move about virtually unnoticed, had connections to extremist Sikh organizations. The search found seven employees with associations with the Babbar Khalsa, and four with the International Sikh Youth Federation.[546] In fact, CSIS determined that Ajaib Singh Bagri's brother was an employee of Dynamic at Vancouver International Airport.[547] CSIS concluded that it would have been easy for these extremist organizations to have "almost unlimited access" to the airport.[548] The staff were not security-screened to work at the airport, and could go nearly anywhere in the airport unchallenged once they received their pass tags and keys.[549] Moreover, the RCMP indicated to CSIS that they felt there was a good chance the Dynamic cleaners were involved in criminal activity.

Regarding the implications of this security failure, CSIS wrote:

> It is clear that this may not be the only non-cleaning activity the staff are involved in. In addition to being able to circumvent security checks, cleaning staff could be used as couriers or go betweens for political or criminal purposes…. Considering the Canadian Governments [*sic*] stated aim to tighten airport security, the present lapse at VIA could prove embarrassing and fatal, particularly if any DYNAMIC staff become implicated in an incident similar to Air India Flight 182…. and it would be interesting to see if similar results would be achieved if checks were carried out at other International airports but it is still only recognition of what could be a serious problem and not a solution.[550]

The "…lax hiring practices of the airport community" also caused consternation at Pearson in the months after the bombings. The screening failures became evident when four employees of an air carrier operating at Pearson were arrested as illegal immigrants. The Immigration Canada representative lectured the carriers on the risk that "…because of the increased security situation, employment of illegal immigrants could prove costly and embarrassing," adding that "…some of these people could have criminal records."[551]

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546 Exhibit P-101 CAB0681, p. 4.
547 Exhibit P-101 CAA0418, p. 2, CAB0601, p. 1.
548 Exhibit P-101 CAB0681, p. 4.
549 Exhibit P-101 CAB0681, p 4
550 Exhibit P-101 CAB0681, p. 5.
551 Exhibit P-101 CAF0704, p. 5.

Security Culture Slow to Change

In the weeks and months following the Air India bombing, Transport Canada, and the Government of Canada as a whole, worked quickly to improve aviation security. Immediately following the bombings, a tough new Ministerial Directive was issued for all flights to Europe or Asia, requiring that all checked baggage be physically inspected or X-rayed, all cargo be held for 24 hours unless it was a perishable item from a known shipper, and all passengers and carry-on baggage be fully screened.[552] The amended *Aeronautics Act* came into force on June 28, 1985, with updated aviation security regulations following in December 1985.

It would be a mistake, however, to suggest that a new culture of strict and uniform security was widely embraced immediately after the bombings, whether one looks at the conduct of airport workers and security guards being paid minimum wage, or the executives of the air carriers themselves.

The Air Transport Association of Canada made extensive submissions to the Government of Canada concerning the emergency measures imposed on June 23, 1985, calling the measures "excessive," and seeking a resumption of the pre-bombing security regime as the standard set of aviation security requirements under normal conditions.[553] Rodney Wallis, who was the Director of Security for IATA between 1980 and 1991, expressed his opinion to the Director of Civil Aviation Security for Transport Canada in September 1985 that Canada had "overreacted" by issuing the strict Ministerial Directive, particularly with regard to the hold on cargo.[554] He testified that the emergency measures "…didn't go down well" with the carriers because they were causing departure delays of several hours per flight, with each hour of delay costing between $10,000 and $18,000 in 1985 dollars for a large jet aircraft.[555]

The carriers emphasized that they supported the imposition of reasonable security measures, but preferred a stepped response based on intelligence and/or risk assessments, rather than imposing tough screening requirements uniformly. This reluctance was understandable. The delays caused by searches of checked baggage and cargo holds were raising operational costs and inconveniencing passengers, and the industry anticipated "major economic problems" if the average three-hour delay per aircraft continued.[556] This reflects a recurring tension in aviation security between the airlines' interests in minimizing costs and inconvenience to passengers, and interests in robust security measures which will require time and money. Although it can be debated whether the government struck the appropriate balance in the aftermath of the Air India bombing, it is undeniable that the pre-bombing system was deficient and that the government has a legitimate role in requiring airlines to invest in security measures.

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552 Exhibit P-101 CAF0595.
553 Exhibit P-101 CAF0602, pp. 3-4.
554 Exhibit P-101 CAF0606, p. 1.
555 Testimony of Rodney Wallis, vol. 37, May 31, 2007, p. 4481.
556 Exhibit P-101 CAF0441, p. 6.

Conclusion

What remains is that the system, as it stood on June 23, 1985, utterly failed to prevent the bombing. There could be no justification for returning to a system of voluntary security measures dependent upon unmotivated, poorly trained and poorly paid security and airport personnel for its delivery and effectiveness. Human, regulatory, and intelligence failures had all contributed to the tragedy. A more robust aviation security regime was required; one which included greater monitoring, compulsory and uniform standards, and the promotion of security awareness