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# APPENDICES

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# Appendix A

P.C. 1989-532



PRIVY COUNCIL

Certified to be a true copy of a Minute of a Meeting of the Committee of the Privy Council, approved by Her Excellency the Governor General on the 29th day of March, 1989.

The Committee of the Privy Council, on the recommendation of the Minister of Transport, advise that a Commission do issue under Part I of the Inquiries Act and under the Great Seal of Canada, appointing the Honourable Virgil Peter Moshansky, a Justice of the Court of Queen's Bench of Alberta, to be a Commissioner to inquire into the contributing factors and causes of the crash of Air Ontario Flight 363 Fokker F-28 at Dryden, Ontario, on March 10, 1989, and report thereon, including such recommendations as the Commissioner may deem appropriate in the interests of aviation safety; and

The Committee do further advise that

- (a) the Commissioner be authorized to adopt such procedures and methods as he may from time to time deem expedient for the proper conduct of the inquiry;
- (b) the Commissioner be authorized to sit at such times and in such places as he may decide;
- (c) the Commissioner be authorized to rent such space and facilities as may be required for the purposes of the inquiry, in accordance with Treasury Board policies;
- (d) the Commissioner be authorized to engage the services of such experts and other persons as are referred to in section 11 of the Inquiries Act, at such rates of remuneration and reimbursement as may be approved by the Treasury Board;
- (e) the Commissioner be directed to advise the Governor in Council as to which, if any, of the groups or individuals that may appear before him, should receive assistance with respect to the legal costs they may incur in respect of those

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P.C. 1989-532

- 2 -

appearances, and the extent of such assistance, where such assistance would, in the opinion of the Commissioner, be in the public interest;

(f) the Commissioner be directed

(i) to submit an interim report, in both official languages, to the Governor in Council not later than six months after the date of the appointment of the Commissioner and to submit any other interim reports to the Governor in Council, in both official languages, as, in the opinion of the Commissioner, may be required; and

(ii) to submit a final report, in both official languages, to the Governor in Council not later than March 30, 1990; and

(g) the Commissioner be directed to file the records and papers of the inquiry as soon as reasonably may be after the conclusion of the inquiry with the Clerk of the Privy Council.

CERTIFIED TO BE A TRUE COPY - COPIE CERTIFIÉE CONFORME



CLERK OF THE PRIVY COUNCIL - LE GREFFIER DU CONSEIL PRIVE

P.C. 1991-2591



PRIVY COUNCIL

Certified to be a true copy of a Minute of a Meeting of the Committee of the Privy Council, approved by His Excellency the Governor General on the 30th day of December, 1991

WHEREAS the Commission of Inquiry into the Air Ontario Crash at Dryden, Ontario was directed to submit a final report, in both official languages, to the Governor in Council not later than December 31, 1991;

AND WHEREAS the Commission will not be in a position to submit its final report on or prior to December 31, 1991 and the Commissioner has requested an extension until March 31, 1992 to prepare and submit his report;

THEREFORE, the Committee of the Privy Council, on the recommendation of the Prime Minister, pursuant to Part I of the Inquiries Act, advises that a Commission do issue amending the Commission issued pursuant to Order in Council P.C. 1989-532 of March 29, 1989, as amended by Orders in Council P.C. 1990-625 of March 29, 1990, P.C. 1991-1187 of June 20, 1991 and P.C. 1991-1845 of September 26, 1991, by deleting therefrom the following paragraph:

"(f) the Commissioner be directed  
(ii) to submit a final report, in both official languages, to the Governor in Council not later than December 31, 1991; and"

and by substituting therefor the following paragraph:

"(f) the Commissioner be directed  
(ii) to submit a final report, in both official languages, to the Governor in Council not later than March 31, 1992; and"

CERTIFIED TO BE A TRUE COPY - COPIE CERTIFIÉE CONFORME

A handwritten signature in cursive script, appearing to read "P. LeBlanc".

CLERK OF THE PRIVY COUNCIL - LE GREFFIER DU CONSEIL PRIVÉ

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## Appendix B

### Counsel and Representatives for Parties with Standing

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	Counsel/Representatives
Commission Counsel	Frederick R. von Veh, QC <i>Commission counsel</i> <i>Stikeman, Elliott</i> <i>Toronto, Ontario</i>
	Gregory L. Wells <i>Associate Commission counsel</i> <i>Calgary, Alberta</i>
Staff Counsel	Adam S. Albright William R. Cottick Laurence C. Goldberg William M. McIntosh Douglas M. Worndl
Counsel to the Commission	W. Ian C. Binnie, QC Peter H. Griffin <i>McCarthy, Tétrault</i> <i>Toronto, Ontario</i>
Chief Coroner of Ontario	Paul A. Bailey <i>Crown Attorney</i> <i>Chatham, Ontario</i>
Air Canada	Rémi J. Lafrenière, QC <i>Air Canada</i> <i>Montreal, Quebec</i>
Aircraft Operations Groups Association (AOGA)	R.A. Peters <i>Aircraft Operations Groups</i> <i>Association</i> <i>Ottawa, Ontario</i>

Air Ontario Inc.	D. Bruce MacDougall, QC Gerard A. Chouest William J. Dunlop Peter M. Jacobsen Ann Bourke (student-at-law) <i>Paterson, MacDougall</i> <i>Toronto, Ontario</i>
Canadian Air Line Pilots Association (CALPA)	John T. Keenan Linda P. Thayer <i>Gravenor Keenan</i> <i>Montreal, Quebec</i>
Canadian Airlines International	Donald I. Brenner, QC Scott W. Fleming <i>Brenner &amp; Company</i> <i>Vancouver, British Columbia</i>
Canadian Union of Public Employees (CUPE), Airline Division	Leanne M. Chahley <i>Caley &amp; Wray</i> <i>Toronto, Ontario</i>
Fokker Aircraft B.V.	G. Robert W. Gale, QC <i>Blake, Cassels &amp; Graydon</i> <i>Toronto, Ontario</i>
Menasco Aerospace Ltd	Berndt Weber <i>Technical Representative</i> <i>Product Support</i> <i>Menasco Aerospace Ltd</i> <i>Oakville, Ontario</i>
Rolls-Royce Ltd	Eric M. Lane Allister Ogilvie <i>Lane, Allen</i> <i>Toronto, Ontario</i>

Survivors  
and  
Estates of Victims

Kristopher H. Knutsen, QC  
W. Danial Newton  
*Carrel & Partners*  
*Thunder Bay, Ontario*

S. Alexander Zaitzeff  
*Zaitzeff, Cancade*  
*Thunder Bay, Ontario*

Toronto Star  
(Torstar Corporation)  
and Canadian Press

J. Blair Mackenzie  
*Torstar Corp.*  
*Toronto, Ontario*

Town of Dryden  
and  
Dryden Municipal Airport

David A. Tompkins  
Katherine A. Auvinen  
*Bell, Temple*  
*Toronto, Ontario*

Terrence A. Platana  
*McAuley & Partners*  
*Dryden, Ontario*

Transport Canada  
and  
Attorney General of Canada

Duff F. Friesen, QC  
*Department of Justice*  
*Ottawa, Ontario*

J. Sanderson Graham  
D.M. Fiorita  
*Transport Canada Legal Services*  
*Ottawa, Ontario*

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# Appendix C

## Parties Granted Full, Limited, and Special Participant Status and Observer Status

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### Full Participant Status

Air Ontario Inc.

Canadian Air Line Pilots Association

Canadian Union of Public Employees, Airline Division

Chief Coroner of Ontario

Fokker Aircraft B.V.

Her Majesty the Queen, as represented by the minister of  
transport and the attorney general of Canada

Town of Dryden and Dryden Municipal Airport

### Limited Participant Status

Air Canada

Canadian Airlines International

Menasco Aerospace Ltd

Rolls-Royce Ltd

Toronto Star/Canadian Press

### Special Participant Status

Survivors and estates of victims

### Observers

Aircraft Operations Group



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## Appendix D

### Witnesses Appearing before the Inquiry

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Witness	Date and Place of Testimony
Brian Gordon Adams Survivor of the crash	September 27, 1989 Thunder Bay
David Jeffrey Adams Air safety investigator Australian Bureau of Air Safety Investigation Canberra, Australia	December 17, 1990 Toronto
Richard Irvin Adams Independent consultant on de-icing technology Newport News, Virginia, U.S.A.	June 18, 1990 Toronto
Angus Moncrieff (Monty) Allan Pilot Air Ontario (Toronto)	August 14, 1990 Toronto
Norbert Wolfgang Altmann Pilot Bearskin Air Services	November 14, 1989 Toronto
Gert Ingemar Andersson Pilot Linjeflyg Airlines Stockholm, Sweden	June 21/22, 1990 Toronto
Ronald Douglas Armstrong Regional director Aviation Regulation Directorate, Ontario Region Transport Canada	October 22/23, 1990 Toronto

<b>Witness</b>	<b>Date and Place of Testimony</b>
John Ashmore Maintenance control manager Air Ontario (London)	March 29, 1990 Toronto
Kostas J. (Gus) Athanasiou Crew chief Air Ontario (Toronto)	February 2, 1990 Toronto
Joseph P. Bajada Aircraft maintenance engineer Aircraft Analysis Section Canadian Aviation Safety Board	April 4/5, 1990 Toronto
Tara Kim Barton Customer service agent Canadian Partner and Dryden Air Services	November 17, 1989 Toronto
Diane May Beasant Owner and president Dryden Air Services	November 23, 1989 Toronto
Mark Arthur Beasant Officer, Ontario Provincial Police Part-time ramp servicer Dryden Air Services	November 23, 1989 Toronto
Lawrence Eldon Beeler President Dryden Flight Centre	November 15/16, 1989 Toronto
David John Berezuk Survivor of the crash Pilot Air Ontario (Thunder Bay)	September 25/26/27, 1989 Thunder Bay
Alfred Bertram Survivor of the crash Flight service specialist Transport Canada Rankin Inlet, Northwest Territories	September 29, 1989 Thunder Bay

<b>Witness</b>	<b>Date and Place of Testimony</b>
John Wesley Biro Survivor of the crash	October 12, 1989 Thunder Bay
Kenneth Richard Bittle Vice-president of maintenance and engineering Air Ontario	August 29/30/31, 1990 Toronto
Brian Gene Boucher Pilot Air Canada (Toronto) Part-time director of training Niagara-on-the-Lake Fire Department	April 26, 1990 Toronto
Arthur Ernest Bourre Weather observer and equipment operator Dryden Municipal Airport	November 22, 1989 Toronto
Wilson John Boynton Supervisor of engineering Air Ontario (London)	February 16, 1990 Toronto
Jill Edith Brannan Ticket and boarding agent Dryden Flight Centre	October 11, 1989 Thunder Bay
Martin Herbert Brayman Retired regional superintendent Air Carrier Inspection (Large Aeroplanes) Division Aviation Regulation Directorate Ontario Region Transport Canada	October 31/November 1, 1990 Toronto
Steven George Brezden Retired aircraft maintenance engineer Air Ontario (Winnipeg)	February 16, 1990 Toronto

<b>Witness</b>	<b>Date and Place of Testimony</b>
Craig Michael Brown Pilot Terraquest Limited	July 19, 1989 Dryden
Morgan Brown Lead station attendant Air Canada (Thunder Bay)	March 27, 1990 Toronto
Warren James Brown Dispatcher Air Ontario (London)	February 21, 1990 Toronto
Charles Thomas Bruzell Customer services manager Air Canada (Winnipeg)	February 20, 1990 Toronto
John C. Callan Chief administrative officer Town of Dryden	July 18, 1989 Dryden
Ricardo Alfonso Campbell Survivor of the crash	September 28, 1989 Thunder Bay
Claude Castonguay Pilot Air Ontario	September 10, 1990 Toronto
Peter Bonham Clay Independent expert witness for Rolls-Royce engine teardown and performance	April 5/6, 1990 Toronto
Rodney John Coates Regional manager of customer services Air Ontario (Toronto)	March 28, 1990 Toronto
Vaughan Stephen Cochrane General manager Dryden Flight Centre	March 6/7/8, 1990 Toronto

<b>Witness</b>	<b>Date and Place of Testimony</b>
Russell Wayne Copeland Dispatcher Air Ontario (London)	February 15, 1990 Toronto
Donald Leslie Crawshaw Survivor of the crash	September 28, 1989 Thunder Bay
Douglas Gary Davis Sergeant Ontario Provincial Police Dryden Detachment	July 20/24, 1989 Dryden
Charles Joseph Deluce F-28 chief pilot and project manager Air Ontario (Toronto)	September 17/18/19/20/21, 1990 December 3/4, 1990 Toronto
William Stanley Deluce President and chief executive officer Air Ontario (London)	December 10/11/12/13, 1990 Toronto
Donald James Douglas Regional director Air Navigation Directorate Pacific Region Transport Canada	November 23, 1990 Toronto
Henry Abram Dyck Superintendent Air Carrier Inspection Division Airworthiness Branch Aviation Regulation Directorate Transport Canada Headquarters	November 13/14/15/16, 1990 Toronto
James Lemar Esh Employee Dryden Flight Centre and Dryden Air Services	November 16, 1989 Toronto
Michael Andrew Ferguson Survivor of the crash	September 14, 1989 Thunder Bay

<b>Witness</b>	<b>Date and Place of Testimony</b>
Susan Mary Ferguson Survivor of the crash	September 14, 1989 Thunder Bay
Rita Figliomeni Flight attendant Air Ontario (Thunder Bay)	March 27, 1990 Toronto
Jerry Deroal Fillier Ramp attendant and refueller Dryden Flight Centre	November 17, 1989 Toronto
James Edward Foot Electrical/mechanical engineering specialist Canadian Aviation Safety Board	April 3/4, 1990 Toronto
Keith Warren Fox Pilot and flight 1363 passenger Air Ontario (Toronto)	March 5/6, 1990 Toronto
Michael Gatto Survivor of the crash	September 14, 1989 Thunder Bay
Raymond Martin Gibbs Pilot Bearskin Air Services	November 15, 1989 Toronto
Raymond Marshall Godfrey Volunteer fire-fighter Unorganized Territories of Ontario Fire Department Wainwright Township, Ontario	July 24, 1989 Dryden
Daniel Martin Godin Survivor of the crash	September 28, 1989 Thunder Bay
Arthur Edward Grenier Constable Ontario Provincial Police Sioux Lookout Detachment	March 27, 1990 Toronto

<b>Witness</b>	<b>Date and Place of Testimony</b>
Thomas Richard Groves Meteorological observer Dryden Municipal Airport	July 20, 1989 Dryden
Harold Murray Haines Survivor of the crash Pilot Air Canada (Sioux Lookout, Ontario)	October 10, 1989 Thunder Bay
Jeffrey Earl Hamilton Emergency services officer Airports Authority Group Central Region Transport Canada	December 7/8, 1989 Toronto
Stephen John Hanley Emergency medical care attendant and paramedic Air Ambulance Unit Ontario Ministry of Health Sioux Lookout Detachment	July 25, 1989 Dryden
Erik Bent Hansen Pilot Air Ontario (London)	August 17, 1990 Toronto
Linda Marie Harder Ticket and boarding agent Dryden Flight Centre	November 17, 1989 Toronto
Thomas James Harris Survivor of the crash	September 13, 1989 Thunder Bay
Sonia Victoria Hartwick Survivor of the crash Flight attendant Air Ontario (Thunder Bay)	September 11/12/13, 1989 Thunder Bay

<b>Witness</b>	<b>Date and Place of Testimony</b>
Allan Clifford Haw Airport mechanic and auxiliary fire-fighter Dryden Municipal Airport	November 17, 1989 Toronto
Robert Louis Helmreich Professor of Psychology University of Texas Austin, Texas, U.S.A.	December 18/19/20, 1990 Toronto
Eugene Garnett Hill Manager, Certification and configuration development Renton Division Boeing Aircraft Seattle, Washington, U.S.A.	June 19, 1990 Toronto
Roscoe Miner Carlyle Hodgins Owner and pilot General Air Spray Ltd	November 14, 1989 Toronto
Mogens Johannes (John) Holm Superintendent, Air Operations Airports Authority Group Transport Canada	June 14, 1990 Toronto
James Walrond Hutchinson Chief, Engineering Analysis Division Canadian Aviation Safety Board	April 9/10, 1990 Toronto
Allan Wesley Hymers Water bomber pilot Ministry of Natural Resources Dryden, Ontario	October 12, 1989 Thunder Bay
Gary Edward Jackson Survivor of the crash	September 27, 1989 Thunder Bay



<b>Witness</b>	<b>Date and Place of Testimony</b>
Joseph Edward Jackson Investigator in charge Accident Investigation Team Canadian Aviation Safety Board	February 23, 1990 March 6/8, 1990 April 3, 1990 Toronto
Bjarne Krog (Brian) Jensen Manager, airport operations and ground equipment services Air Canada (Montreal)	June 22, 1990 Toronto
Paul Scott Jensen Pilot Air Ontario	September 11/12, 1990 Toronto
John Jerabek Line maintenance supervisor Air Ontario (Toronto)	February 1, 1990 Toronto
Thomas Sidney Jones Mayor Town of Dryden	July 17, 1989 Dryden
George MacGregor Knox Acting regional director-general Airports Authority Group Central Region Transport Canada	January 25/26, 1990 Toronto
Ernest Kobelka Emergency medical care attendant Dryden District General Hospital	July 25, 1989 Dryden
Danilo (Dean) Koncan Duty manager, Operations Air Ontario (London)	February 20, 1990 Toronto
Steve Korotyszyn Aircraft maintenance engineer and lead inspector Air Ontario (Toronto)	February 2, 1990 Toronto

<b>Witness</b>	<b>Date and Place of Testimony</b>
Martin Joseph Kothbauer Duty manager System Operations Control Air Ontario (London)	February 22, 1990 Toronto
Stanley Michael Kruger Crew chief Crash Fire Rescue Unit Dryden Municipal Airport	November 20/21, 1989 Toronto
Alana Labelle-Hellmann Flight attendant Air Ontario	September 11, 1990 Toronto
Claude André LaFrance Formerly assistant deputy minister of aviation Transport Canada Headquarters	January 17, 1991 Toronto
Jack Lampe Manager, Cargo services, and de-icing commissioner United Airlines Chicago, Illinois, U.S.A.	June 20, 1990 Toronto
Daniel Keith Lavery Dispatcher Air Ontario (London)	February 21, 1990 Toronto
Paul Richard Lefebvre Station attendant and co-chairman Safety and Health Committee Air Canada (Toronto)	June 15, 1990 Toronto
Gary Donald Harvey Linger Owner ESSO Flight Refuelling Thunder Bay Airport	March 27, 1990 Toronto

<b>Witness</b>	<b>Date and Place of Testimony</b>
Peter Allan Louttit Airport manager Dryden Municipal Airport	July 18/19, 1989 Dryden
Lloyd Alexander McCoomb Director-general Safety and Technical Services Transport Canada Headquarters	June 26, 1990 Toronto
Gerald Hubert McCrae Volunteer fire-fighter Unorganized Territories of Ontario Fire Department Wainwright Township, Ontario	July 24, 1989 Dryden
Thomas Dickson (Dick) McDonald Chairman, Airport Commission Dryden Municipal Airport	July 25, 1989 Dryden
Bryce Neale MacGregor Acting chief Operations and Certification Division Aviation Regulation Directorate Transport Canada Headquarters	November 20/21, 1990 Toronto
Robert Carl McGogy Private pilot	November 14, 1989 Toronto
Jack Lyle McInnis Flight refueller ESSO Flight Refuelling Thunder Bay Airport	March 27, 1990 Toronto
Kelly Mackenzie Survivor of the crash	October 10, 1989 Thunder Bay
Louis John Maltais Fire chief Town of Dryden	July 18, 1989 Dryden

<b>Witness</b>	<b>Date and Place of Testimony</b>
Ronald Peter Mandich Survivor of the crash Green Bay, Wisconsin, U.S.A.	September 28, 1989 Thunder Bay
Gregory John Martin Physician and coroner Town of Dryden	July 24, 1989 Dryden
Henry Christian (Chris) Maybury Pilot Air Ontario (London)	August 15, 1990 Toronto
Charles O. (Chuck) Miller Aviation safety consultant System Safety Inc. Sedona, Arizona, U.S.A.	December 17, 1990 Toronto
Paul Orval Miller Sergeant and identification officer Technical Identification Services Unit Ontario Provincial Police Kenora Detachment	July 17, 1989 Dryden
John Arthur (Jack) Mitchell Director of flight safety Air Canada (Montreal)	October 9/10, 1990 Toronto
Henry Lucas Moore Director Airport Safety Services Branch Safety and Technical Services Directorate Transport Canada Headquarters	January 26, 1990 Toronto
John Murray Morgan Physicist Manager, In-flight simulator National Aeronautical Establishment National Research Council	May 3, 1990 Toronto

<b>Witness</b>	<b>Date and Place of Testimony</b>
Gregory Francis George Morrison Aircraft maintenance engineer and supervisor Air Ontario (Winnipeg)	March 9, 1990 Toronto
James Arthur Angus Morrison Pilot and vice-president of flight operations Air Ontario (London)	October 1/2/3, 1990 Toronto
Fernand Mousseau Director-general Policy Planning and Resource Development Directorate Transport Canada Headquarters	December 1, 1990 January 14, 1991 Toronto
David D. Murdoch Forensic climatologist Scientific Services Division Environment Canada	April 25, 1990 Toronto
John Leonard (Len) Murray Air carrier inspector Air Carrier Inspection (Large Aeroplanes) Division Aviation Regulation Directorate Seventh Region Transport Canada	November 2/13, 1990 Toronto
Weldon Ralph Newton Director-general Aviation Regulation Directorate Transport Canada Headquarters	January 15/16, 1991 Toronto
Jack Paul Nicholson Emergency services officer and acting superintendent Emergency Services/Crash Fire Rescue Airports Authority Group Central Region Transport Canada	December 5/6/7, 1989 Toronto

<b>Witness</b>	<b>Date and Place of Testimony</b>
Ole Tindbaek Nielsen Regional superintendent Air Carrier Maintenance Division Airworthiness Branch Aviation Regulations Directorate Ontario Region Transport Canada	October 29/30, 1990 Toronto
Roger Nordlund Fire chief Unorganized Territories of Ontario Fire Department Wainwright Township, Ontario	July 24, 1989 Dryden
Lawrence Trevor Northcott Water bomber pilot Ministry of Natural Resources Dryden, Ontario	October 12, 1989 Thunder Bay
Robert Victor Nyman Pilot and director of flight operations Air Ontario (Toronto)	September 12/13/14, 1990 September 17, 1990 Toronto
Larry Charles O'Bray Superintendent Emergency Services/Crash Fire Rescue Airports Authority Group Central Region Transport Canada	January 23/24, 1990 Toronto
William O'Connell Lead station attendant Air Canada (Winnipeg)	March 29, 1990 Toronto
Myron Morris Oleskiw Geophysicist, meteorologist, and associate research officer Low Temperature Laboratory National Research Council	April 26, 1990 Toronto

<b>Witness</b>	<b>Date and Place of Testimony</b>
Teoman Ozdener F-28 maintenance manager Air Ontario (Toronto)	August 28/29, 1990 Toronto
Frederick Ernest Arnold Parry Chief, Crash Fire Rescue Dryden Municipal Airport	July 20/21, 1989 July 24, 1989 Dryden
David Alan Patrick Supervising meteorologist Atmospheric Environment Services Environment Canada (Winnipeg)	February 21/22, 1990 Toronto
Robert Douglas Perkins Pilot Air Ontario (Toronto)	February 13/14, 1990 Toronto
Brian Martin Perozak Survivor of the crash	September 27, 1989 Thunder Bay
James Erwin Perry Manager, Community Airports Central Region Transport Canada (Winnipeg)	January 25, 1990 Toronto
Carol Anne Petrocovich Flight 1363 passenger Dryden, Ontario	November 20, 1989 Toronto
Kenneth Martin Pickwick Physical metallurgist Chief of Physical Analysis Canadian Aviation Safety Board	April 5, 1990 Toronto
Harold Christopher Pike Maintenance employee Dryden Municipal Airport	November 22, 1989 Toronto

<b>Witness</b>	<b>Date and Place of Testimony</b>
Earl Randy Pitcher Civil aviation inspector Air Carrier Inspection (Large Aeroplanes) Division Aviation Regulation Directorate Ontario Region Transport Canada	October 24/25/26, 1990 Toronto
Michael Roland Poole Superintendent Flight Recorders and Computers Engineering Branch Canadian Aviation Safety Board	April 9, 1990 Toronto
Channan (Ken) Ramnarine Aircraft maintenance engineer and crew chief Air Ontario (Toronto)	February 1, 1990 Toronto
Desmond James Risto Regional airports disaster planning and protective officer Airports Authority Group Central Region Transport Canada (Winnipeg)	December 4, 1989 Toronto
Gary Albert Rivard Fire-fighter Crash Fire Rescue Unit Dryden Municipal Airport	November 22, 1989 Toronto
David George Rohrer Senior aviation safety officer Canadian Aviation Safety Board	July 3/4/5/6, 1990 Toronto
Erving James Rolfe Maintenance control supervisor Air Ontario (London)	March 28, 1990 Toronto



<b>Witness</b>	<b>Date and Place of Testimony</b>
William John Alan Rowe Senior vice-president Western Canada & Pacific Rim Region Air Canada (Vancouver)	October 12/13, 1990 Toronto
Adrian (Sandy) Sandziuk Flight dispatcher Air Canada (Toronto)	December 14, 1990 Toronto
Brian Edward Sheppard Senior instrument meteorologist Environment Canada	April 11, 1990 Toronto
Peter Shewchuk Station agent/radio operator Air Canada (Thunder Bay)	February 23, 1990 Toronto
David John Shuel Lead attendant Air Canada (Winnipeg)	February 20, 1990 Toronto
Charles Herbert Simpson Pilot and senior vice-president of flight operations Air Canada (Montreal)	October 5, 1990 October 15, 1990 Toronto
Donald Ross Sinclair Regional manager Air Carrier Operations Branch Aviation Regulation Directorate Ontario Region Transport Canada	November 22, 1990 Toronto
Kenneth Alexander Sinclair Assistant deputy minister of policy and coordination Transport Canada Headquarters	January 21, 1991 Toronto

<b>Witness</b>	<b>Date and Place of Testimony</b>
Roderick William Slaughter Director, Flight Standards Branch Aviation Group Aviation Regulation Directorate Transport Canada Headquarters	November 27/28/29/30, 1990 Toronto
Allan Roy Slota Chairman, Emergency Services Town of Dryden Red Cross	July 25, 1989 Dryden
Reginald Harry James Smith Pilot Air Canada (Montreal)	June 12, 1990 Toronto
Ronald Bradley Somers Pilot Air Ontario (London)	January 30/31, 1990 Toronto
Ronald Cameron Stewart Flight safety officer and pilot Air Ontario (London)	May 22/23, 1990 August 20/21, 1990 Toronto
Deborah Marie Stoger Pilot Air Ontario (Toronto)	August 16, 1990 Toronto
Elaine Margaret Summers Aircraft maintenance engineer and technical investigator Canadian Aviation Safety Board	April 10/11, 1990 Toronto
Dennis Lee Swift Survivor of the crash	September 29, 1989 Thunder Bay
Thomas John Syme Executive vice-president Commercial Services Air Ontario (London)	August 22/23/24, 1990 August 27, 1990 Toronto

<b>Witness</b>	<b>Date and Place of Testimony</b>
William John Taylor Project officer and chief, Aircraft Analysis Engineering Branch Canadian Aviation Safety Board	April 6, 1990 Toronto
Uwe Ulrich Teubert Survivor of the crash	September 28, 1989 Thunder Bay
Paulette Theberge Community airports officer Airport Authority Group Central Region Transport Canada (Winnipeg)	January 24/25, 1990 Toronto
Andrew Basil Triolaire Director, Safety and Environment Canadian Airlines International Chairman, Safety Advisory Committee Air Transport Association of Canada	June 25, 1990 Toronto
Alan Ian Umbach Superintendent Air Carrier Operations Division Aviation Group Aviation Regulation Directorate Transport Canada Headquarters	November 17, 1990 November 19/20, 1990 Toronto
Jack van Hengst Chief aerodynamic analyst Fokker Aircraft B.V. Schiphol, The Netherlands	May 1/2, 1990 Toronto
Clare Rodney Vasey Unit operations specialist Airport Control Service Pearson International Airport	June 13, 1990 Toronto

<b>Witness</b>	<b>Date and Place of Testimony</b>
Gary Alan Wagner Pilot Air Canada Physicist/aeronautical engineer Adjunct professor Concordia University Montreal, Quebec	May 4, 1990 Toronto
Sandra Ruth Walker Emergency medical care attendant Dryden District General Hospital	July 25, 1989 Dryden
Richard Waller Survivor of the crash	September 29, 1989 Thunder Bay
Mary Ellen Ward Senior crew scheduler System Operations Control Air Ontario (London)	March 27, 1990 Toronto
Richard Herbert Wickens Mechanical engineer and senior research officer Low Speed Aerodynamics Laboratory National Aeronautical Establishment National Research Council	April 30, 1990 Toronto
David Philip Wightman Assistant deputy minister of aviation Transport Canada Headquarters	January 22, 1991 Toronto
William D. Wilcox Pilot Air Ontario (Toronto)	August 16/17, 1990 Toronto
Ramsey Muir Withers Formerly deputy minister Transport Canada	January 18, 1991 Toronto

**Witness**

Cherry Leigh Wolframe  
Customer service agent  
Canadian Partner and  
Dryden Air Services

**Date and Place of Testimony**

November 23, 1989  
Toronto

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## Appendix E

### Inquiry Schedule

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#### Hearings

Commenced	May 26, 1989
Closed	January 24, 1991
Total number of days of hearings	168

#### Hearing Dates

Week 1	May 26, 1989 (preliminary hearing)	Toronto
Week 2	June 16, 1989 (preliminary hearing)	Toronto
Week 3	July 17–21, 1989	Dryden
Week 4	July 24–25, 1989	Dryden
Week 5	September 11–14, 1989	Thunder Bay
Week 6	September 25–29, 1989	Thunder Bay
Week 7	October 10–12, 1989	Thunder Bay
Week 8	November 14–17, 1989	Toronto
Week 9	November 20–23, 1989	Toronto
Week 10	December 4–8, 1989	Toronto
Week 11	January 23–26, 1990	Toronto
Week 12	January 30 – February 2, 1990	Toronto
Week 13	February 13–16, 1990	Toronto
Week 14	February 20–23, 1990	Toronto
Week 15	March 5–9, 1990	Toronto
Week 16	March 27–29, 1990	Toronto
Week 17	April 3–6, 1990	Toronto
Week 18	April 9–11, 1990	Toronto
Week 19	April 23, 25–26, 1990	Toronto
Week 20	April 30 – May 4, 1990	Toronto
Week 21	May 22–23, 1990	Toronto
Week 22	June 12–15, 1990	Toronto
Week 23	June 18–22, 1990	Toronto
Week 24	June 25–26, 1990	Toronto
Week 25	July 3–6, 1990	Toronto
Week 26	August 14–17, 1990	Toronto
Week 27	August 20–24, 1990	Toronto
Week 28	August 27–31, 1990	Toronto
Week 29	September 10–14, 1990	Toronto
Week 30	September 17–21, 1990	Toronto
Week 31	October 1–3, 5, 1990	Toronto

Week 32	October 9–10, 12–13, 1990	Toronto
Week 33	October 15, 1990	Toronto
Week 34	October 22–26, 1990	Toronto
Week 35	October 29 – November 2, 1990	Toronto
Week 36	November 13–17, 1990	Toronto
Week 37	November 19–23, 1990	Toronto
Week 38	November 27 – December 1, 1990	Toronto
Week 39	December 3–4, 1990	Toronto
Week 40	December 10–14, 1990	Toronto
Week 41	December 17–20, 1990	Toronto
Week 42	January 14–18, 1990	Toronto
Week 43	January 21–22, 1991	Toronto
	January 23–24, 1991 (Submissions)	Toronto

**Transcripts**

168 volumes 33,648 pages

**Exhibits**

Total number of public exhibits 1343

**Witnesses**

Total number of witnesses called at the Inquiry 166

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# Appendix F

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**Ministry of  
the Solicitor  
General**

Office of  
the Chief  
Coroner

26 Grenville Street  
Toronto, Ontario M7A 2G9

**Ministère du  
Solliciteur  
général**

Bureau du  
coroner  
en chef

26, rue Grenville  
Toronto (Ontario) M7A 2G9

Telephone/Téléphone:  
(416) 965-6678

Fax#/Télécopieur  
(416) 324-3766

July 15, 1991

The Honourable Virgil P. Moshansky  
Commissioner  
Commission of Inquiry into the  
Air Ontario Crash at Dryden, Ontario  
595 Bay Street, 14th Floor  
Toronto, Ontario  
M5G 2C2

Dear Sir:

As Chief Coroner for the Province of Ontario, it is my responsibility to ensure that all deaths within Ontario are investigated with the following three principles in mind:

- 1) the public must be satisfied that the death of any member of the community will not be taken lightly, but instead will be as fully and completely investigated as is reasonably possible;
- 2) all of the facts surrounding each death must be made known to the public;
- 3) most importantly, those deaths which are preventable must be identified and all efforts made to delineate and invoke practical recommendations with a view to preventing similar deaths in future.

As a result of investigations into aviation accidents in Canada prior to the Air Ontario crash at Dryden, Dr. Bennett, the Chief Coroner at that time, and I were concerned about the margin of safety in the Canadian aviation industry.

A review of the literature demonstrates that enlightened accident investigation entails a careful analysis of the human factors aspects of a crash. In other words, it is not sufficient simply to



identify the ultimate error resulting in the crash without further exploring the pressures and influences which allow or, in some cases, invite that ultimate error to occur. In this context, we were concerned that deaths resulting from aviation accidents were not being examined in sufficient depth to prevent the recurrence of similar deaths in future.

At the inception of the Commission of Inquiry, you invited the Office of the Chief Coroner to participate fully in the Inquiry process. At their first meeting with you, our representatives expressed to you the concerns which Dr. Bennett and I shared. They were assured from the start that this Inquiry would be conducted in an open forum, would be thorough, and would give full attention to the human factors analysis approach of accident investigation. Such an approach was needed and was overdue. It was on this basis that we determined that a separate and parallel investigation in the form of a coroner's inquest would be unnecessary, inefficient, and perhaps counterproductive, and that the expense associated with full participation throughout the Inquiry process was fully justified. In the course of time I have become absolutely convinced that this was the correct decision.

For the purposes of representing the Chief Coroner at the Commission of Inquiry, we chose Mr. Paul Bailey, Crown Attorney for the County of Kent, and Dr. Robert Huxter, Regional Coroner for Metropolitan Toronto. Each of these individuals came equipped with extensive investigative and aviation experience. I trust that Mr. Bailey and Dr. Huxter were able to assist in and enhance the process by which the evidence that came before you was gathered, tested, and analysed.

It is an arduous task to preside over a public hearing. Participating interest groups often have competing interests and conflict is inevitable. Your approach to the varying interests have allowed everyone to be heard without any compromise with respect to ascertaining the truth. The interests of aviation safety are well served by your experience and wisdom in this regard.

I have been kept apprised on an ongoing basis of the facts discovered and the conclusions reached by you. I am pleased to assert unequivocally that the interests and goals of the Office of the Chief Coroner on behalf of the Province of Ontario have been fully met by the Commission of Inquiry into the Air Ontario Crash at Dryden. In my opinion, your Commission of Inquiry has established a new and badly needed benchmark for the investigation of major aviation accidents in Canada.

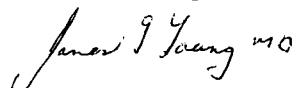
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I fully endorse the approach you took, and the recommendations you have made. In the event of a further major accident, I am confident that my colleagues in other provinces and I will carefully compare the actual performance of the aviation industry and aviation regulators with the standard of conduct you have carefully delineated in your reports.

It is my hope that such scrutiny will not be needed. I strongly urge that the individuals and organizations that are mandated to invoke your recommendations do so. I am encouraged by the improvements that have already been made by air carriers and Transport Canada. The further changes you advocate, however, must also be effected. Only then will a recurrence of the death and suffering caused by the Dryden crash be avoided.

Thank you again for the opportunity of collaborating on this worthwhile endeavour.

Yours sincerely,

A handwritten signature in cursive script that reads "James G. Young M.D.".

James G. Young, M.D.  
Chief Coroner for Ontario

JGY:fl

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## Appendix G

### Time Sequence of Events during the Station Stop at Dryden Municipal Airport and Events Occurring at the Crash Site, March 10, 1989

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The following time sequence of events surrounding Air Ontario flight 1363 on March 10, 1989, is based on information from the following sources:

- Piedmont Airlines' F-28 Operations Manual
- Transcript of Kenora Flight Service Station (FSS) taped log
- Data from simulator trials carried out by the Canadian Aviation Safety Board's (CASB) flight operations group
- Testimony of witnesses
- Ambulance tachographs
- Dryden and airport fire channel tape

References in *italic* type are to exact times; all references in roman type are best estimates.

Time	Events
11:39 a.m.	Flight 1363 lands at Dryden
11:40	Flight ramps at Dryden. Flight is marshalled in by Mr Vaughan Cochrane, with Mr Jerry Fillier standing by with baggage cart. Light snow falling; none accumulating on the ramp or the aircraft.
11:41	Mr Cochrane puts in nose-wheel chocks and stands by the front door while flight attendant opens it. Mr Fillier proceeds to forward cargo hold to unload and load baggage.
11:42	First Officer (FO) Keith Mills leaves cockpit and goes to lavatory at rear of aircraft. Captain George Morwood remains in seat.

<b>Time</b>	<b>Events</b>
11:43	Mr Cochrane goes to cockpit to give pilots the baggage count. (He does not remember whether or not both pilots were there at that time.) Mr Cochrane leaves cockpit and tells Mr Fillier to get the fuel truck. Mr Cochrane then goes into the terminal and calls crash, fire-fighting, and rescue (CFR) unit.
11:45	FO Keith Fox, a passenger travelling from Thunder Bay to Dryden, talks to Mr Cochrane at the Air Ontario ticket counter.
11:47	FO Fox returns to cockpit to inquire about missing baggage. He speaks with Captain Morwood; FO Mills is not in the cockpit. Still snowing. Intensity has increased. Special weather observation taken at 1747Z (issued at 1748Z) shows visibility reduced to 2 ½ miles in snow. Snow starting to accumulate on the wings.
11:48	Mr Fillier returns with fuel truck. Does not hook up but proceeds to cockpit to get details for refuelling. Both pilots are in cockpit. Captain tells Mr Fillier that 13,000 pounds total is required – 6500 pounds per side.
11:50	Mr Fillier commences to hook up for refuelling when Mr Cochrane returns and tells him to refuel a NorOntair flight and a Cessna 206. Both these aircraft are parked in front of the fuel pumps.
11:52	Captain Morwood leaves cockpit and proceeds into terminal. He is seen by Mr Fillier leaving the aircraft as the latter walks towards the NorOntair flight. Light, wet snow falling; more is accumulating on wings. Weather observation taken about 1750Z (issued at 1800Z) gives visibility as 2 ½ miles in light snow.
11:53	Captain Morwood arrives at Air Ontario ticket counter and talks with Ms Jill Brannan.
11:56:03	<i>FO Mills calls YQK FSS: "Kenora Dryden it's Ontario 363."</i>
11:56:10	<i>YQK FSS replies: "Ontario 363 Kenora."</i>

<b>Time</b>	<b>Events</b>
11:56:16	GX 363: <i>"Yes Sir, we are just sitting on the ramp here, I wonder if you could in Dryden could you go ahead the latest Brandon, Winnipeg, Kenora, ahh and Thunder Bay please."</i>
11:56:31	YQK FSS: <i>"Roger stand by."</i>
11:56:48	YQK FSS: <i>"And for Ontario 363 Kenora the Winnipeg weather, seventeen hundred sky partially obscured, five hundred then scattered. Twelve thousand thin broken visibility three fog. Temperature two dew point zero, wind one two zero wind one twenty at ten, altimeter three zero zero one. At Thunder Bay sky partially obscured, four thousand, five hundred scattered, measured ceiling seven thousand broken, nine thousand overcast, one and a half miles in fog, temperature minus two, dew point minus three, winds calm, altimeter 30.17, sun dimly visible, and was that Brandon and what other location?"</i>
11:57:30	GX 363: <i>"Brandon, Kenora, also Canadian Sault please."</i>
11:57:36	YQK FSS: <i>"Roger, Brandon balloon ceiling eight hundred overcast, three miles fog, temperature one, dew point zero, winds one forty degrees at six, altimeter two nine nine six, stratus nine. Kenora we are at two thousand special at one seven one seven, two thousand two hundred scattered, estimated ceiling five thousand broken, four miles fog, temperature zero, dew point minus two, one zero zero degrees five, altimeter three zero one zero. Canadian Soo eight thousand thin broken, estimated ceiling two seven thousand broken, visibility more than fifteen, temperature zero, dew point minus six, wind one four zero degrees nine, altimeter three zero three two."</i>
11:58:00	Captain places call to London SOC centre from telephone at the ticket counter.
11:58:28	GX 363: <i>"Okay let me check those all okay. And can we have an updated terminal please for if there's any amendments to Dryden, Kenora, and Winnipeg please."</i>

Time	Events
11:58:47	<i>YQK FSS: "The Dryden forecast valid from seventeen hundred to zero three hundred is for three thousand scattered, ceiling is ten thousand overcast, occasionally ceiling's three thousand broken, ten thousand overcast, five miles in light rain, light freezing rain and fog, becoming by nineteen hundred Universal eight hundred scattered, ceiling's four thousand overcast, occasionally sky partially obscured, ceiling's eight hundred overcast, two miles light rain, fog, risk of a light thunder shower til twenty-one hundred Universal and after zero zero ceilings fifteen hundred broken, four thousand overcast. For Kenora, valid from seventeen hundred Universal, seven hundred scattered, ceiling's four thousand overcast, five miles light snow showers, occasionally sky partially obscured, ceiling seven hundred overcast, one mile light rain showers, light snow showers, fog, risk of a thunder shower in snow, becoming by nineteen hundred eight hundred scattered, ceilings four thousand broken occasionally, sky partially obscured ceilings eight hundred broken, five miles fog, by twenty-one hundred Universal fifteen hundred scattered, ceilings four thousand broken, occasionally ceilings fifteen hundred broken, four thousand broken, how on that so far?"</i>
11:59:50	<i>Captain completes call to dispatch and starts back to aircraft. Before returning to aircraft the captain speaks with FO Fox and Ms Carol Anne Petrocovich, both passengers who had travelled from Thunder Bay to Dryden, at the Dryden Flight Centre counter.</i>
12:00:10 p.m.	<i>Captain arrives in cockpit</i>
12:00:15	<i>GX 363: "Okay we got that pretty much okay the, it's after twenty-one Z Kenora goes fifteen hundred scattered and that was VFR."</i>
12:00:25	<i>YQK FSS: "Affirmative well, occasionally down to fifteen hundred broken after that time."</i>
12:00:30	<i>GX 363: "Okay we check that, we're down to about a mile and a half in Dryden in snow right now, quite puffy, snow, looks like it's going to be a heavy one. Uh, okay and go ahead with the rest."</i>

Time	Events
	Snow has increased in intensity. Visibility now down to 1 ½ miles (FO Mills's estimate) from 2 ½ miles at 1747Z.
12:00:44	<i>YQK FSS: "Okay Winnipeg, valid from seventeen hundred, sky partially obscured, ceilings five hundred broken, one mile fog, variable five hundred scattered, ceilings four thousand broken, five miles fog, by twenty hundred, eight hundred scattered, ceilings four thousand broken, occasionally sky partially obscured, ceilings eight hundred broken, three miles in fog, and improving, well I don't know if improving after zero two hundred tonight, one thousand broken, four thousand broken, winds zero four zero degrees at ten, occasionally five miles light snow showers and a risk of a freezing drizzle, and ceilings tomorrow about fifteen hundred broken, stand by I'll see if there's any segmets [SIGMET] out for that area."</i>
12:01:00	Mr Cochrane arrives in the cockpit with fuel figures. Captain asks if de-icing is available and Mr Cochrane says yes, it is, and points out Mr James Esh, who is walking by on the ramp, as the man who would do it. According to Mr Cochrane this is the end of the short conversation.
12:01:20	Mr Cochrane leaves the aircraft, and the door is closed. FO Mills has been completing the weight and balance form while the captain and Mr Cochrane are conversing.
12:01:30	FO Mills completes the weight and balance form. The door is already closed so he does not give the form to Mr Cochrane.
12:01:32	<i>FO Mills calls FSS: "Okay we're just firing up here now and uh we'll give you a call requesting the IFR as well."</i>
12:01:35	Before-start check – through flights (Piedmont F-28 Operations Manual); called by FO Mills and actioned by Captain Morwood.
	No Smoking and Seatbelt . . . . . ON Instruments . . . . . SYNC AND X-CHECKED Parking Brake . . . . . SET Fuel . . . . . ___Min, ___OB [On Board]

Time	Events
	Radios, Radar, Transponder . . . SET AND STANDBY
	TTC Switches (2) . . . . . TAKEOFF
	Rudder and Aileron Trim . . . . . CHECKED
	Papers . . . . . ABOARD
	Thrust Index . . . . . SET
	-----Cleared for Start-----
	Anti-Collision Lights . . . . . ON
	Booster Pumps (4) . . . . . ON
	Start Pressure . . . . . <u>    </u> PSI

[Note: This check should take about 60 seconds to complete.]

12:01:50 YQK FSS: "And 363 Kenora there is a segmet [SIGMET] out, correction, for Winnipeg area, radar shows reports confirm north to south line of scattered thunder cells, twenty miles wide from Bissett to Gretna moving eastward at forty-five knots, tops at twenty-eight thousand, severe clear icing and turbulence associated. That's about it."  
 No answer from flight 363. The pilots are probably busy starting the engine or reading check lists.

12:02:30 Crossbleed start (Piedmont F-28 Operations Manual); called by FO Mills and responded to by Captain Morwood.

CROSSBLEED START

If difficulties are experienced with APU air or an external air source with one engine running, a crossbleed start can be made. Prior to using this procedure, ensure that the area to the rear is clear. Increase thrust on the operating engine until there is a 30 psi duct pressure and use this air source to start the remaining engine.

CAUTION: A crossbleed start should not be attempted during pushback.

Engine Bleed Air Main Switches . . . . . ON  
 APU Bleed Air Switch . . . . . OFF  
 Throttle Lever . . . . . ADVANCE  
 Advance throttle lever on the operating engine until duct pressure reads 30 psi. Start remaining engine using normal procedures. After starter cutout, reduce power.



Time	Events
	[Note: This check should take about 50 seconds to complete.]
12:03:20	After-start check (Piedmont F-28 Operations Manual); called by FO Mills and actioned by Captain Morwood.
	<p><u>AFTER START</u></p> Warning & Door Lights ..... OUT Electrical ..... GENERATORS ON CHECKED APU Air ..... OFF Starter Master Switch ..... OFF Air Cond. and Press ..... BOTH ON, SET Anti-Ice ..... AUTO/ON Pitot Heat ..... ON HP Fuel Valve Levers ..... OPEN Flight Control Lights ..... OUT
	[During or following this check the flaps are selected down and almost immediately back up. Flaps up would conform with recommended practice when taxiing on contaminated surfaces. Note: This check should take about 35 seconds to complete.]
12:03:43	YQK FSS: <i>"Ontario 363 Kenora."</i> Snow intensity continues to increase. Special weather observation taken about 1803Z (issued at 1806Z) shows precipitation ceiling at 300 feet above ground level (AGL) and visibility $\frac{3}{8}$ of a mile in moderate snow.
12:03:46	GX 363: <i>"We're fired up, taxiing for departure requesting the airways to Winnipeg."</i>
12:04:03	FHJS (Cessna): <i>"There any chance that plane can hold, I'm having real bad weather problems here."</i>
12:04:07	GX 363: <i>"Okay three sixty three's, holding short of the active, be advised you are down to a half a mile or less in snow here."</i> FO Mills confirms the MET observer's observation is still valid at 1804:07Z. Snow continues to accumulate on the wings; ramp is starting to build up layer of slush.

Time	Events
12:04:10	Captain Morwood calls Ms Brannan on radio and advises they have to hold for a light aircraft.
12:04:15	C-FHJS: "That's a roger."
12:04:31	C-FHJS: "I'm about one mile south of the Airport."
12:05:00	YQK FSS: "Juliette Sierra Kenora, special VFR is approved in the Dryden control zone til one eight one five. Call final."
12:05:05	Captain Morwood makes a PA announcement to the passengers, explaining the delay.
12:05:16	C-FHJS: "We're on final."
12:05:18	YQK FSS: "Juliette Sierra Kenora, roger."
12:06:22	GX 363: "Kenora Ontario [three six three], we're taxiing out at this time, three sixty three Dryden, we check there's a single engine just landed here."
12:06:42	YQK FSS: "Are you using Runway one one or two nine?"
12:06:46	GX 363: "We'll go for 29."
12:06:52	GX 363: "Kenora you copy 363 taxiing for Departure 29." Continues to snow heavily. Snow squall is heaviest at the 29 end of the runway (the east end of airport). Snow is becoming quite thick on the wings. Runway at the east end is building up slush and snow at the runway edges and, possibly, in the centre as well.  <u>The contaminated runway procedures expected to have been followed by the flight crew of C-FONF</u> Taxiing: Most air carriers have their own procedures for taxiing on snow- and/or slush-covered runways. This usually calls for leaving the flaps up and delaying the Before Takeoff Checklist until in the vicinity of the threshold of the departure runway.
12:06:56	YQK FSS: "363 Kenora stand by."

<b>Time</b>	<b>Events</b>
12:07:24	YQK FSS: "Ontario 363 Kenora your clearance Sir."
12:07:33	GX 363: "Go ahead for three sixty three."
12:07:35	YQK FSS: "ATC clears Ontario 363 to the Winnipeg Airport, Dryden direct, maintain flight level two zero zero, departure Runway two nine, proceed on course, squawk code one three zero zero."
12:07:49	GX 363: "ATC clears 363 to the Dryden Airport, maintain to, uh Dryden direct maintain two zero zero off twenty-nine on course, thirteen hundred on the box."
12:07:56	YQK FSS: "Roger that was cleared to the Winnipeg Airport."
12:07:59	GX 363: "Affirmative, Winnipeg Airport."
12:08:24	YQK FSS: "Ontario three six three Kenora, call airborne time one eight zero eight, three-quarters (30 on T.I.U.)."
12:08:29	GX 363: "Call Kenora airborne three sixty three."
12:08:35	Taxi and Takeoff (Piedmont F-28 Operations Manual); called by FO Mills and responded to by Captain Morwood.

#### TAXI & TAKEOFF

Yaw Damper ..... IN  
 Flight Controls ..... CHECKED  
 Flaps ..... \_\_\_\_\_  
 Stabilizer Trim ..... \_\_\_\_\_ UNITS UP/DOWN  
 Liftdumpers ..... ARMED, RDY  
 Collector Tank Indicators ..... BLACK  
 Control Cabin Door ..... LOCKED  
 Shoulder Harness ..... SECURED  
 Takeoff Data and Brief ..... REVIEWED, BUGS SET

[Note: Approximate elapsed time 40 seconds to complete this check.]

**Time**

**Events**

Cleared For Takeoff

APU ..... ON/OFF  
 Flight Att. Advisory ..... GIVEN  
 Transponder ..... ON

Engine anti-icing during ground operation and takeoff.

Engine inlet icing may occur at a temperature above freezing when there is no evidence of icing on the aircraft. Switch on engine anti-icing after engine start when icing is observed or anticipated, i.e., when the ambient temperature is below +10°C and visible moisture (rain, slush, snow, fog, etc.) and/or wet runways exist. To check engine anti-icing pressure controlling in the range 45 to 57 psi, HP rpm may be momentarily increased during taxiing.

CAUTION:

IN FOG AND RAIN AT TEMPERATURES BELOW +10°C THE ENGINE ANTI-ICING SYSTEM MAY NOT BE CAPABLE OF KEEPING THE ENGINES CLEAR OF ICE DURING PROLONGED TAXIING AND/OR LONG PERIODS OF IDLING. IN THESE CONDITIONS IT IS RECOMMENDED TO ACCELERATE THE ENGINES TO APPROXIMATELY 90% HP ROM FOR 3 TO 4 SECONDS AT INTERVALS OF NOT MORE THAN 8 MINUTES. BEFORE COMMENCING THE TAKEOFF ROLL, SELECT TAKEOFF POWER ON THE BRAKES TO CHECK SATISFACTORY ENGINE BEHAVIOUR.

Aircraft turned around at the button of Runway 29, and engines run up apparently in accordance with the above procedures, prior to brake release.

12:09:29      GX 363: *"And Kenora Dryden Ontario three sixty three, is about to roll twenty-nine at Dryden."*

12:09:35      YQK FSS: *"Ontario three six three Kenora, roger."*  
 Snow intensity is decreasing slightly. Special observation taken at 1809Z (issued at 1211Z) gives precipitation ceiling of 1000 feet AGL and visibility of ¾ of a mile in snow.

12:09:35      Short engine run up

Time	Events
12:09:40	<p>Aircraft begins takeoff roll.</p> <p>Takeoff: The aircraft was equipped with standard chined nosewheel tires. A flap setting of 18° is recommended, thereby eliminating possible trapping of slush between vane and flap during retraction after takeoff. The takeoff is based on <math>V_1/V_R=1.0</math> to avoid the possibility of insufficient acceleration after engine failure.</p> <p>It is recommended to raise the nosewheels out of the slush as soon as the elevator becomes sufficiently effective and to continue acceleration with the nosewheels just clear of the slush. Thereby the contribution of the nosewheels to the total slush drag is eliminated. However, care should be taken not to over-rotate, as this would increase the aerodynamic drag.</p> <p>At <math>V_R</math> commence rotation to approximately 10° nose-up pitch and continue the takeoff in the normal manner. <b>CAUTION: SLUSH DRAG PRODUCES SIGNIFICANT NOSE-DOWN PITCHING MOMENTS. THE SUDDEN REDUCTION IN DRAG AT THE MOMENT OF ROTATION MAY RESULT IN OVER-ROTATION.</b></p>
12:09:56	<p>Aircraft reaches 80 knots. This is the speed where captain is committed to take off unless an engine fails before <math>V_1/V_R</math>.</p>
12:10:45	<p>Aircraft crashes in bush 950 metres west of the runway.</p>
12:10:54– 12:12:45	<p><i>Kenora FSS asks Winnipeg ATC if it has contact with Air Ontario 363. The FSS and ATC both try to locate the aircraft and then Kenora FSS speaks with CFR Chief Ernest Parry, who is in Red 3 on the runway at Dryden.</i></p>
12:12:47	<p><i>Chief Parry tells Kenora FSS that aircraft may have gone down west of the airport.</i></p>
12:14	<p><i>Chief Parry informs town dispatch and asks that emergency plan be activated.</i></p>
12:18	<p>Chief Parry in place at McArthur and Middle Marker roads.</p>

<b>Time</b>	<b>Events</b>
12:19	Red 1 arrives at end of Middle Marker Road. CFR crew chief Stanley Kruger takes his portable radio and first-aid kit and proceeds to crash site.
12:24	<i>Command centre in town is set up and ready for requests.</i>
12:26	<i>Chief Parry calls for pumper from town.</i>
12:27-28	<i>Chief Parry asks airport to send field maintenance "guys" and "at least a loader."</i>
12:29	<i>Chief Parry asks if any ambulances are available.</i>
12:30	Sergeant Douglas Davis of the OPP arrives at McArthur and Middle Marker roads.
12:32	<i>Chief Parry reports "twenty/twenty-five walking wounded" out at road.</i>
12:34	UT of O Rapid Attack truck arrives and parks on McArthur Road.
12:35	<i>First ambulance arrives and drives down Middle Marker Road to where Red 1 is parked. From a comparison of all other available information, it appears that the clock in the TACH unit in unit 644 was about nine minutes fast. The TACH unit says it arrived at the site at 12:44 p.m., but Chief Parry reports that the ambulance arrived at the site at 12:35 p.m.</i>
12:40	UT of O tanker truck arrives and parks on McArthur Road.
12:43	Red 2 arrives and drives down Middle Marker Road. Shortly thereafter, it backs out to allow the ambulance to depart. Red 2 loses the air in the brake system and is parked on McArthur Road.
12:44	<i>Two Town of Dryden fire trucks arrive at Middle Marker Road.</i>
12:45	UT of O fire chief Roger Nordlund arrives at McArthur and Middle Marker roads.

<b>Time</b>	<b>Events</b>
12:46	<i>The number of people on board C-FONF is confirmed at 69 in a radio communication from Peter Louttit, manager of Dryden Municipal Airport, to Chief Parry.</i>
12:52	<i>Chief Parry advises that "5 or 6 private vehicles and police cars" have left the site for the hospital with survivors. This is in addition to unit 644, which departed the site at 12:51 with seven survivors.</i>
12:55	<i>Ambulance unit 645 – Sandra Walker – arrives at site carrying supplies and bringing Dr Gregory Martin and Dr Alan Hamilton. Ms Walker is the emergency medical care attendant.</i>
1:05	<i>Ambulance unit 645 departs site with Mrs Nancy Ayer for hospital.</i>
1:08	<i>Dryden Fire 5 on a portable from the site advises that all survivors are out to the road.</i>
1:10	<i>Crew chief Kruger confirms that all survivors are out and remarks, "We need a road in here badly and if we can get some handlines in here somehow."</i>
1:11	<i>Chief Parry calls for a heavy dozer to punch a road to the site.</i>
1:12	<i>Crew chief Kruger advises, "We have got two more survivors ... we pulled out of the wreckage." These survivors are Mr Michael Kliewer and Mr Uwe Teubert. A discussion ensues about getting a helicopter to land at the site to take out these two remaining survivors. It is concluded that it will take too long for a helicopter to arrive, and the two men are carried out of the bush.</i>
1:30	<i>Some time after 1:30, the two UT of O fire trucks are driven down Middle Marker Road and set up for fire suppression.</i>
1:37	<i>Ambulance unit 645 returns to the site.</i>
1:45	<i>Ambulance unit 645 departs the site with Mr Kliewer, Mr Teubert, and Dr Martin.</i>

<b>Time</b>	<b>Events</b>
2:00	First foam is applied to the burning aircraft.
2:00	<i>Ambulance unit 645 arrives at Dryden hospital.</i>

#### **Notes to Time Sequence**

- 1 The time sequences are based on the assumption that all required checks were carried out by the pilots.
- 2 All times are local.
- 3 All the evidence has been considered with respect to weather data for the various times. Some of this evidence is conflicting. In an attempt to resolve contradictions, more reliance was placed on the evidence of trained observers than on the evidence of untrained observers. In this context, professional pilots are considered trained observers.
- 4 The times that are accurate are:
  - (a) The radio transmissions between GX 363 and Kenora FSS. First Officer Mills makes all the calls to FSS. Captain Morwood makes the calls to Dryden Flight Centre.
  - (b) The telephone call from Captain Morwood to the SOC centre in London.
  - (c) Times obtained from the Dryden and airport fire channel tape.
  - (d) Ambulance tachographs (adjusted).
- 5 The times noted as normal for completion of the cockpit checks take into consideration the relatively low experience level of the two pilots on the F-28.
- 6 There is an assumption that the taxi speed was normal.
- 7 Except where noted, all event times following the takeoff of the aircraft are taken from the Kenora FSS tape, the Dryden and airport fire channel tape, or the ambulance tachographs.



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# Appendix H

## Summary of Fatalities and Survivor Injuries

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### Summary of Fatalities in Crash of Flight 1363

Seat	Name	Cause of Death
A	Morwood, George John	Gross blunt force trauma including ruptures of the heart
B	Mills, Keith B.	Smoke inhalation and presumption of blunt force trauma to abdomen
C	Say, Katherine	Generalized body burns
1a	Allcorn, Don	Generalized body burns
1b	Kliewer, Pamela	Generalized body burns
1c	Kliewer, Brian	Multiple trauma, severe head injury, and terminal aspiration of blood
1d	Syme, Steve	Generalized body burns
2b	Kliewer, Lisa	Multiple trauma, CO 21%
2c	Kliewer, Michael	Massive trauma
2d	Rabb, Hilda	Burns to body
3a	Kozak, Ryan	No anatomic cause of death (grave destruction of body)
3b	Kozak, George	Undetermined (charred body with fractured femoral shafts)
3c	McLeod, Kenneth John	Trauma

<b>Seat</b>	<b>Name</b>	<b>Cause of Death</b>
4a	McColeman, Wilfred P.	Undetermined
4b	McColeman, Geraldine	Trauma with terminal aspiration of blood
4c	Gallinger, Fred	Trauma
5a	Monroe, Mark	Traumatic injury with terminal aspiration of blood, CO 15%
5b	Schweitzer, William	Traumatic injury
5c	Rossaasen, Alvin	Smoke inhalation and burns to the body, CO 65% – lethal range
6a	Finlayson, Donald	Smoke inhalation, CO 23%. No anatomic cause detectable.
6b	Fortier, Wendy	Smoke inhalation, toxic CO 33%. No anatomic cause detectable.
6c	Fortier, Greg	Soot in airway, CO 21%. No anatomic cause of death.
7a	Barton, Rudy	Undetermined (charred body)
7c	Ayer, Nancy	Extensive full-thickness cutaneous burns and hypovolemic shock

## Summary of Injuries

Seat	Name	Documented Injuries
1e	Syme, Karen	Hospitalized. Grief reaction and superficial laceration to scalp.
2a	Teubert, Uwe	Hospitalized. 2d and 3d degree burns to back. Lacerations of L face, chin, and L thigh requiring suturing. Abrasions and bruising to chest, lower limbs, and R buttock. Loss of consciousness and concussion. Smoke inhalation.
2c	Kliewer, Michael	Hospitalized but FATAL. Massive trauma and skull fracture.
2e	Phibbs, Jack	Hospitalized. Abrasions to L flank. Bruising of L shoulder. Fractured R thumb. Significant head injury with questionable concussion. Preponderance of L-sided injuries.
3d	Waller, Richard	Hospitalized. Abrasions to forehead and legs. Significant impact and bruising to L shoulder and L chest wall. Physician worried about a ruptured spleen. Chip fracture of L lateral epicondyle. Preponderance of L-sided injuries.
3e	Ditmars, Clyde	Bruising and abrasions to L leg, forehead, nose, and L ribs. Sprained L ring finger. Preponderance of L-sided injuries.
4d	Adams, Brian	Hospitalized. Laceration to R palm and L thumb requiring sutures. Bruising and abrasions to L leg, ankle, and L eye. Preponderance of L-sided injuries.
4e	Perozak, Brian	Bruising to L shoulder and L leg. Preponderance of L-sided injuries.

<b>Seat</b>	<b>Name</b>	<b>Documented Injuries</b>
5d	Haines, Shannon	Laceration to R leg. Abrasion to L leg. Bruising to forehead and L leg.
5e	Archer, John	Abrasions to scalp and hands. Bruising to anterior chest.
6d	Tucker, Gordon	Bruising to R chest and L forearm. Sore neck and R chest.
6e	Maronese, Tina	Abrasions to L foot and bruising to L flank, chest, and scapula. Slight preponderance of L-sided injuries.
7b	MacDougall, Allan	Hospitalized. 3d degree burns to R foot, back, and L shoulder involving 6% of body surface area. Laceration to L forehead. Bruising to L hip. Fracture of L forearm (radius). Preponderance of L-sided injuries. Questionable loss of consciousness. Smoke inhalation?
7c	Ayer, Nancy	Hospitalized but FATAL. Extensive full-thickness cutaneous burns and hypovolemic shock.
7d	Campbell, Ricardo	2d degree burns to face, head, and shoulders involving 5% of body surface area. Lacerations and bruising of L leg.
7e1	Podiluk, Shelley	Hospitalized. 1st degree burns to hands. 2d degree burns to midback, groin, and feet. 9% of body surface area affected by burns. Sore neck and chest. Significant hyperflexion/extension neck sprain noted. Questionable 3rd degree sprain or avulsion fracture of L lateral talofibular ligament (L ankle). Bruising to occiput. Likely smoke or fume inhalation.

<b>Seat</b>	<b>Name</b>	<b>Documented Injuries</b>
7e2	Podiluk, Megan	Hospitalized. 2d to 3d degree burns to 3% of body surface area. No smoke or fume inhalation. Small laceration of the scalp.
8a	Harris, Tom	Hospitalized. 1st and 2d degree burns to L hand, forearm, elbow, and shoulder, and R hand and forearm. 14% of body surface area affected by burn.
8b	Knott, Byron	Hospitalized. Bruising and abrasions to head and body. Dislocated R elbow. Sprained R back.
8c	Mandich, Ron	1st degree burn to face with singed hair. Sore neck and sprained L wrist.
8d	Hartwick, Sonia	Bruising and abrasions to R forehead. (Also diagnosed skull fracture.)
8e	Taggert, Paul	Bruising and abrasions to wrists, face, R knee, and L ribs
9a	Godin, Lori	Abrasions to R lateral knee. Sore neck and R collarbone.
9b	Godin, Dan	No emergency reports. Likely not treated for any injuries.
9c	Bertram, Alfred	Abrasion to L wrist and R chin
9d	Godin, Susan	Bruising and abrasions to R lower waist. Sore neck.
9e	Godin, Danielle	Bruising and sprained/strained back. Conjunctivitis of R eye.

<b>Seat</b>	<b>Name</b>	<b>Documented Injuries</b>
10a	Menzies, Donna	Hospitalized. Sprain/strain to lower back but walked out of woods.
10b	Mackenzie, Kelly	Bruising to L hip, thigh, and parietal area of the head. Abrasions to R wrist.
10c	Mackenzie, James	Bruising and abrasions to R shoulder, hand, and calf
10d	Ferguson, Susan	Hospitalized. Laceration to L scalp requiring 5 sutures. Bruising and abrasions to legs. Admitted for observation.
10e	Ferguson, Michael	Superficial laceration to the L scalp and lower lip. Bruising to R upper arm and R lower leg.
11a	Gatto, Michael	Bruising to shoulder, waist, and L lower leg
11b	Gatto, Ryan	No injuries, just shaken up
11c	Haines, Lois	Hospitalized. 1st to 3d degree burns to both legs and 10% of body surface area. Bruise to R posterior chest, face, and temple with questionable LOC. Sore neck. Laceration of L ankle requiring 4 sutures.
11d	Woods, Violet	Hospitalized. Laceration to L forehead. Bruised periorbital area, R shoulder, and scapula. Dislocated L foot tarsal joint.
11e	Biro, John	Hospitalized. 2d degree burns to scalp. Laceration to lip and R ear requiring sutures. Sore neck. Admitted for concern over past cardiac problems.

<b>Seat</b>	<b>Name</b>	<b>Documented Injuries</b>
12a	Berezuk, David	Hospitalized. Bronchospasm and wheezing secondary to cold exposure or fumes. Laceration to R face needing sutures. Abrasions to R arm, face, and legs. Minor injuries but hospitalized.
12b	Berezuk, Michael	Abrasions to R leg
12c	Berezuk, Sandra	Superficial laceration R forearm, both legs and hips. Fractured R 9th posterior rib.
12d	McFarlane, Douglas	Hospitalized. Fracture L ribs #2, 3, and 4 which resulted in a mild haemothorax. Fracture and dislocated L ankle. Bruising to R frontal scalp, forehead, L flank, R lower thigh, and knee. Preponderance of L-sided injuries.
12e	McFarlane, Gary Scott	Laceration of R lower leg and L knee requiring sutures. Sprained R ankle. Bruise to head. Abrasion to shoulder.
13a	Jackson, Gary	1st and 2d degree burns to both hands. Laceration and puncture of L ear. Abrasion of L leg.
13b	Crawshaw, Donald	Burned or singed hair. Superficial laceration of nose. Sprained L wrist.
13c	Swift, Dennis	Hospitalized. Open compound comminuted fracture of R femur. Abrasions to the face and bruising to the L thigh.
13d	Haines, Murray	Bruise to hip and back
13e	Haines, Jessi	No significant injuries

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# Appendix I

## Minutes of Debriefing Meetings, Town of Dryden, March 13 and 16, 1989

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DISTRIBUTE IN ENVELOPES MARKED CONFIDENTIAL:

THE CORPORATION AT THE TOWN OF DRYDEN

March 13, 1989

Minutes of a debriefing meeting held at 10:00 a.m. on the above date in the Boardroom of the Town Hall.

Present: Mayor Jones, Airport Commission Chairman D. McDonald, Fire Chief L. Maltais, Project Engineer T. McConnell, Construction Superintendent W. Yasinski, Deputy Fire Chief D. Herbert, Welfare Administrator D. Smith, Treasurer P. Heayn, Administrator J. Callan, Telephone Manager W. Greaves, Police Chief R. Phillips, Town Engineer M. Fisher, Clerk B. Hoffstrom, Office Staff: G. Odell, E. Boyce, M. Wiedenhoft, E. Realini.

Chief Maltais chaired the meeting and announced the purpose of the meeting was to review any problem areas which arose during activation of our Emergency Plan following the crash around noon on Friday, March 10th of an Air Ontario F-28 jet. The aircraft was fully loaded and carried a total of 69 crew and passengers. There were 45 survivors and 24 fatalities. Chief Maltais noted that discussions at this meeting are confidential to those in attendance. He then requested each person to give individual comments.

TOM MCCONNELL reviewed his activities in the plan and indicated that the operation appeared to be well organized from his point of view.

WILL YASINSKI reviewed the Public Works activities, noting that diaries were maintained at the Public Works office of communications received and dispatched, noting that it was difficult in the early stages to convince people that this was not a practice. He noted a small problem with the portable power plants which were obtained at Canadian Pacific Forest Products in that the plants were available but there was no lighting to go with them. He noted also that Ontario Hydro and Bell Canada have portable generators but they are not on our



contact list. They also have snowmachines and should be on our list. There was discussion on whether the power plants should be stored on our site or at Bell or Ontario Hydro, and if they are, we should have the name of a contact person for access after regular working hours. He noted Public Works would be holding their own debriefing later today.

DARRYL HERBERT advised that his pager did not alert him, instead he went to the Fire Hall on his own volition after hearing something on the radio. He noted his involvement was primarily in assisting the Fire Chief. Also, all but four firemen, who are out of town, responded to this emergency. Firemen will be debriefing tonight.

GLENNA ODELL indicated she had a rather hectic ride to the hospital, also that proper forms were not initially available at the hospital. After Maurette arrived with the proper documentation, etc., there appeared to be very little problem.

ESTHER BOYCE acted as secretary at the Emergency Operations Centre. She commented on the excess of unnecessary people in the EOC, and suggested that the Red Cross should have a representative on the Control Group. Another suggestion was that the media people should be kept out of the control room.

LOUIS MALTAIS suggested that everyone involved in this event should do a personal diary on the extent of their involvement. He noted also that there was a need for a designated code so that people involved are able to determine that a real emergency is not a practice.

MAURETTE WIEDENHOEFT reported on communication problems with the Red Cross, the frantic ride to the hospital, the fact that we should have purchased toys or books or something for the children to keep them occupied, the need to ensure that an internal plan is developed for all departments, and she recommended that more employees attend the Arnprior training centre.

DOROTHY SMITH commented on the conflict with the Red Cross and their involvement in registering people. She also expressed concern with the operations of the media at the motels noting they should be controlled better by the Police Department, and noting that more police are required in that regard.

PAUL HEAYN noted that Ken Rentz was helpful in preparing a meeting place for relatives of the victims in the basement of the United Church.

He noted we should ensure there is a good supply of body bags on hand at all times, also that the ID badges need updating.

ELSIE REALINI reported on the co-operation she received from local merchants, particularly The Bay. The personal hygiene bags prepared for the injured people were very much appreciated. It was suggested an information package on Dryden complete with paper and pen be available for distribution to injured people in such circumstances as most of them are unaware of very much of what is available in Dryden. With respect to the hospital activities, she noted there was some duplication of information being requested from the victims and this was somewhat of a problem, particularly as time went by and the injured became more anxious and tired, etc. She also expressed a concern with people ending up totally alone in a motel room after such a harrowing experience.

WALTER GREAVES noted the importance of having telephones installed well in advance as much as practical because if telephone installers are required, it reduces the fire crew by up to three people. He was not aware of any other particular problems with communications. It has been suggested that the telephones in our EOC should have a hold button so that if it is necessary to have a caller wait for some information, the room noise is not picked up by the receiver. It was also suggested that large numbers indicating the telephone number of each phone be positioned above the phone location so that it is readily visible from all points in the room.

RUSS PHILLIPS commented on a number of problems, including the OPP role and how it fits in with our plan, communications in general between the control group and the outside world, ordering of supplies, fuel, medical services, media releases. He suggested we file our Town Emergency Plan in Kenora for their information. He suggested some of the roles in our Plan require clarification. Also the media should have a room separated from the EOC, and the control room made more secure. He advised that, in the future, Nancy Murdick will be involved at the outset of any emergency and will act as the scribe. He also suggested that telephones be installed on a permanent basis in the control room.

MEL FISHER noted he requires two copies of the Emergency Plan, and he suggested there should be maps available of the whole area surrounding the town rather than maps only of the town itself. He agreed the control centre requires greater security, and suggested there was a possible need for radio communications with all departments.

JOHN CALLAN advised he thought the people involved had functioned well and while the control centre facility had certain inadequacies, it was much better than the centre utilized for the November exercise. He agreed with the comments made earlier with respect to separation of the media by providing a separate room for them, however he noted that the use of Hugh Syrja for dealing with the media appeared to work well. He commented on the problems with the Red Cross with respect to their role, their relationship with our plan, the need for badges for on-site workers and/or arm bands, the conflict over role and authority with the OPP, the excellent co-operation received from the Ministry of Natural Resources, and the problems experienced in controlling the media on Saturday at the Lenver Inn. He indicated that letters of commendation would be sent to various individuals.

BRUCE HOFFSTROM concurred with the concerns raised with respect to the security for the EOC in particular and with the other concerns in general.

DICK MCDONALD commented on his activities and involvement with this event. In his opinion, the plan was well organized and well executed. He commented on the coincidental availability of the Hercules and the mid-flight change of plans to pick up experienced staff in Winnipeg.

LOUIS MALTAIS indicated there was a problem with the initial alert being placed by radio as this immediately alerted anybody operating a scanner. Future alerts are proposed to be by telephone. With respect to media, he suggested there should be both press and radio involved with press releases to be issued through the Administration. A communications problem resulted when people and equipment directed to specific locations did not confirm to the control group when they had arrived at these locations. He commented on the chain of command and noted this nearly fell apart a couple of times and that it must be maintained in order to avoid chaos. He suggested there should be one spokesman in the control centre for each major organization involved, i.e. Red Cross, etc. He noted the need for telephones on a permanent basis and for maps covering the area at least 10 kilometers surrounding town. He advised that Andrew Skene has arranged for a psychological team to be in Dryden to deal with workers if it is required.

He advised a debriefing has been scheduled for 2:00 p.m., Thursday, March 16th, 1989 involving all the resource agencies and people involved, to be held in the basement of the Anglican Church. Coffee and sandwiches will be available.

He commented on the ID badges and the need to have them updated and, in some cases, badges are not sufficient. There is a necessity for civilians to be provided with armbands which clearly indicate they are representing the Town of Dryden Emergency Group and perhaps their designation.

TOMMY JONES commented on our plan and on the coincidental meeting held Friday morning just before the crash. He noted that the internal plans are supposed to be updated by April 15th. He noted as well that the crash did occur beyond our jurisdiction outside the town limits and beyond the airport, and our involvement in the plan was to act as an evacuation centre to help and assist the injured.

He suggested that when our plan is revised, it should include detailed responsibilities, including delegation of the roles, definition of responsibilities, for at least three levels downward when people are away. We were fortunate this time that nearly everyone was present and available.

He noted that the letters of commendation referenced by Mr Callan should be sent to the individuals' superiors as well as to themselves.

He suggested there should be a special phone number for the plan co-ordinator so that in the event of an exercise or a real emergency an attempt can be made to contact the co-ordinator. He then philosophized on emergency planning in Dryden, particularly with respect to our vulnerability due to the Canadian Pacific Forest Products function, the CPR, the Trans Canada Highway, etc.

In closing, he extended his compliments to all on a job well done.

PAUL HEAYN asked that all invoices for expenses related to this occurrence be processed as quickly as possible.

Meeting adjourned at 11:40 a.m.

Following adjournment, the Emergency Control Group met to review the arrangements for the general debriefing to be held Thursday, adjourning at 12:00 noon.

Source: Exhibit 37

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THE CORPORATION AT THE TOWN OF DRYDEN

March 16, 1989

Minutes of a debriefing meeting held at 2:00 p.m. on the above date in the basement of the Anglican Church.

## Present:

Louis Maltais	Fire Chief	Dryden
John Callan	Administrator	Dryden
Bruce Hoffstrom	Clerk	Dryden
Bob Mitchell	District Manager ICG	Ignace
John Hyndman	Secretary, Dryden Ministerial Assoc.	Dryden
Walter Greaves	Dryden Telephone	Dryden
Russ Phillips	Police Chief	Dryden
Dick McDonald	Chairman, Airport Commission	Dryden
Tom Varga	Sergeant, OPP	Dryden
Maxine Moulton	Direct of Nursing, Hospital	Dryden
Harold Rabb	Dryden Ambulance	Dryden
Carl Eisener	Chief of Staff, Hospital	Dryden
Andrew Skene	C.E.O., Hospital	Dryden
Mel Fisher	Town Engineer	Dryden
Robert L. Rolls	Rector of St. Luke's	Dryden
Peter Louttit	Airport Manager	Dryden
Ernie Parry	Chief, Crash Fire Rescue	Dryden
Ken Bittle	V.P. Maintenance, Air Ontario	Dryden
Bill Deluce	President, Air Ontario	Dryden
H.H. Sampson	Regional Director, Emerg. Preparedness	
Major Don Christie	Central Region Operations, Dept. of National Defence	
Marleen Griffiths	Emergency Planning Ontario	
Jim Ellard	Deputy Co-ordinator, Emergency Planning Ontario	
Des. Risto	Emergency/Disaster Co-ordinator, Transport Canada	Winnipeg
Roger Nordlund	Fire Chief, UT of O	Wainwright
Hugh Syrja	Manager, CKDR	Dryden
Trevor Woods	Program Manager, Fire Manager, Ministry of Natural Resources	Dryden
Len Suómu	Chief Forester, Canadian Pacific Forest Products	Dryden
Ted Broadhurst	Mill Manager, Canadian Pacific Forest Products	Dryden
Gerry Ferguson	Director of Recreation	Dryden

Archie McNeil	Office Manager	Dryden
Craig Nuttall	Councillor	Dryden
Carl Bleich	President, Red Cross	Dryden
Vic Kameda	Facility Superintendent	Dryden
Dorothy Smith	Welfare Administrator	Dryden
Paul Heayn	Treasurer and Deputy Clerk	Dryden
Ken Rentz	Emergency Representative, Amateur Radio	Dryden
Tom Hinton	Director of Investigation, Canadian Safety Aviation Board	Dryden
Maj. Jim Armour	Accident Investigator, Canadian Safety Aviation Board	Dryden
Const. Klaus Larsen	Identification Officer, City Police	Thunder Bay
Det. Sgt. J. Bolduc	Criminal Investigation Div., Police	Thunder Bay
Allan Slota	Emergency Services, Red Cross	Dryden
Will Yasinski	Construction Superintendent	Dryden
Ken Kurz	Captain, Volunteer Firefighters	Dryden
Randy Smith	By-law Enforcement Office E.M.O.	Keewatin
Darold Anness	Canadian Pacific Forest Products	Dryden
Art Burnell	General Hospital	Sioux Lookout
Sylvia Arkeson	Director Nursing Service	Sioux Lookout
John Coagie	Chief of Security, Canadian Pacific Forest Products	Dryden
Raymond Godfrey	Lieutenant, U.T.of O.	Dryden
Ralph Fulford	Fire Chief	Fort Frances
Gary Rivard	CFR	Dryden
Fred Bouter	Ex Staff Officer, Flight Crew Training Fokker Aircraft	
John Albanese	Councillor	Fort Frances
Jack Murray	Police Chief	Fort Frances
Nancy Murdick	Secretary, Police Force	Dryden
Joe Abela	Communications Supervisor, Ministry of Natural Resources	Dryden
Dave Wessel	President, Amateur Radio Society	Dryden
Dave Beasiey	Laverendrye General Hospital	Fort Frances
Constable Brent Black	Police Force	Kenora
W.F. Beatty	Public Affairs Manager, Canadian Pacific Forest Products	Dryden
J.A. Riley	Security Assistance	Dryden
Tim Eady	Hydro Superintendent	Dryden
Mario Facca	Captain, Fire Department	Sioux Lookout
Darryl Herbert	Deputy Fire Chief	Dryden
Ed White	Deputy Fire Chief	Kenora
D.J. Milliard	Firefighter	Kenora
F.C. Harvey	Inspector, OPP	Kenora

Mayor Jones opened the meeting by calling on Canon Robert Rolls for a prayer. Following this, Mayor Jones introduced selected individuals and called on all others to stand and be identified. He welcomed all present to this meeting, announcing that the purpose of the meeting was to review any problem areas which may have arisen with respect to the implementation of the Dryden Emergency Plan following the crash shortly after 12:00 noon on Friday, March 10th of an Air Ontario F-28 jet. He then turned the meeting over to Fire Chief and Emergency Planning Co-ordinator Louis Maltais.

Fire Chief Maltais indicated that each individual involved would have an opportunity to speak and comment on any areas of concern which had come to their attention.

The following comments were received:

- PETER LOUTTIT – Responded in his own vehicle (has no FM radio) had trouble finding control centre number – had some confusion as to who was “Fire No. 1” (control centre) – suggested there is a need for a radio identifier for the centre.
- ERNIE PARRY – Made his first call to the Police Dispatcher – received calls from “Fire No. 1” (confirmed need for a radio identifier) – had no difficulty working with Emergency Control Centre (ECC) personnel.
- MAYOR JONES – Suggested that individuals speaking identify any weaknesses they found in their own plan or in the overall plan.
- PETER LOUTTIT – Indicated there had been minor deficiencies with the airport plan, but only with the identification of Fire No. 1 with the Town plan.
- CANON ROLLS – Problems getting a phone line at the hospital – no means of communication except for Fax – supports the use of ham operators – problems with the media attempting to obtain information from victims at the hospital and at the Lenver Inn.
- REV. RENTZ – With respect to the ham operators, noted they had forgotten to have a local direct long distance set up put in place.

- MEL FISHER - Noted he had a peripheral relationship with the ECC - needs a direct line between Public Works and ECC - need for a dedicated room for an ECC - problem with using the firemen's room, public infiltration, etc. - noted the need for detailed area maps with current information, and fixed in position on the walls - noted the need to order heavy equipment (ie D8 bulldozer) early, particularly in cold weather due to warm up time required.
- ANDREW SKENE - Had trouble contacting ECC due to telephone lines being jammed - suggested a Fax machine in the ECC - noted that worldwide media coverage on air crashes is much greater than he had expected, and more planning is required in this regard - noted there were 37 active beds at the hospital, and if there had been more casualties, the capabilities of the hospital would have been correspondingly reduced - responded that the hospital had been aware of the availability of the Hercules ambulance aircraft and in at least four different conversations from the hospital, had advised the Hercules was not required.
- KEN BITTLE - Gave general comments, details not available.
- DR. EISENER - Noted the impact of the media and the need for some control and guidelines - gave accolades to Town workers and volunteers, noting the same remarks had been made from certain media.
- HAROLD RABB - Noted ambulance service had no particular problems - responded that maybe 25 patients had been moved by private vehicles - responded that the impact of using private cars increased the intensity of the work load at the hospital but there were, in fact, 12 doctors on hand - reported two doctors went to the accident site leaving 10 at the hospital - noted this may not always be an option - responded that, in his opinion, conditions at the accident site



appeared to be well under control – noted he was the third vehicle to arrive and that capable direction was being given by Ernie Parry.

- MAXINE MOULTON – Confirmed the problem with communications – noted there was no idea of the passenger capacity of the aircraft from the designation – “F-28-” (most civilians aren’t familiar with this information) – hospital was not given any idea of the number of patients.
- ANDREW SKENE – Commented the Red Cross was a great help in keeping track of names.
- INSP. HARVEY – Extended compliments to all workers involved – noted his primary concerns were with onsite security, search and rescue, locate and identify – noted 58 OPP officers were on site – indicated no particular problems other than those with the media.
- REV. RENTZ – Expressed concern that the media had tied up the telephone at the airport.
- CARL BLEICH – Commented on the good co-operation received from the OPP Sergeant Munn – recommended the OPP obtain a Fax machine.
- PETER LOUTTIT – Commented on the tight security and that there was very little unnecessary traffic or spectators.
- INSP. HARVEY – Expressed concurrence on the remarks on the need for a Fax for the OPP and noted this would be looked into – responded that he did not think there had been any duplication of communication – indicated the helicopters had been engaged by the media and this did create a problem which interfered with police communications due to the noise as the helicopter were hovering over the crash site.

- REV. RENTZ - Commented that in his opinion, the common frequency is the best way to maintain communications.
- SGT. VARGA - Noted it was optional for Dryden to become involved in an incident which occurred off the airport site and commended all involved for their excellent participation - commented on the C130's which although were not required at this time, should be kept in mind in the event of a future need.
- JOHN CALLAN - Commented that he had ordered the helicopters which, as it turned out, were not required at this time.
- ERNIE PARRY - Noted that helicopter pads had been constructed at the hospital.
- DICK MCDONALD - Commented briefly on his activities and involvement at the crash site noting he had taken one roll of photographs and turned the prints over to the authorities.
- CHIEF PHILLIPS - Noted his first contact was to Andrew Skene at the hospital and the district headquarters of the OPP - commented on the role of the OPP in our emergency plan and the relationship with the Emergency Control Group, the Dryden Police Force - suggested there was some overlap which needs to be addressed - provisions should be made for the Police Dispatcher during events of this nature as the regular work goes on - there should be a way to shorten the length of transmissions, i.e. 10 codes - facilities should be twinned so that an extra operator can be brought in to handle the emergency situation, leaving the other to handle the regular business - the communications process requires further clarification and definition - ham radio operators should be used as much as possible - it may be that additional telephone lines are required and the telephone sets should have a hold button on

them – there should a direct line from the Emergency Control Centre to the police office – he will be taking his own personal scribe with him to the next incident – media should be in a separate room – Hugh Syrja should be identified as the media officer in our emergency plan.

- INSP. HARVEY – Agreed with the need for a personal scribe and control of the media – agreed with the need for improvements and clarifications of roles, details, with respect to the role of the OPP and how it is involved in the Dryden Emergency Plan – apologized for the removal of the ham operator away from the site by the OPP – agreed with the suggestion that proper identification of such volunteers to demonstrate their right to be present would facilitate operations at the site.
- ERNIE PARRY – Noted ham operators are new in our emergency plan – a good idea but it didn't work at the site for himself, needs some refining – confirmed the need for individuals to have a scribe at hand, he could have used one but didn't have one.
- CHIEF MALTAIS – Confirmed scribes would be available next time for those who need them.
- PETER LOUTTIT – Confirmed the aircraft had departed the airport at 12:09 p.m.
- ERNIE PARRY – Noted that communications with helicopters at the site was a problem.
- CHIEF PHILLIPS – Commented the problem we had was that there were too many people trying to speak on the frequencies and very often whole transmissions had to be repeated – there appears to be a need for some separate channels or implementation of 10 codes.

- PETER LOUTTIT – Questioned the purpose of a specific frequency and how this could be implemented.
- CHIEF PHILLIPS – Commented on how the media picked up everything on the 2-way radios, perhaps “voice guards” should be used – confirmed the need to keep transmissions concise and brief or alternatively implement use of 10 codes.
- WALTER GREAVES – Noted telephones had been installed at the ECC by 12:35 p.m. – suggested discussions be held with the hospital and any other organization that may require additional telephones in the event of an emergency so that plans and strategies can be developed in advance.
- REV. HYNDMAN – Confirmed the shortage of telephones at the hospital and expressed commendations for the hospital staff.
- CANON ROLLS – Commented on the arrangements made for relatives of victims at the First United Church but there was no list of names made available.
- BOB MITCHELL – Noted he was involved in a stand-by role only, however equipment is available through ICG i.e. snowmachines, helicopters, etc.
- INSP. HARVEY – Commented on the problem with helicopters at the scene due to the low ceiling and the actual site of the accident well off the end of the runway.
- ANDREW SKENE – Responded to previous remarks that it was fortunate there were few Dryden residents on the aircraft as this would no doubt have added to the pressure and congestion at the hospital and other places.
- REV. RENTZ – Noted that ham is a communications support and in this occasion there was particularly speedy response from members – equipment worked well – link arranged between Winni-

peg and Toronto but nobody here to connect – he noted a problem with identification on the radios and this is to be discussed in conjunction with the Town emergency plan – he noted the room used for an ECC was not designed for communications, and an outside antenna with Coax cable is required so they can plug in at both the hospital and the Town office – he noted their batteries are worn down and they are changing their equipment to handle this better in the future – he agreed frequencies are over used by the users – recommends we have a single common frequency.

- ERNIE PARRY – Questioned who called in the helicopters and was the hospital aware and acknowledged the use of helicopters was not viable due to the low ceiling – questioned whether there was a transportation officer in the emergency control group – recommended there be a plan for working with helicopters.
- CHIEF MALTAIS – Responded that Ministry of Natural Resources radios on the base are available for communication with helicopters.
- JOHN CALLAN – Confirmed that these matters would be looked into.
- DOROTHY SMITH – Noted the overlap with the Red Cross on registration, and our forces were then spent primarily on obtaining clothing – noted the need for information packages for the victims – noted the importance of having identification, armbands or something, for the workers.
- VIC KAMEDA – Noted the potential for security problems at the arena used as a temporary morgue, however actual problems were minimal.
- CARL BLEICH – Noted the Red Cross was prepared to look after clothing but the Town had handled this – noted their workers already have emergency identification – acknowledged the problem

with overlap in the Town plan – noted that at the airport, CFR Chief Ernie Parry calls the Red Cross while in town there is some confusion as to their role, which requires clarification – problem with information from Air Ontario in that it was known that there was a large number of survivors and many inquiries, and it was very difficult to deal with people inquiring as to passengers whose names are not on the list of survivors, this may be one area where guidance would be helpful in dealing with this type of inquiry – noted the need to quickly obtain an accurate, up-to-date passenger manifest – noted that the Red Cross has telephone access to the Red Cross in Winnipeg, Thunder Bay and Toronto and numerous inquiries are directed to those locations.

KEN BITTLE

- Noted the passenger manifest request is not as straight forward as it might appear, due to reservations which may be used by someone other than the person who made the reservation, also there are some walk-on passengers – noted the security process to identify bodies – noted that survivors names are not released to the public in order to protect the privacy of themselves and their families.

ALLAN SLOTA

- Confirmed the need for a good registration system and inquiry file for response – noted that workers need to know in advance what types of information can be given and to whom and where to direct other inquiries.

GERRY FERGUSON

- Confirmed problems with the media – noted there were no problems with respect to rescheduling of activities due to the emergency requirement for the use of the second arena – he noted the pool staff are available as fully trained personnel in first aid and CPR.

TED BROADHURST

- Noted the need for Canadian Pacific Forest Products to ensure that their emergency group

is adequately staffed, also to review their equipment list.

LEN SUOMU – Confirmed that equipment is available in an emergency although it is usually quite remote from town.

DAROLD ANNESS – Commented on the lighting plant, noting the need for more details on the type of equipment required on the first request – noted one individual had gone to the scene with a power saw but did not receive good directions on where to go – questioned whether there is a need for a forester or an MNR type person familiar with maps, bush roads, etc. – suggested there should be clarification in where to call at anytime of the day or night for help.

TED BROADHURST – Noted that Canadian Pacific Forest Products has a good supply of long distance telephone lines available for use in the event of a real emergency.

TREVOR WOODS – Commented on the helicopters – noted that blankets and sleeping bags had been made available – noted the trailer unit and the kitchen tent had been made available, complete with workers and heaters – noted that Bell Canada and Ontario Hydro also offered to assist – noted there are snowshoes, communications base, etc. on the station – suggested there might be a need to review the contact person to be used, and the facilities which are to be made available.

HUGH SYRJA – Suggested there is a need for more news lines and hold buttons on the telephones – also suggested a private line for the PR person – noted the confusion between the number of people on the flight, it was either 57 and 4 or 65 and 4.

ROGER NORDLUND – Only problem was that there was only one message from dispatchers.

- DES RISTO – Commented on the various emergency exercises conducted at the Dryden Airport and how they gradually improved, and he noted how the practice had paid off.
- ANDREW SKENE – Final comment, Community Counselling Service is being offered during the evening this week and will continue if required or the hospital will arrange to bring in an emergency trauma team from Toronto.
- REV. RENTZ – Noted the need to look at our procedure for finding places for people to stay.
- INSP. HARVEY – Noted that the identification officers have identified, at this point in time, 17 of the 22 dead.
- CHIEF MALTAIS – Commented on the benefits of the Arnprior training received by many of the Town employees.
- JOHN CALLAN – Noted the need to continue the fine tuning process, invited questions from all present, welcomed representatives from Emergency Planning Ontario and Emergency Planning Canada – noted the differences between the exercises and the real thing.
- PETER LOUTTIT – Commented that the exercise builds up the frame work for the real event.
- BILL DELUCE – Extended compliments on the rescue service provided by the Town and the emergency workers – noted his willingness to co-operate in any way with further development of our emergency plan.
- JIM ELLARD – Noted that the Dryden experience will no doubt be beneficial to many other municipalities.
- MAJOR CHRISTIE – Noted that Canadian Forces plans may be different than civilian plans but offered to



discuss how their services can be accessed – noted one problem with this event in that Trenton was contacted by both the OPP and the Ontario Air Ambulance with conflicting information as to whether it was wanted or not wanted – it is recommended there be only one method of contact.

- H.H. SAMPSON – Extended compliments of Emergency Preparedness College on a good job well done.
- KEN BITTLE – Expressed his thanks to all who are involved.
- MAJOR ARMOUR – Noted there is a need for the Canadian Aviation Safety Board to interview more witnesses – noted the municipality operates the airport and is involved and will be requested to comment on the report of the CASB before it is finalized.

Mayor Jones, in his closing remarks, indicated the need to update our Emergency Plan and continue holding exercises on a regular basis. He commented on the need for discipline in the exercising of any plan, the need to keep the delegation line in place, and the need to maintain communications with citizens.

All present were invited to remain after the meeting for sandwiches and coffee.

Meeting adjourned at 4:35 p.m.

DISTRIBUTION: Mayor, Council, John Callan, Bruce Hoffstrom, Paul Heayn, Mel Fisher, Archie McNeil, Sgt. Varga, Det. Sgt. Bolduc, Ed White, John Albanese, Mario Facca (Box 1326, Sioux Lookout) and Maureen Griffiths.

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# Appendix J



U.S. Department  
of Transportation  
Federal Aviation  
Administration

## Appendix II

# Advisory Circular

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Subject:	COCKPIT RESOURCE MANAGEMENT TRAINING	Date: 12/1/89 Initiated by: AFS-210	AC No: 120-51 Change:
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1. PURPOSE. This advisory circular (AC) presents guidelines for developing, implementing, and evaluating a cockpit resource management (CRM) training program. This training is designed to be a regular part of all training for crewmembers.

2. RELATED FAR SECTIONS.

- a. SFAR 58, Advanced Qualification Program.
- b. Part 121, Subpart N (Training). 121.400-405, 121.409-421, 121.424, 121.427.
- c. Part 121, Subpart O (Crewmember Qualifications). 121.432-433, 121.434, 121.440-443.
- d. Part 135, Subpart E (Flight Crewmember Requirements). 135.243-245.
- e. Part 135, Subpart G (Crewmember Testing Requirements). 135.293-295, 135.299-301.
- f. Part 135, Subpart H (Training). 135.321-331, 135.335-351.

3. RELATED READING MATERIAL. For detailed information on the recommendations made in this AC, the reader is encouraged to review Cockpit Resource Management Training: Proceedings of a NASA/MAC Workshop, 1987. The National Aeronautics and Space Administration (NASA) Conference Proceedings (CP) number is 2455. Copies may be purchased from the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161, (703) 487-4650.

4. BACKGROUND.

a. Investigations into the causes of air carrier accidents have shown that human error is a contributing factor in approximately 70 percent of all air carrier incidents and accidents. Most airlines, however, provide technical training with little emphasis on the human element. This AC provides guidelines for FAR Parts 121 and 135 certificate holders to establish training that is designed to increase the efficiency with which flight crewmembers interact in the cockpit by focusing on communication skills, teamwork, task allocation, and decisionmaking.

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b. Since 1979, an increasing amount of evidence has accumulated suggesting that between 60 and 80 percent of air carrier incidents and accidents have been caused, at least in part, by a failure of the flightcrew to make use of readily available resources. A long-term NASA research program has demonstrated that these types of incidents have many common characteristics. One of the most compelling observations of this program and other research studies is that, often, the problems encountered by flightcrews have very little to do with the more technical aspects of operating a multicrewmember aircraft. Instead, they are associated with poor group decisionmaking, ineffective communication, inadequate leadership, and poor management. In addition, most training programs emphasize almost exclusively the technical aspects of flying and do not deal effectively with various types of crew management strategies and techniques that are also essential to safe flight operations.

c. These observations have recently led to a developing consensus in both industry and government that more training emphasis needs to be placed upon the factors that influence crew coordination and the management of crew resources. Briefly defined, CRM is the effective utilization of all available resources--hardware, software, and people--to achieve safe and efficient flight operations. CRM training programs have been or are being developed by several major air carriers, and although the concept is receiving widespread acceptance, insufficient progress has been made in the industry as a whole. Moreover, there is substantial confusion in the industry with respect to the key elements of CRM training and how to go about developing a CRM training program.

d. A 1987 NASA workshop on CRM training, comprised of various segments of the aviation community, has produced a series of recommendations for training programs in this area. These guidelines, while not mandatory, are very useful in understanding the critical elements of a CRM training program.

##### 5. BASIC CONCEPTS OF CRM TRAINING.

a. General. While there are probably many approaches and techniques useful in CRM training, it seems clear that certain features are necessary. The program should focus on the functioning of crews as intact teams, not simply as a collection of technically competent individuals, and should provide opportunities for crewmembers to practice the skills that are necessary to be good team leaders and members. This requires training exercises that include all crewmembers together in the same roles they normally perform in flight. The program should help crewmembers learn how to use their own personal and leadership styles in ways that foster crew effectiveness. The program should also help crewmembers learn that how they behave during normal, routine circumstances can have a powerful impact on how well a crew functions during high workload, stressful situations. During these emergency situations, it is highly unlikely (and probably undesirable) that any crewmember will take the time to reflect upon his or her CRM training to figure out how to act. However, actions taken during more relaxed times probably increase the chances that a crew will handle stressful situations more competently.

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b. Research studies from the behavioral sciences strongly suggest that behavior change in any environment cannot be accomplished in a short period, even if the training is very well designed. Trainees need time, awareness, practice and feedback, and continual reinforcement to learn lessons that will endure over long periods of time. In order to be effective, CRM training must be accomplished in several phases over time.

c. Therefore, CRM training programs should include at least three distinct phases:

- (1) An awareness phase where CRM issues are defined and discussed.
- (2) A practice and feedback phase where trainees gain experience with CRM techniques.
- (3) A continual reinforcement phase where CRM principles are addressed on a long-term basis. Each of these phases is discussed in more detail in paragraph 7 and in NASA CP number 2455.

d. Summary. CRM is defined by the following basic concepts:

- (1) It is a comprehensive system for improving crew performance.
- (2) It is designed for the entire crew population.
- (3) It can be extended to all forms of aircrew training.
- (4) It concentrates on crewmember attitudes and behaviors and their impact on safety.
- (5) It provides an opportunity for individuals to examine their own behavior and make individual decisions on how to improve cockpit teamwork.
- (6) It uses the crew as the unit of training.
- (7) It is a training program that requires the active participation of all cockpit crewmembers.

#### 6. PHASES OF CRM TRAINING.

a. Overall Objective of CRM. CRM training is designed to prevent incidents and accidents.

b. Awareness Phase.

- (1) The awareness phase of CRM training consists of classroom presentations and focuses on interpersonal relations and crew coordination. This part of the training also provides a common terminology and conceptual framework for identifying and describing crew coordination problems.

(2) This training phase can be accomplished by a combination of training methods such as lecture presentations, discussion groups, role-playing exercises, computer-based instruction, and videotape examples of good and poor team behavior in the cockpit.

(3) A useful way of beginning the awareness phase may include the development of a curriculum addressing CRM skills that should be acquired, such as:

(i) Communication. (E.g., cultural influences, barriers such as rank, age, and position, assertiveness, participation of all crewmembers, cockpit-cabin crew coordination, listening, feedback, and legitimate ways of expressing dissent.)

(ii) Situation Awareness. (E.g., reality versus perceptions of reality, fixation, monitoring, incapacitation.)

(iii) Problem Solving/Decisionmaking/Judgment. (E.g., conflict resolution, review.)

(iv) Team Management. (E.g., team building, managerial skills, authority, barriers, cultural influences, roles, workload management.)

(v) Stress Management. (E.g., fitness to fly, fatigue, incapacitation.)

(vi) Team Review. (E.g., premission analysis and planning, critique, ongoing review, postmission.)

(vii) Interpersonal Skills. (E.g., listening, conflict resolution, and legitimate avenues of dissent.)

(4) Awareness promotes credibility and helps in changing attitudes, however, it is important to recognize that it is only a necessary first step. Many programs rely almost exclusively on this aspect of training, but classroom instruction alone may not fundamentally alter crewmember attitudes and behavior over the long term.

c. Practice and Feedback Phase.

(1) The practice and feedback phase of CRM training is designed to provide participants with self- and peer-critique in order to improve communication, decisionmaking, and leadership skills. This phase is best accomplished through the use of simulators and video equipment. Video feedback, under the direction of a facilitator, is particularly effective because it allows participants to view themselves from a third-person perspective; this promotes acceptance of one's weak areas, which encourages attitude and behavior changes.

(2) Practice and video feedback during debriefing can be accomplished as follows:

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(i) Line oriented flight training (LOFT) sessions or other simulated or actual operation scenarios can include CRM training. In these cases, crewmembers would be in a simulator and asked to respond to a series of incidents which could or could not lead to emergencies. They would be evaluated for technical expertise, as well as communication, coping, and coordination abilities (as part of the CRM training).

(ii) Video feedback during debriefing should optimally be provided so that crewmembers could evaluate their skills.

(iii) In cases where simulators are not available, crewmembers can participate in complicated group problem-solving exercises. Through video feedback during debriefing, they can then evaluate the positive and negative actions of all crewmembers.

(iv) Crewmembers can also participate in role-playing exercises designed to provide practice in developing strategies for dealing with incidents and to allow analyses of behaviors during incidents. Again, video feedback is recommended for evaluation and feedback during debriefing of crewmember abilities in such areas as decisionmaking, team participation, and team leadership sharing.

(v) Personality and attitude measures can also be used to provide feedback to participants, thereby allowing them to assess their strengths and weaknesses.

d. Reinforcement Phase.

(1) The third phase is reinforcement. No matter how effective the classroom curriculum, interpersonal drills, LOFT exercises, and feedback techniques are, a single exposure will be insufficient. The attitudes and norms which contribute to ineffective crew coordination are ubiquitous and have developed over a crewmember's lifetime. Thus, it is unrealistic to expect a short training program to make up for a lifetime of development. To be maximally effective, CRM should be embedded in the total training program. It should be continually reinforced, and it should become an inseparable part of the organization's culture. The latter is often overlooked, but it is clear that effective CRM training requires the support of the highest levels of management.

(2) CRM training should be instituted as a regular part of the recurrent training requirement. Recurrent CRM training should include refresher curriculum and practice and feedback exercises such as LOFT with video feedback, or a suitable substitute employing video feedback. It is particularly important that some of these recurrent CRM exercises take place with a full crew--each member operating in their normal crew position. For example, recurrent training LOFT exercises designed for CRM should be conducted only with an actual crew.

(3) There is a natural tendency to think of CRM as training only for the "managers" or captains. However, this notion misses the essence of the

primary CRM training objective--the prevention of crew-related incidents and accidents. It should be most effective in the entire crew context, and this requires training exercises that include all crewmembers working together and learning together. In the past, much of flightcrew training has been separated by crew position, and while this may be effective for certain types of training (e.g., technical skills and systems knowledge, etc.), it is not appropriate for CRM training.

#### 7. THE ROLE OF CRM INSTRUCTORS AND CHECK AIRMEN.

##### a. General.

(1) The success of any CRM training program should ultimately depend upon the skills of the personnel responsible for administering the training and observing its effects. Thus, it is vitally important that CRM training instructors, facilitators, and check pilots be highly skilled in all areas related to CRM performance, and they should also be expert observers of crew coordination dimensions. These skills are different from those associated with traditional flight instruction. Gaining proficiency in CRM instruction and observation will require special additional training for instructors and check pilots in CRM training methods such as role-playing exercises, systematic crew observation, providing effective feedback, and LOFT administration.

(2) In addition, simulator and line check pilots should utilize every available opportunity to emphasize the importance of crew coordination skills and techniques. This should be accomplished by not only pointing out deficiencies, but by noting and reinforcing instances of highly effective crew coordination whenever such behavior is observed.

#### 8. EVALUATION OF CRM TRAINING PROGRAMS.

##### a. General.

(1) CRM training is a relatively new concept still in the process of evolution. For this reason, it is vitally important that each program be evaluated in order to determine whether it is achieving the desired result, the improvement of flightcrew coordination and performance. Thus, each organization should organize a systematic evaluation program to track the effect of their training program and as a means of making continuous improvements. The emphasis of this evaluation process should be on crew performance, not at the individual level of analysis. The major areas that should be assessed are: interpersonal coordination and communication; problem-solving and conflict resolution; workload management; and technical performance.

(2) The purpose of this evaluation is not to assess individual crewmembers on CRM-related dimensions as a means of assessing their fitness for duty. The current state-of-the-art in the measurement of CRM-related behavior does not allow such fine discriminations at the present time. However, the importance of these dimensions should be emphasized to individual

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crewmembers at all available opportunities, and improvements in assessment techniques may allow CRM-related criteria to be utilized on a more formal basis in the future.

9. COLLECTION OF EVALUATION DATA. In an optimal research design, data on crewmember's CRM attitudes and behavior should be collected prior to the awareness phase of CRM training and again at intervals after training to determine both initial and enduring effects of the program. In many cases, however, this pure evaluation strategy cannot be applied, as many crewmembers may have already completed some type of CRM training. The goal should be to obtain an accurate picture of the state of the organization before formal adoption of this type of training and to continue to monitor the same elements after adoption.

10. EVALUATION TOOLS.

a. Data collection could include a survey of crewmember's attitudes regarding CRM concepts and also their evaluation of the impact of formal CRM training, LOFT, or of an operational scenario. (An example of a crewmember survey is provided in Appendix 1.)

b. Additional data could be collected by check airmen, qualified line observers, and/or LOFT instructors trained in the formal evaluation of crew coordination. An evaluation worksheet could be completed after LOFT periods or other operational simulations. The evaluation worksheet should contain evaluations of the crew's utilization of the key concepts of CRM described in paragraph 6, as well as a global evaluation of overall technical performance and crew coordination. Additional information for each crew should include a description of special circumstances (i.e., abnormal or emergency situations imposed or encountered) and amplifying comments regarding extremely good or poor instances of CRM behavior. (An example LOFT CRM Evaluation Worksheet is provided in Appendix 2.)

11. DATA BASES. Information collected from line crewmembers, check airmen, qualified line observers, and other evaluators should be maintained in computer-resident data bases. The data should be oriented toward group rather than individual performance. Data should not identify individual crewmembers by name, but should include the following demographic identification:

- a. Aircraft type.
- b. Crew position.
- c. Approximate age (range).
- d. Approximate experience in position and aircraft.
- e. Formal training in CRM.
- f. Experience with LOFT of operational scenarios.



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(1) On both crewmember surveys and evaluations, the instructor or check airman should be identified. Information from participants in training and the characteristics of evaluations given by check airmen and other evaluators may be used as measures of the quality of instruction and evaluation.

(2) It should be stressed that the reasons for collecting evaluation data include:

(i) To measure the operational state of the organization.

(ii) To determine areas in need of further instruction.

(iii) To find which aspects of training work most effectively.

(iv) To ensure that all individuals involved in training and evaluation are well prepared and standardized.



Daniel C. Beaudette  
Director, Flight Standards Service

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# Appendix K

Ministre des Transports



Minister of Transport

June 6, 1991

The Honourable Mr. Justice Virgil P. Moshansky  
Commissioner  
Commission of Inquiry into  
The Air Ontario Crash at Dryden, Ontario  
P.O. Box 687 Adelaide Station  
Toronto, Ontario  
M5C 2J8

Dear Mr. Justice Moshansky:

RE: AVIATION SAFETY RECOMMENDATIONS  
DRYDEN COMMISSION OF INQUIRY, SECOND INTERIM REPORT

I am writing in reply to the recommendations contained in Part 5 of the Commission's Second Interim Report which was tabled in the House of Commons on December 11, 1990.

These interim recommendations were made in the interests of aviation safety as a result of the Commission's ongoing investigation into the circumstances surrounding the accident involving an Air Ontario F-28 aircraft, at Dryden Ontario, on March 10, 1989.

My staff and I have reviewed these recommendations and I am pleased to provide you with the attached written response which formalizes the department's initial response given at the time of the report release.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Jean Corbeil'.

Jean Corbeil

Attachments

TRANSPORT CANADA RESPONSE  
TO THE  
INTERIM RECOMMENDATIONS  
OF THE SECOND INTERIM REPORT  
DRYDEN COMMISSION OF INQUIRY

INTERIM RECOMMENDATION NO. 1 - RUNWAY-END DE-ICING/ANTI-ICING:

"Transport Canada should, on a priority basis and in co-operation with major air carriers, implement interim runway-end de-icing/anti-icing facilities at Pearson International Airport. The target should be to have the first of such facilities in place on an interim basis as early as possible in the 1990-91 icing season. Subsequent permanent installations should be designed and constructed to satisfy both safety and environmental concerns."

TRANSPORT CANADA RESPONSE:

Transport Canada accepts the need for dedicated facilities for de-icing. Construction of dedicated de-icing facilities for the 1990/91 winter season was not possible as it was too late to initiate and complete a construction project of this magnitude. In addition, agreement by all carriers on standard de-icing procedures and additional de-icing equipment is required. In the long term, there is general agreement between Transport Canada and the air carriers that dedicated de-icing facilities are required at Lester B. Pearson International Airport (LBPIA). NORR Airport Planning Associates completed a feasibility study in February 1991. The study recommended two of the three proposed airfield sites as being suitable. A recommended development plan was forwarded to the LBPIA Airline Consultative Committee (ACC) for review. A recommendation will be made by the project manager by the end of May 1991. The study addresses LBPIA but could provide national guidance.

INTERIM RECOMMENDATION NO. 2 - GATE-HOLD PROCEDURES:

"Transport Canada should examine and, if feasible, implement air traffic control gate-hold procedures at Pearson International Airport as a means of reducing departure delays during conditions of freezing precipitation."

TRANSPORT CANADA RESPONSE:

Transport Canada, in cooperation with the aviation industry, has implemented gate-hold procedures at LBPIA during periods of freezing precipitation. In addition, an Air Carrier Advisory Circular was sent on January 3, 1991 informing air carriers of the procedures being implemented at LBPIA to eliminate aircraft congestion at the runways during inclement weather.

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INTERIM RECOMMENDATION NO. 3 - RAMP AREA EXPANSION:

"In addition to the already announced feasibility studies for two new runways and supporting taxiways at Pearson International Airport, Transport Canada should investigate and, if feasible, proceed to implement an expansion of existing ramp space on the airport to reduce congestion and consequent departure delays. This undertaking should be given high priority."

TRANSPORT CANADA RESPONSE:

A study was undertaken to examine this matter. The consulting firm, Aviation Planning Services of Montreal has completed the analytical work and are discussing the details with airport staff.

INTERIM RECOMMENDATION NO. 4 - USE OF TYPE II ANTI-ICING FLUIDS:

"Transport Canada should strongly encourage and support the use by Canadian air carriers of type II anti-icing fluids that meet AEA specifications for turbo jet aircraft and, where applicable, for propeller-driven aircraft."

TRANSPORT CANADA RESPONSE:

The Minister of Transport has written to all Canadian air carriers strongly encouraging and supporting the use of type II fluids.

INTERIM RECOMMENDATION NO. 5 - RAMP AREA LIGHTING:

"Transport Canada should, in the interest of employee safety and in order to facilitate reliable inspection of aircraft surfaces after de-icing/anti-icing, ensure that adequate and sufficient exterior lighting exists in all gate and ramp areas where de-icing and anti-icing operations are conducted at Pearson International Airport and at other major airports in Canada."

TRANSPORT CANADA RESPONSE:

The lighting levels on the apron areas where de-icing operations are conducted have been evaluated on a number of occasions and found to be consistent with Transport Canada and International Civil Aviation Organization (ICAO) apron floodlighting standards. Notwithstanding the above, steps have been taken to improve lighting levels. Construction will begin in April, 1991 on a program to improve apron lighting at terminal 1, with completion scheduled for fall 1991. Two sets of high pressure sodium lights have been installed at terminal 2 for test and evaluation purposes.

INTERIM RECOMMENDATION NO. 6 - CLEAN AIRCRAFT COMPLIANCE:

"Transport Canada should, on a priority basis, provide, where necessary, enforcement resources to ensure that the clean aircraft regulation is complied with, including runway-end spot checks of aircraft surfaces in adverse winter weather."

TRANSPORT CANADA RESPONSE:

Transport Canada regulatory officials were tasked to monitor and enforce the regulations during inclement weather this winter at LBPIA and other Canadian airports. Monitoring guidelines were issued to assist inspectors in enforcing the regulations. These guidelines include the requirement for spot checks at appropriate locations on airports.

INTERIM RECOMMENDATION NO. 7 - PROVISION OF DE-ICING/ANTI-ICING SERVICE:

"Transport Canada should strongly encourage Canadian air carriers to form joint entities to provide all air carrier de-icing/anti-icing services at Pearson International Airport and at other major airports in Canada, and to have available, for use when necessary, equipment capable of applying both type I and type II fluids."

TRANSPORT CANADA RESPONSE:

The Minister of Transport has written to all Canadian air carriers strongly encouraging and supporting this recommendation.

INTERIM RECOMMENDATION NO. 8 - DE-ICING/ANTI-ICING PROCEDURES TRAINING:

"Transport Canada should require that air carriers produce aircraft ground de-icing/anti-icing procedures and training standards for both flight and ground Personnel. Implementation of such procedures and standards should be made a mandatory requirement of an air carrier's operating certificate."

TRANSPORT CANADA RESPONSE:

Transport Canada developed and distributed a training program to all carriers in November, 1990 which included procedures and standards for aircraft ground de-icing and anti-icing. This program has been distributed for immediate implementation as required by regulation. All training, including the new de-icing/anti-icing material, is required to be included in the carrier's Operation Manual, which is a condition of issue of the operating certificate.

- 4 -

INTERIM RECOMMENDATION NO. 9 - TC INSPECTOR/MAJOR CANADIAN AIRPORTS:

"Transport Canada's Airports Authority Group should place on the staff of each of its major airports, individuals with substantial flight operations expertise. Such individuals should report directly to the airport manager on any issue related to operational safety. Furthermore, a mandatory reporting process should be put in place to ensure that aviation safety-related issues are promptly brought to the attention of the appropriate decision-making level of senior management and to ensure that such issues are addressed within a specified period of time."

TRANSPORT CANADA RESPONSE:

Transport Canada has staffed such a position at Lester B. Pearson and Vancouver airports. The Department will study the applicability to other major airports in Canada and will determine the reporting relationships to ensure that safety-related issues are promptly brought to the attention of the appropriate level of senior management.

INTERIM RECOMMENDATION NO. 10 - HOLD-OVER TIMES/DEPARTURE DELAYS:

"Transport Canada should examine, on a priority basis, Canadian airports served by air carriers to ascertain if the incompatibility between departure delays and de-icing/anti-icing fluid hold-over times, as identified at Toronto's Pearson International Airport, exists at other sites. Should such incompatibilities be found, Transport Canada should ensure that appropriate corrective measures are taken."

TRANSPORT CANADA RESPONSE:

Through Transport Canada's monitoring of airports during inclement weather conditions, congestion problems, if existing elsewhere than LBPIA, will be noted and appropriate corrective measures will be taken. Instructions have also gone out to all Transport Canada Airport Managers to work with the air carriers to expedite operations during poor weather conditions and to report on any problems where safety is a concern.

INTERIM RECOMMENDATION NO. 11 - CLEAN-UP OF DE-ICING/ANTI-ICING FLUID:

"Transport Canada and/or the air carriers should, in the interests of ramp employee safety and for environmental reasons, maintain suitable equipment and develop appropriate procedures for the clean-up and disposal of de-icing/anti-icing fluids in areas utilized by air carriers."

TRANSPORT CANADA RESPONSE:

Glycol pickup equipment was acquired for LBPIA on a priority basis. This equipment reduced the glycol environmental problem to the maximum extent possible for the 1990/91 winter season. In the long term, the dedicated de-icing facilities will also include a glycol recovery system. It should be noted that the new Terminal 3 at LBPIA has an underground glycol collection facility.

INTERIM RECOMMENDATION NO. 12 - CANADA - DE-ICING/ANTI-ICING TECHNOLOGY:

"Transport Canada should take an active and participatory role in the work currently underway within the international aviation community to advance aircraft ground de-icing/anti-icing technology. This should include involvement in the development of international standards, development of guidance material for remote and runway-end de-icing facilities, and development of more reliable methods of predicting de-icing/anti-icing fluid hold-over times."

TRANSPORT CANADA RESPONSE:

The Transport Canada Transportation Development Centre has, for a number of years, in collaboration with other government agencies including the Department of National Defence and the National Research Council, the U.S. Federal Aviation Administration and the European as well as North American aviation industry, been actively researching and developing state of the art aircraft anti-icing and de-icing technologies. Current research centres on the use of anti-icing fluids along with associated hold-over times and the development of aircraft sensors to detect ice on wings and other critical surfaces. Transport Canada, recognizing the importance of this issue internationally, has asked that a working group be established in ICAO, with Transport Canada participation, with the objective of pooling research information on de-icing/anti-icing fluids and techniques, and establishing an international standard of operating procedures.

INTERIM RECOMMENDATION NO. 13 - FLUID HOLD-OVER TIME CHARTS:

"Transport Canada should strongly encourage Canadian air carriers to provide their flight crews with de-icing/anti-icing fluid hold-over time charts that are based on the most recent technological information. These charts should be used as guidelines."

TRANSPORT CANADA RESPONSE:

The Minister of Transport has written to all Canadian air carriers encouraging them to use hold-over time charts as a guidance to flight crews.

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AMENDMENT #8 -- May 3, 1991

includes comments by:

AAX  
AAR  
AKPT



# Appendix L

Commission of Inquiry  
into the Air Ontario Crash  
at Dryden, Ontario



Commission d'enquête  
sur l'écrasement d'un avion  
d'Air Ontario à Dryden (Ontario)

Commissioner  
The Honourable Virgil P. Moshansky  
Counsel  
F.R. von Veh, Q.C.  
Associate Counsel  
G.L. Wells  
Administrator  
R.J. McBey

Commissaire  
L'honorable Virgil P. Moshansky  
Conseiller juridique  
F.R. von Veh, c.r.  
Conseiller juridique associé  
G.L. Wells  
Administrateur  
R.J. McBey

## CONFIDENTIAL

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★

Dear \*\*\*\*\*:

**RE: INQUIRIES ACT, SECTION 13**  
**Affected Party - \*\*\*\*\***

The Commission of Inquiry into the Air Ontario Crash at Dryden, Ontario was established by Order in Council P.C. 1989-532, dated March 29, 1989, to inquire into, and report on the contributing factors and causes of the crash of Air Ontario Flight 1363 at Dryden, Ontario, on March 10, 1989. Commissioner Moshansky was also asked to make such recommendations as he deemed appropriate in the interests of aviation safety.

Throughout the course of the Commission hearings, all Participants were afforded the opportunity to cross-examine all witnesses, either through their counsel or representative, to submit written briefs to the Commission and, if they so desired, to recommend to the Commissioner that additional witnesses, other than the ones called by the Commission, be called to testify. As well, all Participants, either through their counsel or representative, were given a synopsis of witnesses evidence and copies of all relevant documentation before any given witness was called to testify. Such documents were subsequently filed before the Commission as exhibits. In addition, at the conclusion of the public hearings of this Commission, all Participants were given full opportunity to present submissions to the Commissioner as they saw fit.

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Section 13 of the Inquiries Act states that:

No report shall be made against any person until reasonable notice has been given to the person of the charge of misconduct alleged against him and the person has been allowed full opportunity to be heard in person or by counsel.

This letter shall constitute notice that the Commissioner will hear and consider any submissions that you or your counsel may wish to make in relation to adverse findings made against you. Although the Inquiries Act addresses a "charge of misconduct", in the interest of fairness, Commissioner Moshansky has directed that notice be afforded to all persons against whom he may make adverse findings. The Commissioner has advised me that he does not view the findings enumerated below as constituting "misconduct" within the meaning of Section 13 of the Inquiries Act.

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INSERT ADVERSE FINDINGS

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Please consider this letter as official notice pursuant to the provisions of section 13 of the Inquiries Act, and advise the Commission in writing on or before Friday, September 20, 1991, if you wish:

1. to be heard in person or by counsel;
2. to be heard by means of written submissions; or
3. not to be heard by the Commission.

**SHOULD YOU NOT RESPOND ON OR BEFORE FRIDAY SEPTEMBER 20, 1991, IT WILL BE TAKEN TO MEAN THAT YOU HAVE WAIVED YOUR RIGHT TO BE HEARD PURSUANT TO THE INQUIRIES ACT, SECTION 13.**

It is to be noted that any submissions presented pursuant to this procedure will be carefully considered by the Commissioner in preparation of his Final Report. Written submissions are to be received by the Commission on or before **FRIDAY, SEPTEMBER 27, 1991.**

If you choose to make submissions in person or by counsel, the Commission will hold individual hearings in camera at 595 Bay Street, 14th floor, Toronto, Ontario. In such event, a hearing date will be scheduled after receipt of your response to this notice and you will thereafter be notified in writing of the date set for the hearing.

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In order to prevent disclosure of the potential findings of this Commission prior to release of the Final Report, the Commissioner requires that the contents of this correspondence be kept in absolute and strict confidence.

If you have any questions regarding any of the foregoing, please do not hesitate to contact me.

Yours truly,

F.R. von Veh, Q.C.  
Commission Counsel

FVV/sct

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# Appendix M

## Rulings

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### 1 Rulings Regarding Status Applications on behalf of Victims, Survivors and their Families (May 26, 1989)

THE COMMISSIONER: I at this time wish to extend a welcome to everyone who is present here this morning. We are here to deal with the issue of status, which is most important to the orderly conduct of a commission of inquiry. By the Order in Council, which has been filed as an exhibit and which is dated March 29th, 1989, this Commission was directed to inquire, pursuant to the provisions of part I of the *Inquiries Act*, into the contributing factors and causes of the crash of the Air Ontario F-28 aircraft at Dryden, Ontario, on March 10th, 1989, and to report thereon, including such recommendations as may be deemed appropriate in the interests of aviation safety.

In order to assist the Commission in these investigatory and advisory functions, the participation of interested parties is most welcome. However, in order to facilitate the effective, efficient, timely, and fair conduct of the Inquiry, party participation must necessarily be limited.

Legal and practical considerations dictate the necessity of establishing boundaries to participant status which will permit the fair, orderly, timely, and effective conduct of the Inquiry.

It is my intention that the concept of procedural fairness shall be a basic tenet of this Inquiry. To that end I have previously directed that certain interested parties shall be entitled to full status as participants on the various investigative teams involved in the investigation of this matter. This marks the first time that interested parties have been granted such status in the process of aircraft accident investigation in Canada. Up to the present time, interested parties have only been accorded observer status on investigative teams. It is the view of all concerned that interested parties have much to contribute to the investigative process by seconding to the investigative teams persons with specialized expertise in various areas under investigation.

Having regard to the statutory authority vested in me as Commissioner and having regard to the terms of reference and to the developments in the law relating to commissions of inquiry, I have concluded that it is appropriate to permit three categories of party participation, and these will be: full participant, special participant, and observer. All participants will have access to working spaces at designated counsel tables in the Commission's hearing rooms.

I will first deal with the category of full participant.

Parties who are granted the status of a full participant will be permitted representation by counsel. Their counsel will be able to cross-examine Commission witnesses, submit written briefs to the Commission, and, if necessary, to recommend to the Commissioner the calling of certain witnesses. In the course of any commission of inquiry, allegations will be made at public hearings which will reflect adversely on certain parties. It is my position that any party adversely implicated by testimony at the public hearings of the Commission shall be given a full opportunity to be heard.

I will now deal with the category of special participant status.

This category of status could apply to the participation of crash survivors and the estates of crash victims. While one has great sympathy for these parties and, while the testimony of survivors will be no doubt important in discovering the causes of the accident, it is believed that their individual involvement as full participants would not contribute significantly to the present Inquiry into the contributing factors and causes of the crash.

Given the large number of parties similarly situated in this regard, it is believed that their individual participation at public hearings would become unwieldy and ultimately counterproductive. However, recognizing their profound interest in the findings of this Inquiry and having regard to the practical difficulties inherent in their individual participation, I am prepared to hear representation this morning in connection with the granting of special participant status to one counsel representing the collective interests of the crash survivors and the estates of the crash victims. It is my intention that the representative counsel on behalf of the special participant would be entitled to cross-examine Commission witnesses and to submit written briefs to the Commission.

The final category of participants who may be involved in the Inquiry is that of observers. Individual representatives of survivors and of estates, if they so request, and any other party establishing a special interest in these proceedings, will be granted status as an observer at the Commission.

An observer will be entitled to submit written briefs to the Commission. Additionally, observers will be permitted to submit written suggestions to Commission counsel regarding the calling of evidence. Without limiting the generality of the foregoing these written suggestions may include prospective questions that the observer believes should be asked of a particular witness by Commission counsel or may include suggestions as to prospective witnesses that the observer believes should be called before the Commission. The form and substance of the response to these suggestions will, however, be at the complete discretion of Commission counsel.

A letter outlining rules of procedure will be mailed to all participants shortly. Additional specific rules of procedure may also be outlined at the initial formal hearing of the Commission which is scheduled to commence in Toronto on June 16th, 1989.

We will now proceed to hear the applicants for status.

(Transcript, vol. 1, pp. 7-12)

THE COMMISSIONER: On the basis of the representations that I have heard, I deem it appropriate in these circumstances to grant to the applicants special participant status to one counsel to represent the collective interests of the group in question with the proviso that such counsel position may be filled by two or more counsel as are agreed upon by the parties.

(Transcript, vol. 1, pp. 19-20)

## **2 Ruling Regarding Applications for Legal Costs – Survivors and Victims’ Families – CUPE Airline Division (September 11, 1989)**

THE COMMISSIONER: At the status hearings of this Commission held in Toronto, Ontario, on the 26th day of May, 1989, there appeared before me Mr Alexander Zaitzeff and Mr W. Danial Newton in their respective capacity as counsel on behalf of several victims, estates, and/or survivors of the crash of Air Ontario Flight 1363 at Dryden, Ontario, on March 10th, 1989.

Mr Zaitzeff and Mr Newton appeared also as representatives of a group of legal counsel acting on behalf of a majority of the remaining crash survivors and victims’ estates with the concurrence of all such counsel. They made an application on behalf of all of those parties whom they represented and to whom I shall hereinafter refer as “the Applicant group” for status before this Commission with full rights of cross-examination.

Having regard to all of the circumstances and the arguments advanced by counsel, I deemed it appropriate to exercise my discretion by granting special participant status to a single representative of the collective interests of the survivors and the estates of the crash victims, notwithstanding the absence of any precedent for so doing.

The said counsel appearing for this Applicant group then made a further application before me on behalf of the Applicant group seeking financial assistance with respect to their legal costs. Counsel for the Applicant group represented to me that without such assistance the Applicants would be unable to actively participate at the hearings of this Commission. I reserved decision with respect to this application pending the submission by counsel for the Applicant group, at my request, of

written argument in support of their application. Such written argument was subsequently received by me.

In addition, some 25 letters were received by the Commission during the month of July 1989 from various counsel, representing the majority of the survivors and victims involved, in support of the position taken by Mr Zaitzeff and Mr Newton in their request for funding.

A further application for financial assistance with respect to legal costs was also made at that time by Ms Leanne Chahley, counsel for the Canadian Union of Public Employees, Airline Division, which organization's request for full participant status was granted at the said status hearings of this Commission. On July 10th, 1989, Ms Chahley wrote a letter to the Commission in response to my request that she provide a written submission in support of her application for funding. She indicated that the organization of which she represents has a membership of more than 8,400 flight attendants and customer service agents, and that it has a demonstrated history of participation in inquiries relating to the airline industry ... having previously appeared at several hearings in Canada and the United States.

There is nothing in the material submitted to me to suggest that these previous appearances at such hearings were funded out of the public purse.

Although the Canadian Union of Public Employees, Airline Division, does not have a specific allocation of funds for this type of proceeding, as was indicated by Ms Chahley in her letter, I am not at all persuaded by the material before me that an organization of this magnitude would be unable to make other arrangements to fund legal representation before the Commission if it saw fit. Its previous history of participation infers as much. In any event, I am not persuaded that it is in the public interest in this case to recommend funding to institutions or organizations who have sought participant status. This application is, therefore, declined.

The Government of Canada in this matter have seen fit to provide in the terms of reference for this Commission of Inquiry established under part I of the *Inquiries Act* a direction to the Commissioner to advise the Governor in Council as to which, if any, of the groups or individuals that may appear before him should receive assistance with respect to the legal costs that they may incur in respect of their appearance before the Commission. And the extent of such assistance where such assistance would, in the opinion of the Commissioner, be in the public interest.

Paragraph (e) of the minutes of a meeting of the committee of the Privy Council establishing this Commission held on the 29th day of March, 1989, reads as follows:

(è) The Commissioner be directed to advise the Governor in Council as to which, if any, of the groups or individuals that may appear before him should receive assistance with respect to the legal costs they may incur in respect of those appearances, and the extent of such assistance where such assistance would, in the opinion of the Commissioner, be in the public interest.

It will be seen from a reading of paragraph (e) of the minutes referred to that the Commissioner is not empowered to grant legal costs as such but, rather, is authorized to make recommendations for the funding of the legal costs of a participant where, in the opinion of the Commissioner, such assistance would be in the public interest.

At the status hearings of this Inquiry, I expressed my intention that the Inquiry would be conducted in accordance with the principle of procedural fairness, a doctrine which is flexible in concept and whose content varies depending on the nature of the Inquiry and the consequences to the individuals involved. It is my view with respect to the present application, that my discretion in this matter ought to be exercised having regard to the principle of procedural fairness and also the public interest itself.

Counsel for the application group have, in their written argument, referred to certain criteria which were applied to the question of participant funding at the Mackenzie Valley Pipeline Inquiry, from which criteria certain guidelines have been set out in a text entitled *A Handbook on the Conduct of Public Inquiries in Canada* (1985) by R.J. Anthony and A.R. Lucas.

I have found these guidelines to be useful in my consideration of the application made by the Applicant group which guidelines are as follows:

- (a) There should be a clearly ascertainable interest that ought to be represented at the inquiry.
- (b) It should be established that separate and adequate representation of that interest will make a necessary and substantial contribution to the inquiry.
- (c) Those seeking funds should have an established record of concern for, and should have demonstrated their own commitment, to the interest they seek to represent.
- (d) It should be shown that those seeking funds do not have sufficient financial resources to enable them adequately to represent that interest, and will require funds to do so.
- (e) Those seeking funds should have a clear proposal as to the use they intend to make of the funds, and should be sufficiently well organized to account for the funds.



On the basis of the material before me, I am satisfied that the Applicant group has met the criteria set out in paragraphs (a) to (d) inclusive.

With respect to paragraph (e) counsel for the Applicant group have proposed the following uses of the funds which it seeks. The funds that would be made available to the group would be for the compensation of counsel and appropriate and limited support staff for purposes of the hearings.

The counsel would be required to submit detailed accounts for services rendered in the normal fashion to the Commission offices for review. There would also have to be budget monies available for distribution of information, correspondence, copies of evidence, transcripts, and the multitude of disbursements that a matter of this nature necessarily attracts.

While I am not bound in the exercise of my discretion by the decisions of previous commissions of inquiry, it is nevertheless useful to examine funding decisions made in other inquiries, several of which have been referred to in the written submission filed with the Commission by Mr Zaitzeff.

A principle which clearly emerges from previous inquiry decisions is that funding is almost invariably provided to individuals who may be personally vulnerable to adverse testimony before the Commission, and who were unable to finance legal representation.

In the case of the Royal Commission into the Donald Marshall Jr Prosecution, in addition to recommending funding for legal counsel for individuals who were involved in the arrest and prosecution of Donald Marshall, the Commission also recommended funding for the following:

- (a) A parent who was endeavouring to protect the reputation of his son, the murder victim, whose character was under attack by testimony before the Commission.
- (b) Two public interest groups, the Black United Front and the Union of Nova Scotia Indians, both of whom held the view that the discrimination and racism influence the administration of justice in Nova Scotia and may have contributed to Marshall's conviction.

The Commission in its ruling stated the following:

We believe that the public interest requires, in a proper case, that the point of view of organized and affected minority groups be appropriately represented and articulated. This is such a proper case.

While there is no parallel between the present applicants and those individuals whose interests were vulnerable to adverse testimony before

the Marshall Inquiry, it is arguable that there is some similarity between the parties referred to in subparagraphs (a) and (b) above and the present Applicants.

There is, however, a strong similarity between the Applicant group herein and the group of parents who were granted participant status in the Royal Commission of Inquiry into Certain Deaths at the Hospital for Sick Children and Related Matters conducted by Mr Justice Grange who made the following statement on the issue of participant funding:

I want to say a word about funding. Some of the parties represented are well able to look after themselves financially and with them, we are not concerned. There are those who have a legitimate interest and who are not so able and, where appropriate, I intend to make recommendations for funding of their legal expenses by the Provincial Government.

Chief Justice Parker who conducted the Commission of Inquiry into the Facts of Allegations of Conflict of Interest Concerning the Honourable Sinclair M. Stevens commented favourably on the decision of Mr Justice Grange with regard to the funding of the legal costs for the parents of deceased children in the course of his own ruling regarding the funding of parties as follows:

Then, again, there are counsel here who have standing because they are interested in the Commission, but they do not act for parties that are being affected or may be affected.

The two that have asked for funding are in the last category. They are not acting for parties that may be directly affected by the outcome in the sense that Mr. Stevens is. It is true that, on occasion, funding has been granted to parties. In certain circumstances funding may be justified. A clear case, it would seem to me, would be the inquiry into the Hospital for Sick Children where certain persons were funded for their costs.

It is my view that the position of the Applicant group before me is completely analogous to that of the parents of the deceased children involved in the Grange Inquiry. It is beyond dispute that the Air Ontario crash survivors and the victims' personal representatives have a direct and legitimate interest in the conduct of this Inquiry.

Furthermore, they can claim, as in fact they do, to represent the point of view of at least a segment of the travelling public on the dual issues of airline operations and flight safety, both of which are within the purview of this Commission. It is arguable that they have a contribution to make to this Inquiry from that perspective and it is impossible to

exclude the possibility that this group may raise an issue which others have overlooked notwithstanding due diligence.

In my opinion, it would be manifestly unfair to exclude them from the process of this Inquiry by reason of impecuniosity. To hold otherwise would be to reduce the grant of special participant status to the Applicants to a hollow victory indeed.

It is, in my view, in the public interest that they be included in the process.

I subscribe to the comments of the Commission in the Marshall Inquiry contained in its decision of May 14th, 1987, with respect to the question of funding of various parties which comments are to be found at page 1 of the decision:

However, we do believe that, absent any prohibition, it is implicit in the Terms of Reference of any Royal Commission that it has the capacity, and indeed the obligation, to respond to any party who has been granted standing and who raises an issue of participant funding. To refuse to respond to such a request would be inconsistent with a tradition of Royal Commissions, a tradition which encourages full participation in a public and independent forum. In recent times similar requests have been responded to by then Mr. Justice Berger, Mr. Justice Grange, Mr. Justice Estey and Mr. Justice Parker.

It is also noted that in the matter of the recently concluded Code Inquiry in Alberta into the affairs of the Principal group of companies full funding of legal costs at public expense was granted to a large group of investors who were given participant status with representation by one counsel acting on behalf of the collective group.

Entirely apart from the evidence before this Commission indicating the inability of the Applicant group to finance the costs of representation by legal counsel at the hearings of this Commission, I would deem it in the public interest for the other reasons already stated that this collective group of survivors and the victims' families receive assistance with their legal costs incurred with respect to appearances at the Inquiry.

I will, therefore, recommend to the Governor in Council the payment of reasonable legal costs of counsel representing them including necessary disbursements.

Taking into consideration the fact that Commission counsel have the primary responsibility of presenting before this Inquiry all relevant evidence gathered by the investigators acting under my direction and perceiving the role of counsel for the Applicant group to be in the nature of a less onerous interest role and being conscious of the fact that public funds are involved, I think it appropriate to fix the extent of assistance

with respect to legal fees and expenses to be recommended for counsel on behalf of the Applicant group as follows:

- (a) Counsel fees are to be calculated at an hourly rate on the basis of the fee schedule in use by the Government of Canada for outside legal counsel.

Firstly, the hours for which counsel shall be entitled to assistance shall be the total of the hours actually spent by the representative counsel of the Applicant group at the hearings of this Commission.

And secondly, recognizing that preparation time is a necessary element of counsel work, I direct that counsel for the Applicant group shall be entitled to compensation for a maximum of one hour of preparation time for each hour actually spent at the hearings of the Commission.

- (b) The travel and living expenses of counsel representing the Applicant group incurred while attending hearings of the Commission shall be reimbursed on the same basis as the expenses of Commission counsel under the current guidelines of the Government of Canada.
- (c) The reasonable and necessary disbursements incurred by counsel in the course of representing the Applicant group.

In the event that such funding is approved by the Governor in Council, I deem it appropriate to direct that counsel for the Applicant group shall present detailed statements of accounts on a monthly basis for approval by the secretary to the Commission or by the Commissioner or his designate.

In addition, I direct that no extraordinary expenditures shall be undertaken by counsel for the Applicant group without obtaining the prior approval of the secretary of the Commission or by the Commissioner or his designate.

Finally, I would say that I have reduced my reasons for decision to writing, in both English and French versions, and the written reasons are available for any interested parties.

(Transcript, vol. 10, pp. 9-23)

### **3 Ruling Regarding Admissibility of Evidence on Pilot Attitudes and Aviation Safety Concerns. The Objectives of Cross-Examination. (September 26, 1989)**

THE COMMISSIONER: During the hearings yesterday afternoon, agreeing with objections raised by Mr Jacobsen and Mr Keenan, I ruled that hearsay evidence pertaining to the reputation for competency of First Officer Mills, where such evidence was tendered as proof of the

truth of the subject matter, itself, was inadmissible. I have not retreated from that view.

However, this morning Mr Jacobsen, counsel for Air Ontario, and Mr Keenan, counsel for CALPA, have joined in objecting to both the manner of cross-examination and the content of the cross-examination of Captain Berezuk, the witness presently on the witness stand, being conducted by Mr Bailey who is the counsel for the chief coroner of Ontario.

Mr Jacobsen perceives Mr Bailey's manner of cross-examination to be objectionable. He describes it to be discourteous and of a badgering nature. I will deal with that issue first.

While one might say that Mr Bailey's manner of cross-examination is vigorous, I would certainly not characterize it as discourtesy; nor do I consider Mr Bailey to be badgering the witness.

He is entitled to point out inconsistencies in the evidence, if there are any, and also to test the credibility of the witness. I do not equate such a legitimate objective of cross-examination as badgering.

It is my view that it is important to know whether there is some sort of unwritten rule or code of honour or attitude or accepted blind trust among airline pilots that prevents professional pilots who are, themselves, passengers on commercial flights from communicating their urgent flight safety concerns to the cockpit crew even at a time of perceived danger.

Furthermore, it is important to know whether this is what influenced or constrained this witness from communicating his own obvious concerns to the cockpit crew of the F-28 which crashed.

This is a legitimate area of concern for this Inquiry from the point of view of aviation safety, the subject which clearly is within the terms of reference establishing this Commission. If there is a subtle form of peer pressure or intimidation or even simply a professional attitude among pilots which discourages the communication of perceived dangerous situations by a pilot/passenger to the cockpit crew, then the larger public interest requires that this be examined.

A full airing of issues potentially impinging on the larger question of aviation safety is, in my view, more important than the preservation of the niceties of evidentiary rules by which a Commission of Inquiry in any event is not bound.

It is, therefore, my ruling that Mr Bailey may proceed with his cross-examination.

(Transcript, vol. 15, pp. 48-50)

#### **4 Ruling Regarding Prejudicial Effect of Adverse Evidence and Air Ontario's Application to Call Witness out of Sequence – Inquiry Procedure – Ongoing Investigation (November 20, 1989)**

THE COMMISSIONER: At the conclusion of proceedings on Friday afternoon last, Mr Jacobsen, counsel for Air Ontario, made application for a direction to Commission counsel to call as a witness out of sequence one Wayne Copeland, an employee of Air Ontario at its London, Ontario, SOC headquarters.

Mr Copeland, it is indicated, was the person at the London, Ontario, SOC office of Air Ontario who spoke on the telephone with Captain Morwood shortly prior to the departure of flight 1363 from the Dryden airport on March 10, 1989.

The object of the application as outlined by Mr Jacobsen is to end speculation, which he alleges is occurring in the media and among the public, as to the contents of the telephone conversation in question.

It is contended that the evidence that has been heard from several witnesses, who variously described Captain Morwood's demeanour after this telephone conversation as being one of either anger or upset, is prejudicial to Air Ontario and that fairness requires that Air Ontario be permitted to have Mr Copeland called at this stage of the proceedings instead of at the planned hearings of the Commission either in late January or February of 1990.

Mr Jacobsen urged that it would be simple and a non-time-consuming matter to have Mr Copeland inserted as a witness at this stage of the proceedings. He estimated that only 15 minutes would be needed to put in Mr Copeland's direct evidence.

This time estimate, of course, does not take into consideration the time which various counsel will require for cross-examination of Mr Copeland. One of these counsel has already informed Commission counsel that he will require at least one half day for cross-examination of Mr Copeland.

While on the face of it the application appears to be innocuous, a careful consideration of all the factors involved reveals a number of additional areas of concern, some of which were raised by Commission counsel, Mr von Veh, and by Mr Bailey, counsel for the chief coroner of Ontario, both of whom argued against the application.

Mr von Veh pointed out that Commission counsel, who has the responsibility for the order of calling of witnesses, has a pre-planned sequential program for the introduction of evidence pursuant to which he anticipates dealing with the area of evidence involving Mr Copeland in the new year, calling Mr Copeland now would be out of context and seriously disruptive to the planned schedule; moreover, there is an investigation by the Ontario Provincial Police still ongoing concerning

Captain Morwood's telephone call or calls from the Dryden airport terminal.

It is indicated by Commission counsel that it has been established by the Ontario Provincial Police investigation thus far that Captain Morwood spoke on the telephone to at least one other person at the Air Ontario SOC offices besides Mr Copeland on March 10th and that calling Mr Copeland now would prejudice that ongoing investigation. In my view, this alone is sufficient reason to deny the application.

There are, however, other cogent reasons for doing so. There is evidence already on record which some parties other than the Applicant could perceive to be adverse to their interests. Probably there will be more. That being the case, I am of the view that to allow this application would set a troublesome precedent which could conceivably cause chaos to the proceedings of this Inquiry by unleashing demands by other parties adversely affected by the testimony of a particular witness that they then and there be permitted to call a witness to respond to such adverse testimony.

This is not a privilege enjoyed even by persons accused of a serious criminal offence. Although a commission of inquiry is not to be equated with a criminal trial, a comparison with criminal procedure is instructive. Criminal trial procedure in our system of justice does not permit an accused to take the stand during the course of the presentation of evidence by the Crown in order to refute adverse testimony arising during presentation of the Crown's case.

It seems to me that a party at an inquiry under the *Inquiries Act* who perceives that certain evidence is adverse to that party is hardly entitled to a privilege not extended to an accused who is prejudiced by adverse testimony and whose personal liberty in fact may be at stake.

Having regard to all the circumstances, it is my view that the potential prejudicial effects upon the conduct of the Inquiry of allowing the application in question far outweigh any perceived prejudice to the interests of the Applicant.

The concept of fairness requires that the party adversely affected by evidence be given full opportunity to respond to adverse testimony. That principle was recognized from the very first days of this Commission. The Applicant will be given full opportunity to do so but at the appropriate time. The application is therefore dismissed.

(Transcript, vol. 26, pp. 1-5)

## **5 Ruling Regarding Testimony of Pilots with Respect to Confidentiality of Pilot Surveys – Claim for Privilege – Exclusion of Witnesses (May 22, 1990)**

THE COMMISSIONER: Well, I will deal with that point first. It strikes me that there is really no analogy between the position of these pilots and a party accused in a criminal matter and a party in a civil action. I don't think I can come to the conclusion that you suggest, Mr Keenan, with respect to the pilots.

In this matter, it is not in dispute that five Air Ontario F-28 pilots gave certain information to their safety officer, Captain Stewart, after the March 10th crash at Dryden and that Captain Stewart recorded this information.

Commission counsel proposes to call Captain Stewart and the five pilots in order to establish the circumstances under which the information was given to Captain Stewart by these pilots, and he argues that those circumstances are relevant to the larger issue of privilege based on confidentiality which is being asserted on behalf of those pilots with respect to that information.

This is a two-stage issue. The first stage involves the circumstances out of which a claim for privilege based on confidentiality arises. The second stage involves examining the issue of whether or not a claim for privilege can be sustained on the basis of confidentiality. At this point, we are concerned only with the first stage.

Counsel for Air Ontario and for the Canadian Air Line Pilots Association representing the five pilots argue that the pilots who gave statements to Captain Stewart should not be called as witnesses at this stage, nor should their identities be made public prior to a decision being made on the larger issue of privilege itself. It is suggested that I hear only the evidence of Captain Stewart on this point. However, to hear the evidence of Captain Stewart alone would be to only hear one side of the story.

The question is not so much one of whether an offer of confidentiality was made but whether that information which was received by Captain Stewart would not have been given to him by the pilots in question in the absence of an undertaking as to confidentiality.

The available jurisprudence on the subject indicates that a tribunal faced with a claim of privilege on the basis of confidentiality must hear evidence as to the circumstances giving rise to such claim. In this case, I can think of no evidence more germane to the issue of such circumstances than that of the five individuals with respect to whom a claim for privilege is being asserted on the basis of confidentiality.

The circumstances under which the statements in question were given go to the very heart of the matter. That evidence can only be given by



the pilots themselves. Position statements made by counsel on their behalf is not evidence.

In short, in order to intelligently adjudicate on the main issue, I feel that I have to hear those who claim privilege and their evidence must be subject to the tests of cross-examination.

At this stage, no reference to the content of the actual statements given by each of the pilots will be made. It is already public knowledge that certain statements were made.

In my view, it cannot reasonably be inferred that any injury will accrue to these pilots or to the general pilot group by merely hearing the evidence of the five pilots as to the circumstances under which their individual statements were made to Captain Stewart.

I therefore conclude in all the circumstances of this case that it is appropriate that Captain Stewart and the five pilots be called as witnesses in this stage of the process of ultimately determining the efficacy of the claim for privilege.

Counsel for the chief coroner of Ontario has moved that there be exclusion of witnesses during this phase of the Inquiry. This is routinely done in courts at all levels. Because of the delicate nature of this matter, I deem it to be in the best interests of all concerned, including the said pilots themselves, that an order for exclusion be made.

I accordingly make the following order. First, all witnesses who are to be called to testify in this phase of the Inquiry shall be excluded from the hearing room while other witnesses testify. Second, witnesses who are yet to be called to testify are hereby directed not to watch the television monitor at Commission premises during the hearings. Third, witnesses who are to be called shall not discuss their evidence or the evidence of any other witness with any other person excluding counsel for those persons.

Witnesses who are yet to be called to testify are directed not to read the transcripts of evidence given by other witnesses who have testified ahead of them during this phase of the Inquiry.

I think that takes care of it.

(Transcript, vol. 74, pp. 72-76)

## **6 Ruling Regarding Application for Exclusion of Witnesses – Several Individuals To Be Examined on Specific Subject with Respect to Which They Gave Previous Statements Separately (August 14, 1990)**

THE COMMISSIONER: Well, having heard the arguments both pro and con, I am of the view that this particular situation can be distinguished from any other situation that we have faced to the present point in time.

We have here a small group of individuals who apparently will be testifying on a very specific area, with respect to which they gave statements separately. I think it's in the general interest of all concerned that the application should be granted. I see no reason why aspersions of any sort should be cast upon the group of individuals who will be testifying by reason of the fact that they will be excluded while the evidence is being heard.

It's very common, as has been pointed out by Mr Friesen – I think he summed it up very well – for witnesses to be excluded during the course of trials, both civil and criminal, and no connotations or aspersions are cast upon a group of witnesses who are so excluded in those situations, and I don't see why it should happen here. I think it's in their own interest as well as the general interest that the application should be granted, and I am going to make that order.

(Transcript, vol. 91, pp. 10–11)

### **7 Ruling Respecting Admissibility of Witness Pre-Hearing Interview Transcripts for Purpose of Cross-Examination of Interviewee – Question of Privilege (September 20, 1990)**

THE COMMISSIONER: During the adjournment, I have reviewed those sections of the transcripts of the interview conducted with Captain Deluce which are alleged to contain statements which are inconsistent with what he said in his viva voce evidence on the witness stand.

In addition, I have considered the question of whether there is any sort of privilege to be attached to the transcripts which were produced of the interviews. It has been suggested by Mr MacDougall and Mr Keenan in particular that there was some sort of understanding that these statements would not be used in any proceeding before this Commission.

I have spoken to those Commission counsel who were present during the interview with Captain Deluce, and they indicate to me and my understanding of their view of the situation was that any statements which might have been perceived to grant some sort of privilege to the witness statements during the interview were in fact directed in the minds of Commission counsel specifically to certain personal problems which were drawn to their attention by Mr Deluce's counsel. And I certainly would not expect any of those statements to become any part of the public record.

However, on further examination of the record, I also noted that Mr Jacobsen at volume 1 of the transcript – and Mr Jacobsen was counsel representing Captain Deluce – made a statement:

This is an intimidating process for him, rightly or wrongly, and what I wanted to – I wanted to put that on the record in hopes that people would be understanding when we are looking at this.

Now, this, in my mind, equates with an expectation that indeed this was a record and that it might be looked at in the future. There, it is noted, were objections by counsel from time to time regarding certain questions. The interview went both on and off the record at times.

And having regard to all of this evidence, it is my view that it would not be in the public interest to prevent the witness from being asked to explain certain inconsistent statements, if there were inconsistent statements, made by him during the course of the interview.

Now, with respect to the question of whether or not there were inconsistent statements made by this witness insofar as what he has told us on a viva voce basis on the witness stand is concerned, I have perused in volume 2 of the transcripts, pages 309 and 310 in particular – these were the passages which are cited to me as being the passages in contention.

And I, having read those passages, am of the view that there clearly was an inconsistent statement made during the course of the interview with respect to the wing check relating to the speed at which it was conducted as compared to what the witness has said on the witness stand.

That being the case, I deem it entirely appropriate that the witness should be called upon to explain the inconsistency. I think he should be given that opportunity, from his own point of view, and I think it is desirable in the public interest as well.

(Transcript, vol. 113, pp. 106–109)

**8 IN THE MATTER OF the Commission of Inquiry into the Air Ontario Crash at Dryden, Ontario (“the Commission”)**

**AND IN THE MATTER OF PART I of the Inquiries Act, R.S.C. 1985, c.I-11, s.13**

**AND IN THE MATTER OF an application before Commissioner Virgil P. Moshansky made by Paterson, MacDougall on behalf of Air Ontario Inc. and ten individuals (“the Applicants”)**

An in camera hearing was held before me on Wednesday, October 9, 1991, at which time representations were made to me by D. Bruce MacDougall, Q.C., Mr. Peter M. Jacobsen, and Mr. Gerard A. Chouest of the firm Paterson, MacDougall, counsel to the Applicants. Also in

attendance were Commission Counsel, F.R. von Veh, Q.C, and Assistant Commission Counsel, Mr. Laurence C. Goldberg.

I will briefly set out the background and the issues that gave rise to the October 9, 1991, in camera hearing.

This Commission of Inquiry is established pursuant to Order in Council PC-1989-532 and Part I of the *Inquiries Act*. Accordingly, this Commission is bound by the Order in Council that requires me:

... to inquire into the contributing factors and causes of the crash of Air Ontario Flight 363 Fokker F-28 at Dryden, Ontario, on March 10, 1989, and report thereon, including such recommendations as the Commissioner may deem appropriate in the interests of aviation safety.

On August 19, 1991, Commission Counsel forwarded, by registered mail, letters of notification to, among other organizations and individuals, the Applicants.

As well, copies of all the letters were delivered to their counsel, Mr. D. Bruce MacDougall, on August 19, 1991. I should explain at the outset the role of Paterson, MacDougall and other counsel in this inquiry.

Throughout the hearings before me, a lawyer from Paterson, MacDougall attended every day of the hearings when an Air Ontario witness was being questioned. At times there were two Paterson, MacDougall counsel present, at times a counsel from another law firm assisted, and very frequently a senior executive from Air Ontario assisted counsel who appeared before me. Furthermore, Paterson, MacDougall had transcripts of proceedings supplied to it on a daily basis. Moreover,

- Before any witness testified, a synopsis of such witness's anticipated testimony, based on witness interviews, was forwarded to all representative counsel, including Paterson, MacDougall.
- Before any witness testified, photocopies of all exhibits proposed to be introduced through a given witness were forwarded to all representative counsel, including Paterson, MacDougall.
- All representative counsel appearing before me, including Paterson, MacDougall, were afforded broad rights of cross-examination of all witnesses.
- All representative counsel, including Paterson, MacDougall, were afforded the right to file written briefs as they saw fit, for my consideration.
- All counsel appearing before me, including Paterson, MacDougall, were afforded the opportunity to call such further evidence as they saw fit, in addition to the evidence called by Commission Counsel.

- Paterson, MacDougall chose not to call any evidence other than through one witness, Constable E.A. Grenier of the Ontario Provincial Police.
- All counsel appearing before me, including Paterson, MacDougall, were afforded the opportunity to present closing arguments.

The hearings ended on January 24, 1991. Since that time I have been engaged in sifting through the evidence and formulating my analysis and potential findings and conclusions.

The August 19, 1991, letters forwarded by Commission Counsel, on my direction, to a number of organizations and individuals contained the following provision:

Section 13 of the *Inquiries Act* states that:

No report shall be made against any person until reasonable notice has been given to the person of the charge of misconduct alleged against him and the person has been allowed full opportunity to be heard in person or by counsel.

This letter shall constitute notice that the Commissioner will hear and consider any submissions that you or your counsel may wish to make in relation to adverse findings made against you. Although the *Inquiries Act* addresses a "charge of misconduct", in the interest of fairness, Commissioner Moshansky has directed that notice be afforded to all persons against whom he may make adverse findings. The Commissioner has advised me that he does not view the findings enumerated below as constituting "misconduct" within the meaning of Section 13 of the *Inquiries Act*.

The substance of the intended findings adverse to ... [named organization or individual] ... are that, at material times ...

By correspondence dated August 30, 1991, from Mr. MacDougall to Commission Counsel, further information and particulars were sought.

By letter dated September 6, 1991, Commission Counsel responded to Mr. MacDougall's correspondence by forwarding a 13-page letter of particulars.

By correspondence dated August 29, 1991, one Applicant, a recipient of an August 19, 1991, letter from Commission Counsel, wrote to Commission Counsel advising of a desire to submit written representations to the Commission. That Applicant's written representations, dated September 8, 1991, were in fact forwarded to Commission Counsel by facsimile transmission on September 9, 1991.

Two letters, both dated September 13, 1991, were forwarded by Mr. MacDougall to Commission Counsel, setting out representations relating to Section 13 and again requesting further particulars.

By correspondence dated September 26, 1991, Commission Counsel forwarded a 66-page letter to Mr. MacDougall addressing various issues raised in the two September 13, 1991, letters above noted, including a detailed elaboration of particulars. Mr. MacDougall was further advised to the following effect:

Should you take issue with any of the foregoing, or wish to comment thereon, the Commission will entertain your further written representations on or before Monday, October 6, 1991, or hear your viva voce submissions in camera, but on the record, on Wednesday, October 9, 1991 at 9 a.m. in the boardroom located at the Commission's offices. Should you wish to make viva voce submissions, the Commissioner has requested that a brief written summary of such submissions be delivered to the Commission offices by 12:00 noon on Tuesday, October 8, 1991.

By correspondence dated October 4, 1991, Mr. MacDougall wrote to Commission Counsel. This letter, received at the Commission's offices on the afternoon of Friday, October 4, 1991, is hereafter set out in full.

Dear Sir: ...

Thank you for your letter of September 26, 1991.

We have taken note of the options set out at page 65 of your letter and wish to inform you that we shall be making viva voce submissions before the Commissioner on October 9, 1991 and, in accordance with your request, shall provide a brief written summary of those submissions by 12:00 noon on October 8, 1991. As we expect you will be opposing, we should request a written summary, by 5:00 p.m. on the 8th, of any points you intend to raise beyond those set out in your letter of September 26, 1991.

In general terms, we shall be submitting that the Commissioner cannot properly make a report of misconduct against any of the persons referred to in your letters to us.

In addition, we shall also be submitting, in any event, that the notice of the charges of misconduct as contained in your letter of September 6, 1991, as expanded by your letter of September 26, 1991, falls short of being reasonable notice.

Although we and our clients are anxious for this matter to be concluded, we must point out that if the Commissioner rules against us on the names issue, even leaving aside a possible judicial review, it will be necessary for us to make a formal request for a further extension of time for response, as we will be advising all of the named persons of their right to retain counsel independent of Air Ontario, as their personal position could conflict with that of the company.

In addition, apart entirely from the names issue, we shall be requesting additional time to respond, on proper notice, to the charges.

Please let us know if these arrangements are satisfactory.

Yours very truly,  
D. Bruce MacDougall

Commission Counsel responded to the above-noted October 4, 1991, correspondence on Monday, October 7, 1991. The response is hereafter set out in full.

Dear Mr. MacDougall: ...

I thank you for your letter of October 4, 1991.

Please be advised that the position of Commission Counsel is set out in my correspondence of September 26, 1991. Accordingly, I do not at the present envision the necessity of raising any further points before the Commissioner on October 8, 1991.

In paragraph two (2) of your noted correspondence you state:

"In general terms, we shall be submitting that the Commission cannot properly make a report of misconduct against any of the persons referred to in your letters to us."

It is reiterated that the various observations and findings proposed to be made by the Commissioner are not viewed by the Commissioner as constituting "misconduct" as that term is used in section 13, but rather, either are or could be construed to be adverse findings, which were communicated in the interest of fairness.

I have forwarded a copy of your October 4, 1991 correspondence to the Commissioner, and look forward to seeing you on Wednesday, October 9, 1991 at 9:00 a.m. and also receiving your written summary of submissions to be made by 12:00 noon on Tuesday, October 8, 1991.

Yours very truly,  
F.R. von Veh

After the above-noted sequence of events, an in camera hearing was convened by me in the boardroom of the Commission offices on Wednesday, October 9, 1991, at 9:00 a.m.

The Applicants' position may be summarized as follows:

1. that I cannot properly make a report of misconduct against any of the persons who were recipients of the August 19, 1991, letters;

2. that I should make findings and observations only of a generic nature, without naming any individuals;
3. that reasonable notice has not been afforded to the recipients of the August 19, 1991, letters to enable them to respond properly; and
4. that, should I name individuals, then more time is required to enable Paterson, MacDougall to advise all recipients of the August 19, 1991, letters of their right to retain independent counsel since their personal interests could conflict with those of Air Ontario Inc.

These four points were supported by reference to the *Inquiries Act*, the case law, and the *Canadian Charter of Rights and Freedoms*, s.7.

Having regard to all of the circumstances, the exhibits filed before me, and the argument advanced by counsel, I will now deal with the above-noted four points.

### Reporting Misconduct

When Commission Counsel first raised with me the question of communicating with certain individuals who might be expected to be named in my Report, it was my view that the various observations and findings I had under consideration would not constitute charges of misconduct as that term is used in Section 13. I viewed such proposed observations and findings as being, at most, adverse findings. However, in order that all persons potentially affected by such adverse findings be treated fairly, I directed Commission Counsel to notify all potentially affected persons of the observations and findings that I proposed to consider in order that they could avail themselves, if they desired, of a further opportunity to be heard. On August 19, 1991, Commission Counsel wrote to, among other individuals and organizations, Air Ontario Inc. and the ten individuals named herein, setting out the adverse findings that I considered could be made against them. As stated earlier, this correspondence contained the following provision:

Although the *Inquiries Act* addresses a "charge of misconduct", in the interest of fairness, Commissioner Moshansky has directed that notice be afforded to all persons against whom he may make adverse findings. The Commissioner has advised me that he does not view the findings enumerated below as constituting "misconduct" within the meaning of section 13 of the *Inquiries Act*.

Accordingly, in view of the fact that I do not propose to make "charges of misconduct" within the meaning of Section 13 of the *Inquiries Act*, the factual basis does not exist for counsel's first point and I need not consider it further.



## **Generic Findings without Naming Individuals**

In the earliest stages of this Commission, I consulted with internationally recognized experts in the field of aviation accident investigation. I concluded, on the basis of these consultations, that, in order to conduct a thorough investigation into an airline accident such as this, it was necessary to examine all operational elements which could potentially have a bearing on the accident. Internationally accepted standards of aviation accident investigation required an examination of, among other things, the flight crew, the aircraft and its systems, the infrastructure immediately involved in the aircraft operation leading up to the accident, the air carrier, and the regulator. Only in this way could all of the contributing factors and causes of an airline crash be properly determined.

At the first formal public hearing on June 16, 1989, I outlined my interpretation of the terms of reference of the Inquiry:

I interpret the terms of reference to provide a broad mandate to inquire not only into the Air Ontario crash but also into any derivative matters which affect aviation safety, with respect to which I am directed to make such recommendations as I may deem appropriate. The Commission may, from time to time, enlarge, consolidate, delete, and/or modify any of the said areas of inquiry as the evidence unfolds.

Evidence was adduced from 166 witnesses, resulting in an evidentiary record consisting of approximately 34,000 transcript pages and approximately 177,600 pages of exhibits and related documentation.

I am obligated to report to the Governor in Council on my observations and findings based on the evidentiary record before me. To discharge this mandate and to make meaningful recommendations in the interests of aviation safety, it is necessary that such findings and recommendations be supported by an analysis of specific evidence before me. In my view, a proper analysis of the "contributing factors and causes of the crash of Air Ontario Flight 363" requires observations and findings adverse to some organizations and individuals to be made.

In my view, I would be remiss in carrying out my mandated duties as specified in the Order in Council dated March 29, 1989, if I did not specifically name organizations or individuals, where appropriate, to lend clarity to the narrative of events and to identify clearly and without ambiguity the particular events that in my view contributed to the crash, or that give rise to my specific recommendations concerning aviation safety.

To refer only to nameless and unspecified individuals could do an injustice by casting a cloak of doubt over the conduct of other individ-

uals, who are blameless, and others who did not have the opportunity to appear before me and be heard. This I am not prepared to do.

In my view there is no conflict between the way in which I propose to fulfil my terms of reference and the requirements of natural justice, or, in *Charter* terms, the requirements of fundamental justice.

In considering the argument advanced on this second point, I have reviewed all of the cases referred to, and in particular *Re Nelles et al. and Grange et al.* (1984) 9 D.L.R. (4th) 79 (Ont. C.A.) (hereinafter "*Nelles*"); *Re First Investors Corporation Ltd.; Re Associated Investors of Canada Ltd.* (1988) 58 Alta. L.R. (2d) 39 (Alta. Q.B.) (hereinafter "*First Investors*"); and *Robinson v. R.* (1986) 4 W.W.R. 729.

In *First Investors*, an inspector was appointed pursuant to the *Alberta Business Corporations Act*, S.A. 1981, c.B-15, to inquire into the dealings of two corporations. Public hearings were conducted by the inspector, and one of the principals of the subject corporations made application to the Court seeking an order, the effect of which would limit the inspector in the conduct and reporting of his investigation. Mr. Justice Berger of the Alberta Court of Queen's Bench rejected the applicability of the *Nelles* case to the Alberta inspector's investigation. The judgement at page 59 states:

The applicant relies, in part, upon the pronouncement of the Ontario Court of Appeal in *Nelles v. Grange* (1984) 42 C.P.C. 109 9 D.L.R. (4th) 79, 3 O.A.C. 40. The decision of the Ontario Court of Appeal is premised, in part, on the notion that (at p. 89):

... if no charge is subsequently laid, a person *found responsible* by the commissioner would have no recourse to clear his or her name [my emphasis].

In the case at bar the inspector's mandate is to investigate. I have held that he is not authorized to fix criminal liability. While evidence of criminal activity may emerge, the investigation neither usurps nor undermines the function of the judicial process in the ordinary courts.

In the proceedings to date, the inspector has, in keeping with the principles of fundamental justice, allowed the applicant the right to be represented by counsel and the right to cross-examine witnesses. The applicant does not submit that there is evidence of procedural unfairness. His argument appears to be prospective in nature. In that respect, the observations of Legg J. in *Robinson v. B.C. (Govt.)*, [1986] 4 W.W.R. 729, 3 B.C.L.R. (2d) 77, 28 C.C.C. (3d) 489 (sub nom. *Robinson v. R.*) (S.C.), at p. 747 are of assistance.

I agree with counsel for the Attorney General that the commission of inquiry appointed by the Order in Council is a recom-

mentary, not an adjudicative, body. It will report findings to the Lieutenant Governor in Council. It will make no determinations as to guilt or innocence or civil or criminal liability. It cannot terminate the employment of or otherwise discipline any person. Nor will its report necessarily lead to any subsequent proceedings against anyone. That being so, it cannot be said that the inquiry will deprive any person of liberty or security of the person ... "

In support of their submissions, counsel for the Applicants relied on the *Nelles* case, as had been done by the applicant in *First Investors*.

I am unable to accept such a submission.

Every commission of inquiry is governed by its own terms of reference. The terms of reference of the instant investigative and recommendatory Commission of Inquiry mandated me:

... to inquire into the contributing factors and causes of the crash of Air Ontario Flight 363, Fokker F-28 at Dryden, Ontario, on March 10, 1989, and report thereon, including such recommendations as the Commissioner may deem appropriate in the interests of aviation safety.

The terms of reference of the *Nelles/Grange* inquiry specifically precluded the commissioner of that inquiry from making findings of civil or criminal responsibility. While I have no intention of assigning criminal or civil liability, the terms of reference of this Commission contain no such limitation. In my judgement, my terms of reference not only contemplate, but, having regard to the record of evidence before me, require that I make findings of fact that may be regarded as critical or adverse.

I am dealing with a crash that resulted in the death of 24 individuals. The record indicates that the crash did not occur free of human, corporate, and regulatory error. I intend to report my findings fairly and accurately. I cannot do so without identifying the individuals, corporations, and organizations in question. Counsel for the Applicants acknowledged in argument that it would be appropriate "to name" the pilots of C-FONF. I do not see any rational basis on which to limit the "naming of names" in this way. All individuals and regulatory and corporate entities involved in this Commission have been afforded to the full the benefit of the principles of fundamental justice.

For these reasons, I am not prepared to make observations and findings of only a generic nature without naming any individuals. Individuals will be named in observations and findings in cases where the evidentiary record and the discharge of my mandate so warrant.

I might also point out that the *Nelles/Grange* inquiry was established pursuant to the Ontario *Inquiries Act*, while the instant Commission of Inquiry is established pursuant to the federal *Inquiries Act*. This fact negates the necessity of addressing the constitutional issues that were so important to the disposition of the issues before the Ontario Court of Appeal in its consideration of the procedures of the *Nelles/Grange* inquiry.

### The Issue of Reasonable Notice

Counsel for the Applicants argued that the recipients of the August 19, 1991, letters have not had sufficient particulars or time to respond properly to the proposed adverse observations and findings. I do not agree with this submission. With respect to particulars, Commission Counsel's 66-page letter of September 26, 1991, provided Paterson, MacDougall with notice in considerable detail of the points and the circumstances that may give rise to an adverse finding in my eventual Report. Counsel for the Applicants have access to the full evidentiary record, and their day-to-day participation in the Inquiry, together with Commission Counsel's 66-page letter, can leave them in no doubt about the issues that must be addressed. In the present application, Paterson, MacDougall intimated that nothing less than my report in draft form would satisfy their requirements. The request, in my view, indicates the extent to which the Applicants have misconstrued the limits of procedural fair play and fundamental justice.

With respect to the issue of timing, the following chronology is of significance:

- (a) The August 19, 1991, letters were sent by registered mail to 11 persons. Each notice contained the following notification concerning timeliness:

Please consider this letter as official notice pursuant to the provisions of section 13 of the Inquiries Act, and advise the Commission in writing on or before Tuesday, September 3, 1991, if you wish:

1. to be heard in person or by counsel;
2. to be heard by means of written submissions; or
3. not to be heard by the Commission.

**SHOULD YOU NOT RESPOND ON OR BEFORE TUESDAY, SEPTEMBER 3, 1991, IT WILL BE TAKEN TO MEAN THAT YOU HAVE WAIVED YOUR RIGHT TO BE HEARD PURSUANT TO THE INQUIRIES ACT, SECTION 13.**

It is to be noted that submissions presented pursuant to this procedure will be carefully considered by the Commissioner in preparation of his Final Report. Written submissions are to be received by the Commission on or before **TUESDAY, SEPTEMBER 10, 1991.**

Only one Air Ontario witness wrote to Commission Counsel and made written submissions as requested in the August 19, 1991, letter.

- (b) A copy of each August 19, 1991, letter was delivered to Mr. Bruce MacDougall on August 19, 1991. By correspondence dated August 30, 1991, Mr MacDougall wrote to Commission Counsel requesting more particulars and setting out his position in relation to Section 13. There are two paragraphs of particular significance in this correspondence:

We are writing to you with respect to Section 13 notices you have provided to us as counsel to Air Ontario and to several of the witnesses who gave evidence at the inquiry.

The above information will assist us greatly in preparing our response to the notices that you have provided to us. Obviously the sooner we are in possession of this information the sooner we will be able to respond.

It is clear from reading the letter *in toto* and particularly the two paragraphs quoted therefrom that Paterson, MacDougall was acting as counsel to Air Ontario and to persons employed by Air Ontario who appeared before me.

- (c) Two letters dated September 13, 1991, were forwarded by Mr. MacDougall to Commission Counsel, essentially requesting further particulars. Both letters initially set out the context in which they were forwarded to the Commission:

We are writing this letter as Counsel for Air Ontario Inc., a participant in the Inquiry, and as Counsel also representing the interests of the witnesses ... in response to the Notices of "intended findings" contained in your various letters to them of August 19, 1991.

and

We are writing to you as counsel for Air Ontario Inc. in response to your letter of August 19, 1991 to the president for the company.

Having regard to the role that Paterson, MacDougall assumed in this Inquiry; the degree of specificity of the particulars that were sent to Mr. MacDougall; the passage of fifty-one (51) days from August 19, 1991, to the date of the in camera hearing; and the role Paterson, MacDougall assumed in the Inquiry process by representing the interests of all but a few of the Air Ontario employees in interviews and dealings with the Commission, by representing them at all hearings before me, and by the very correspondence leading up to this application, as earlier noted, I am left in no doubt that all of the persons who were forwarded letters on August 19, 1991, had reasonable and sufficient time to respond to such letters, either individually or through Paterson, MacDougall, the counsel representing their interests.

Counsel for the Applicants argued that there was an unreasonable delay in the service of the letters from the Commission dated August 19, 1991, September 6, 1991, and September 26, 1991, upon the Applicants. In the circumstances, I do not agree. This Commission of Inquiry was constituted on March 29, 1989, hearings commenced on July 17, 1989, and hearings ended on January 24, 1991. Since that time I have been reviewing a vast volume of documents and transcript evidence. The letters to the Applicants were forwarded as soon as I was satisfied with my review of the evidentiary record.

In the interests of fairness to all concerned, notwithstanding my decision set out above, I am hereby granting an extension of time until noon on Thursday, October 24, 1991, by which time the remaining ten persons may make written representations to me concerning the notices such persons were forwarded on August 19, 1991, as amplified by correspondence dated September 6 and 26, 1991. Such representations may be individually sent, as was done by one Applicant, or may be submitted by counsel.

### **Possible Conflict of Interest in Legal Representation of Individuals**

I have given particular consideration to counsel's assertion that individuals may need more time to respond since Paterson, MacDougall "will be advising all of the named persons of their right to retain counsel independent of Air Ontario, as their personal position could conflict with that of the company."

The conduct of Paterson, MacDougall throughout this Inquiry led me to believe that any issues of conflict had been addressed by Paterson, MacDougall and its clients at a very early stage; and further, that such early consideration of such issues resulted in Paterson, MacDougall representing all of the individuals that they purported to represent. I am of the view that Paterson, MacDougall cannot now argue that it is

unable to provide these individuals with independent counsel as the Inquiry draws to a close and delivers its Final Report, after such individuals were interviewed and appeared as witnesses before me represented by Paterson, MacDougall during the investigation phase of this Inquiry.

With respect to the individuals themselves, if any person who received an August 19, 1991, letter from the Commission feels aggrieved by reason of the representation of Paterson, MacDougall and now wishes separate representation, then such persons can come forward before me as individuals to make submissions on Thursday, October 24, 1991.

### *Charter of Rights*

Counsel for the Applicants argued that the procedure proposed by the Commission would violate the individual Applicants' common law right to reputation and their right under Section 7 of the *Charter of Rights and Freedoms* not to be deprived of "security of the person" except in accordance with the principles of fundamental justice. I very much doubt that the "security of the person" of any individual will be put at risk as a result of the Final Report of this Commission of Inquiry. To the extent that "security of the person" may be an issue, there has been and will be scrupulous adherence to the principles of fundamental justice.

For the foregoing reasons the Application is denied.

DELIVERED AT TORONTO, ONTARIO,  
THIS 11th DAY OF OCTOBER, 1991.

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THE HONOURABLE Mr. JUSTICE  
VIRGIL P. MOSHANSKY, COMMISSIONER

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# FINAL REPORT

## TECHNICAL APPENDICES

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- 1 Occurrence No. 825-89-C0048: Structures/Site Survey Group Report LP 38/89: Accident: Fokker F28, Mk 1000, Registration C-FONF, 10 March 1989  
*Canadian Aviation Safety Board Investigation Team*
- 2 Fokker Aircraft B.V. Amsterdam, Fokker Aerodynamics, Report No. L-28-222: Note on the Aircraft Characteristics as Affected by Frost, Ice or Freezing Rain Deposits on Wings
- 3 Fokker Aircraft B.V. Amsterdam, Report No. VS-28-25: Flight Simulator Investigation into the Take-off Performance Effects of Slush on the Runway and Ice on the Wings of a Fokker 100
- 4 A Report on the Flight Dynamics of the Fokker Mk 1000 as They Pertain to the Accident at Dryden, Ontario, March 1989  
*J.M. Morgan, G.A. Wagner, R.H. Wickens*
- 5 Wind Tunnel Investigation of a Wing-Propeller Model Performance Degradation due to Distributed Upper-Surface Roughness and Leading Edge Shape Modification  
*R.H. Wickens and V.D. Nguyen*
- 6 Freezing Precipitation on Lifting Surfaces  
*Myron M. Oleskiw*
- 7 Human Factors Aspects of the Air Ontario Crash at Dryden, Ontario: Analysis and Recommendations to the Commission of Inquiry  
*Robert L. Helmreich*