CHAPTER THREE

Legislation and Policy

Introduction

THIS CHAPTER LOOKS AT certain key concepts embodied in the *Canadian Transportation Accident Investigation and Safety Board Act* (*CTAISB Act*) as a consequence of the policy debates which took place over the years preceding it. Our purpose here is to answer the question of whether overall policy goals have been effectively achieved. Despite its detailed allocation of responsibilities among Board members and staff, the *CTAISB Act* in many respects gives its administrators a wide scope for adapting the accident investigation process to the evolving needs of the public and of the stakeholders.

The intense debate surrounding the Westray Mine Inquiry[1] shows that both the rights of the individual and the need of the community to learn safety lessons must be respected. In our assessment, we had to address not only tangible factors such as the structure of the *Act* and the TSBC, but also intangible factors such as public confidence. No less important than the letter of the law, these less tangible factors affect the legitimacy of the Transportation Safety Board of Canada (TSBC) and its processes. The legislative decisions which were made and the changes we recommend reflect this multidimensional challenge.

Freedom, Not Isolation

FOR MANY YEARS the concept of an independent board was the subject of debate among policy makers, legislators and the Canadian transportation community. Essentially, this concept means that the investigator must be seen to be and must in fact be independent of the government transport service operator and the regulator. That much is critical, and it is aimed at eliminating potential conflicts of interest.

Rather than seeing it as a means to avoid conflict of interest, the TSBC has somehow interpreted independence as requiring a series of barriers between itself and the transportation industry and between Board members and its investigative staff. However, we see independence not as a constraint, but as an opportunity. An independent body should feel free to make whatever inquiries it wants and to challenge the regulator whenever it wants. Support for this concept is growing elsewhere, and it is now reflected in the transportation accident investigation process of several other nations including Australia[2] and the United States.

> By establishing the Transportation Accident Investigation Board, we will also be responding to calls for an independent agency that came from most of the groups concerned. The Board will therefore be separate from any of the departments. ... The independence of the new agency is a guarantee that investigations will be conducted fairly and objectively, since from now on, those who investigate shipping and railway accidents will not be connected in any way with those who determine the safety regulations, thus, Madame Speaker, eliminating any conflict of interest.
>
> *Hon. Benoît Bouchard, Minister of Transport, House of Commons Debates, April 17, 1989.*

The TSBC sees independence as a fundamental organizational goal.[3] But it does not need to interpret independence as an operational mission. Independence is a means, not an end in itself. The statute makes the TSBC independent. That is enough.

The self-imposed need to maintain separateness has undermined the TSBC's effectiveness, particularly in two areas. The TSBC has been reluctant to use industry resources and expertise that are potentially available in investigations. This reduces the depth of inquiry. Independence should be taken to mean that while the TSBC alone must eventually determine, decide on and be responsible for its final product, it should not conduct all that it does, especially its investigations, in isolation.

Second, because of the TSBC's preoccupation with its concept of independence, the tools of consultation, participation, cooperation and sharing of information with users and industry play a very limited role in its day-to-day activities. As a result, we

have heard that many stakeholders are doubtful of the TSBC's ability to produce relevant safety enhancing products. In isolation, the TSBC cannot optimize its impact on transportation safety.

The TSBC believes strongly that the people of Canada are its only real constituents. While the public benefits from safety enhancements, the TSBC must understand that individual members of the transportation community have needs that the TSBC must address. For instance, small transport operators without internal investigation specialists rely on the TSBC to identify safety lessons.

By requiring that the Board give notice of its recommendations to the ministers of federal departments and other directly interested persons, Parliament has created constituencies that the Board must address. The Supreme Court of Canada has said that an insurance company should check the public accident record of a carrier applying for insurance.[4] Such an accident record would be developed by the TSBC. When both Parliament and Canada's highest court have identified particular users for the TSBC's products, the Agency cannot contend that its only stakeholder is the public.

We believe that a service organization must know who its users are and what their needs are. In a practical sense, the most effective way for the TSBC to advance safety is to provide useful and timely information to those who have the means of translating such information into concrete safety improvements, that is, government, operators, carriers and manufacturers. The only way to know if these constituents see, appreciate or even understand the TSBC's work is if that organization maintains effective contact with the transportation community. Despite all its efforts, this goal has not been achieved.

But urging the TSBC to understand its stakeholders does not mean that it must accept their priorities. Indeed, the Board should analyze whether the choices made by an operator are in the interest of, say, persons living along a pipeline or fare-paying passengers, or whether regulatory safety initiatives work.

Although Parliament made the TSBC independent so it could challenge the regulator, our review in Chapter 2 indicates that the Agency has tended to avoid strong comment on the effectiveness of government safety programs.

This is worrisome, because the use of a mandate to oversee transportation safety from an independent viewpoint is growing in importance. Transportation regulators are facing severely constrained resources, and the industries they monitor are staggering under competitive pressures. This combination can be dangerous and makes the need for a watchdog greater than ever. We believe that the TSBC has been given enough power and freedom to work the way Parliament intended — to oversee safety of the entire system including government operators and regulators. Independence means the freedom to challenge the regulator with confidence.

However, there is a price attached. The TSBC is left to monitor its own effectiveness. It cannot depend on the outside public administration to put its own house in order, and cannot afford to retreat into its shell or attempt to avoid controversy. Instead, it must strive to evaluate continuously its own effectiveness in the eyes of its constituents and against the purposes for which it was created.

RECOMMENDATIONS

36. 

The Board, in developing all of its policies, should take into consideration the particular needs of all those who rely on the Agency's work, including:

- **non-travelling public exposed to risk from transportation occurrences;**
- **fare-paying passengers;**
- **other transportation users; and**
- **carriers, particularly those without specialized safety resources.**

37. 

The Board should make all of its policies, determined under section 8 of the *CTAISB Act*, readily accessible to the public without charge in a clear and easily understandable format. Where appropriate, policies applying to only one mode or type of TSBC procedure, such as field investigations or public inquiries, should be made available under separate cover.

38. 

The TSBC should make more effective use of private industry expertise, in order to:

a) **supplement the TSBC's resources in the event of major or unusual occurrences;**
b) **ensure, when investigating occurrences, that the TSBC obtains complete understanding of the current managing environment and development of new technologies; and**
c) **ensure that recommendations are technically feasible and will effectively address safety deficiencies identified.**

A Multimodal Board

WE HAVE CHARACTERIZED the first three years of the TSBC as the test of a prototype. Nowhere is this sense of new approach more obvious than with multimodality. Unlike independence, however, it was by no means certain that this feature would be included in the design of the new Agency.

After policy makers accepted the need to remove the realm of transport accident investigations from the realm of conflict of interest, in time and in light of industry trends,[5] they saw an opportunity to boost effectiveness and to achieve economies by integrating investigation of several modes in one agency.

In examining modal integration, we asked ourselves what was hoped for, what were the actual results and whether the Transportation Safety Board of Canada has accomplished Parliament's policy goals. Parliament saw modal integration as a way to recognize the modes as deserving equal treatment, to allow efficient sharing of technical resources and to increase the effectiveness of investigation and analysis. It was expected this would work through cross-fertilization of experience.

> We have opted for an integrated approach to safety systems... . The multimodal approach offers several advantages. It will make it possible to pool specialized resources in areas such as engineering, medicine and psychology, while the experiences of each transport mode can be shared as well... . It goes without saying that our various types of transportation will be on an equal footing.
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> *Hon. Benoît Bouchard, Minister of Transport, House of Commons Debates, April 17, 1989.*

However, Parliament gave the new organization a free hand to work out the concept. From discussions with Board members we get the impression that at the time the TSBC was established, the large work backlog from its predecessor organizations left little time to discuss the various principles which should guide and achieve integration.

Although Parliament specified separate Directors of Investigations (DOI) for the rail and pipeline, marine and air modes, there is nothing in the *CTAISB Act* which details how modal investigation must be structured. There was a choice. The main alternative would have been to organize investigation tasks in each mode into more distinct units which, under the umbrella of a single board, simply would have shared administrative services. As we have discussed, the TSBC chose to adapt most of the Canadian Aviation Safety Board (CASB) structure and process for the new organization and to apply them to the investigation and report preparation processes in all modes.

Rail, marine and pipeline investigators coming into the new organization lacked the air investigators' experience in working with their own laboratories and highly developed investigation organization. Despite this, before 1989, marine and rail carriers, unlike the aviation community, still saw their own modal accident investigation as credible. As we shall discuss, the pipeline industry felt, and still considers, that pipeline accident investigation should reside with the National Energy Board (NEB). It is thus understandable that the marine, rail and pipeline investigators would have viewed the new organizational venture with caution. Further, unlike the former CASB staff, pipeline, marine and rail investigators had a more recent history of using accident investigations to find fault.[6]

> CTAISB in a sense has imposed the air mode model on the other units. Their lines of command and methodology are the norm, hence the air mode work has experienced the least change. Satisfaction is highest within the air unit and they count with the highest industry regard as well. The adjustment to the new agency may be taking a toll on staff morale in the rail and marine directorates. There may be insufficient recognition within the Board of the importance of the work done by these groups.
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> *Submission of Ontario Ministry of Transportation, August, 1993.*

Our impression is that, although the senior Board staff were familiar with managing air investigation, they had much less direct experience in managing marine, rail and pipeline investigations. The people inherited from these modes essentially were transplanted into a new administrative structure that was the same as that of the CASB.

Standardization is a good idea if it produces a better product. It is a mistake if it adds burdens and reduces clarity. Modal integration should be managed to increase public confidence that a broad range of skills and experience will be brought to bear to enhance safety.

We were concerned to hear from many in the rail and marine communities that they felt that the government's accident investigation effort in their modes was less prominent than before 1989 and less important than that in the air mode today. But each mode has particular needs. For example, mariners and railroaders use precise workplace vocabulary and are not comfortable with the TSBC's efforts to standardize report wording across the modes.[7]

Apart from pipeline operators and regulators, our consultations show that most transport industries and users generally support the multimodal concept and do recognize its potential benefits. The TSBC recently has taken steps to promote integration of staff. These steps include common training seminars, which we are told have had a positive effect. More must be done concerning the TSBC's internal management and its relations with outsiders.

As industry experience shows, integration has the potential to improve investigations, by allowing common use of technology and ideas. In fact, technological development demands such an approach. (For example, the aluminum structure of a fast passenger ferry would be more familiar to an aeronautical engineer than to a traditional naval architect.) However, our review has not revealed many applications of cross-fertilization within the TSBC.

Budgetary allocations between modes at the TSBC have been in about the same proportion since 1989. However, accident statistics show that the allocations reflect the history of predecessor organizations and not the relative risks involved in each mode.[8]

The most fundamental advantage of placing investigation of all transport accidents under one agency is that integration allows the most efficient use of limited resources to deal with those safety deficiencies having the highest risk potential. It does not matter to a victim whether an injury is caused by a rail crossing accident, pipeline fire or collision at sea. It is the cost, severity and frequency of risk exposure which matters to the transportation community, travellers and bystanders. Allocation of investigatory and analytical resources should be based on transport-wide risk analysis. Risk management means considering the potential for accidents to occur, as well as their individual cost and severity. For example, it is much more risky to drive than to fly.[9] While mode-specific investigatory bodies cannot be expected to upsize or downsize quickly in step with their stakeholders' risk exposure, an integrated agency should be able to adjust its focus to ensure the least expensive way of achieving the best levels of safety.

Our discussion of the Occurrence Classification and Response System (OCRS) shows that the TSBC does not yet possess an effective management tool for taking advantage of this flexibility. For example, it has chosen not to require reporting of any pleasure craft occurrences, yet continues to investigate a large number of private and recreational aircraft accidents. We believe the TSBC should move toward treating the modes more equally.[10]

A confident ability to apply resources where they are most needed is an essential part of a mature TSBC. Sometimes that allocation might not be obvious, and difficult choices will be required. Consider the person who builds a boat of unique design at home for personal use. That individual has direct control over the voluntary assumption of risk. On the other hand, a person who pays to use a boat at a fishing lodge has reasonable expectations that the lodge owner will run a safe boating operation. If there is an accident involving a manufactured boat at the fishing lodge, both the manufacturer and lodge owner may require an investigation to prevent the same thing from happening again.

However, even if death befalls the owner of the homebuilt boat, the public should not be expected to see tax dollars spent investigating the mishap. On the other hand, if a tanker pollutes the Canadian coast or a train carrying dangerous cargo

derails in the vicinity of a town, the public would have more interest in knowing why this happened even though no lives may have been lost.

In assessing whether modal integration will enhance the effectiveness of accident investigation, we conclude that this concept, as intended by Parliament, has potential. Our research shows, however, that the TSBC has not yet achieved the efficiencies in modal integration for which Parliament hoped. In certain respects, this has been due to oversights in the legislation. We turn next to this issue.

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RECOMMENDATIONS

39.

Board members should develop and apply a consistent policy across all modes in choosing to investigate commercial versus private recreational transportation occurrences.

40.

While acknowledging the principles of modal integration, the TSBC must remain sensitive to the different perceptions, cultures and operating environments of the different modes. To this end:

a) **harmonization of investigatory processes and methods should not be based on the historical practices of one mode at the expense of preserving and developing methods necessary to do the best investigation in other modes;**
b) **such harmonization should be implemented only where there will be a demonstrable benefit to the quality of investigations as distinct from the mere efficiency of the investigation process;**
c) **the content and format of reports and other communications should take into account the differing needs of the public and those sectors of the transportation community which will rely on the reports; and**
d) **the usefulness of TSBC publications should be measured by periodic public surveys and readability analysis.**

Jurisdiction

TO MEET PUBLIC EXPECTATIONS and to work in a federal state, the TSBC must have and exercise sufficient geographical and functional authority. It must also respect provincial jurisdiction and not interfere with the task of other federal agencies to investigate accidents for regulatory and disciplinary purposes. We recognized the conflict and approached this subject by analyzing whether the jurisdictional difficulties we identified are the result of the constitutional division of powers, the *CTAISB Act* or choices made by the TSBC. The cause will determine the remedy.

Far more Canadians die on the road or in boating accidents than in other transportation-related incidents. Considering the intent of multimodality, we find it surprising that the TSBC lacks the power to investigate highway accidents and has chosen not to investigate boating accidents.

Generally, the *Act* offers the Agency scope for doing investigations and studies in all federally regulated modes[11] except extraprovincial trucking and busing. The subjects that attracted the most submissions in this area involved pipelines, federal road transport and pleasure boating.

Pipelines

This is an area where we believe Parliament made a serious error. In not thinking through the implications, Parliament mandated two agencies to investigate essentially the same thing. Only Parliament can correct this situation. We believe that the TSBC's jurisdiction over pipelines should be maintained.

We heard pipeline industry officials and the NEB call for the return of responsibility for pipeline accident investigation to the NEB. They emphasized the rarity of pipeline accidents in Canada and the cost to the taxpayer of maintaining duplicate investigation staff at the NEB and the TSBC. They argued that the NEB, with its open hearing process and its lack of involvement in the day-to-day operation of pipelines, overcomes any possible conflict of interest.

However, the lack of an operational role for the NEB does not eliminate the potential for a regulatory conflict of interest. The NEB, with its full control over petroleum pipelines from site approval to tariff and export approval, has a responsibility similar to that of the former Railway Committee of the Canadian Transport Commission (CTC). Mr. Justice Grange found that committee an inappropriate overseer for railway accident investigation because its detailed regulatory knowledge of railway tariff costing made it too accommodating to industry cost-benefit choices. We have compared the regulatory powers of the NEB with those of the former Transport

Canada Air Administration that Mr. Justice Dubin similarly found to be an inappropriate place to house aircraft accident investigation. The Justice commented:

> There is admittedly the appearance of conflict of interest where the investigative agency is part of the regulatory authority. Furthermore, the Air Administration is far more than a regulator but, for practical purposes, has also the responsibility of enforcing the regulations, is licensor, a supplier of a multitude of necessary services and facilities, and a litigant when Her Majesty the Queen is sued in right of the Department of Transport. ...
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> There is thus a potential for conflict of interest for the accident investigator with respect to all these activities, and the very appearance of such a conflict casts a shadow on the credibility of the Aviation Safety Bureau and diminishes the public acceptance of its worth.[12]

Although the NEB may not operate pipelines, there are enough similarities in function to make this observation relevant.

However impartially and carefully the NEB might practise its fact-finding function when a major pipeline accident happens, it is too similar in its multiple roles to the former Railway Committee and the Air Administration to be seen by the public as totally impartial in overseeing pipeline safety.[13] The NEB staff has suggested steps that it could take, such as communication barriers and direct accident reporting, to separate its accident investigation role from its regulatory role. We do not believe that these procedures would work.

> The reason for the amendment is not a vote of non-confidence in the NEB ... . It is a recognition that the principle in terms of transportation, that regulators and those in charge of safety ought not to be in the same office because of the potential for conflict, should be consistent.
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> *Brian Tobin, M.P.*
> *House of Commons Standing Committee on Transport. Minutes of Proceedings June 6, 1989.*

While the pipeline industry deserves credit for its safety record, Canada has the advantage of having relatively new pipelines. Recent pipeline catastrophes in the former Soviet Union, the United States and Venezuela[14] show that accidents involving oil and gas pipelines may pose significant risk to the public.

As well as investigating federal pipeline accidents, the TSBC could play a useful role in reaching agreements with provinces whereby it would investigate accidents to oil and gas pipelines in provincial jurisdiction. This would avoid duplication.

Parliament's main reason for setting up the TSBC was to bolster public confidence, and not just industry confidence, in the safety of the transportation system. In giving the TSBC the responsibility for pipeline investigation, Parliament made a deliberate policy choice. It rejected an investigation model such as the one proposed to us by the NEB and the Canadian Gas Association. To remove one mode now from the TSBC's responsibilities would result in the Agency spending too much time defending its jurisdiction rather than getting on with its job of improving safety. We conclude that the present TSBC jurisdiction over pipelines should be retained.

We do agree that the NEB should continue to have power to investigate accidents involving new pipeline construction. That is clearly not a transportation issue.

Federal Road Transport

When the House of Commons Standing Committee on Transport was reviewing the Bill which created the TSBC, its members considered extending the TSBC's responsibilities to include interprovincial and international trucking and busing.[15] While the federal government has constitutional responsibility for these sectors, it has delegated trucking and busing regulation to provincial boards.[16] Local police forces are responsible for the investigation of most highway accidents whereas coroners' inquests may be held for serious accidents involving death. The Road Safety Directorate of Transport Canada has contracted with universities to do site investigations of a small sample of road accidents to help develop new vehicle safety standards.[17]

The greatest number of fatalities of any mode and the greatest risk to the public are found in private and commercial vehicle transportation.[18] In fact, motor vehicle accidents are among the major causes of death in Canada. Trucks are a significant cause of fatalities, representing only four percent of highway accidents, but 42 percent of highway deaths.[19] We were disappointed to learn that despite the significant risk that highway transport poses to the public, statistical information on the causes and circumstances of highway deaths is fragmented and unco-ordinated.[20] The human and economic cost of not having accurate facts to learn useful safety lessons is simply unacceptable. There is a real need for more information on highway safety in general and on issues such as the risk impact of heavier and larger vehicles in particular.

The federal government has done extensive work on aspects of highway safety through Transport Canada and the National Research Council of Canada. It is now time to make that role much more visible and to add the resources of the TSBC. Much can be done by refocusing the present federal effort in developing vehicle safety standards. Safety lessons learned from the operation of vehicles within federal jurisdiction apply equally to the same types of vehicles operating under provincial regulation.[21]

We do not envision the TSBC plunging into this area. The process should be slow and steady, characterized by open and frank discussion. It would be appropriate for the TSBC to set reasonable targets and adopt flexible strategies for ultimate jurisdiction in this area. As a start, the TSBC has a strong contribution to make in compiling national data.

There is no call by the transport community for another level of administration in highway safety. But we found general agreement on the benefit of having highway safety data compiled at the national level, and that task is best performed by the TSBC. Similarly, the limited highway accident investigations undertaken by the federal government would fit appropriately with the Board, its laboratory and its access to multimodal expertise.

Such a model of statistical gathering and analyses, together with investigations of a sample of accidents, works well in the United States where the mandate of the National Transportation Safety Board (NTSB) includes highway safety. A well-developed OCRS would permit the selection of a useful sample. A user friendly TSBC highway accident data base could be used by provincial governments to regulate and by Transport Canada to develop new vehicle standards.

Pleasure Boating

For similar reasons to those we advanced with respect to highways, the TSBC should give serious consideration to the eventual inclusion of pleasure boating incidents in its mandate. Although the *CTAISB Act* gives the TSBC jurisdiction over all marine accidents, TSBC Regulations exclude the requirement to report pleasure craft accidents. We were told that the TSBC felt its resources were not sufficient to allow the investigation of thousands of such accidents.

> Given this mandate, we feel that the first priority for the Board should be to undertake a complete review of long-term boating safety, with an eye to establishing major areas for detailed study and the development of possible courses of action. Without an understanding of where boating safety has been and where it appears to be going, we run the risk of adopting solutions to which there is no problem, or of expending limited resources on relatively minor safety issues.
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> *Submission of the Council of Boating Organizations of Canada, August 1993.*

Pleasure boating is an activity in which millions of Canadians participate annually, and we believe that the TSBC should begin to consider the benefits of monitoring the area. Without a reporting requirement, the TSBC cannot run a complete OCRS. Without a complete OCRS, it cannot measure and plan what it does for maximum benefit.

The pleasure boating community's diversity — the many types of boats and the considerable number of operators — complicates efforts to enhance safety. Several non-governmental organizations

have attempted to collect and to analyze boating accident statistics. However, research shows that statistical information on the Canadian small craft safety environment is even more unco-ordinated than for highway transport.[22]

The NTSB in the United States demonstrates how a national agency, with a small budget, can make a positive contribution to boating safety. For example, the NTSB's 1993 pleasure boating study used data provided by the U.S. Coast Guard and by 18 state governments to make findings and recommendations on the level of personal flotation device use and PFDs' impact on survival rates; the levels of operator skill; the relationship between alcohol consumption and boating accidents; and the creation of an improved reporting system to lead to a national boating accident data base.

The TSBC could play an equally useful role by collecting occurrence reports for incidents above a realistic threshold; by developing a uniform data base; and by targeting a limited number of accidents for investigation which have a real potential for learning safety lessons, such as commercial use of small craft for recreational purposes. As in the federal road transportation area, there should be open consultation and planned, gradual movement into this field.

Geographic Jurisdiction

In recognizing the multinational nature of transportation, the *CTAISB Act* urges the TSBC to harmonize its investigations with international standards.[23] The TSBC staff have an international reputation for technical expertise. They promote international safety through such initiatives as helping to found the Marine Accident Investigators International Forum.[24] We applaud these steps because the Canadian public has an interest in making international transport as safe as practicable. International safety issues affect international travellers as well as those living along our shores who are vulnerable to ship operators not meeting international standards.

Always with an eye to the efficient use of resources, we support efforts to make accident investigation in Canada as good as or better than international standards. However, the fact that some Canadian procedures do not follow international standards has in some cases reduced the usefulness of the Agency's safety products.

It would be unfortunate if this international reputation were called into question by less than satisfactory national practices. National standards legitimately may diverge from international ones where Parliament makes a deliberate policy choice.[25] However, the Board should remember section 16 of the *Act* when designing the reporting system and other tools of its own making.[26] We discuss confidentiality later in this Report.

The International Civil Aviation Organization's (ICAO) 1951 Annex 13 allows the naming of an accredited observer from the country of an aircraft's registry to participate in the investigation of an accident in another country. Since

then, considerable international experience has been shared in this mode. The TSBC has continued giving technical assistance to other countries under ICAO guidelines and a network of informal contacts.

The increasingly multinational nature of the transport industry in all modes and the risk potential demonstrated by various marine pollution disasters have alerted the world to the need for further co-operation. For example, the recent Convention on Oil Pollution Preparedness, Response and Co-operation[27] urges countries to share technical resources and to help avoid common dangers.

Co-operation in international aviation accident investigation is a given. We believe its extension to other modes should be encouraged. A *CTAISB Act* amendment would send a strong signal of Canada's intention and help advance public safety. We should add that the TSBC has sufficient power under the present law to co-operate on an informal basis.[28]

We are concerned about the Act's narrow definition of the geographical reach of marine accidents. For example, the TSBC can investigate accidents on mobile offshore platforms and their standby or supply tugs anywhere within the 200-mile economic zone. However, the Board does not have full statutory power to investigate accidents on board foreign flag ships not involved in the offshore oil industry unless they occur within the much more restricted 12-mile territorial sea.

Consider the public outcry if an accident on a foreign flag ship passing near the Canadian coast resulted in pollution damage to Canada, and the TSBC found itself powerless to investigate unless a witness to the accident happened to arrive in Canada. Not all pollution discharges or other safety deficiencies threatening Canadians necessarily occur within the territorial sea, or force a ship to enter a Canadian port. Although international law may not be open to broad rights of inspection outside the territorial sea, the TSBC should at least have the power to investigate and to draw findings from any evidence available. If the owner of a polluting foreign ship or the government of its registry refused to co-operate with the TSBC, at least Canadian public opinion would focus on people other than the Board and the Parliament of the day.

Canada has set up ship-entry reporting and vessel traffic system (VTS)[29] off its east and west coasts and in the Great Lakes. Many of these are organized with the United States. Such systems could expand in scope until VTS operate like air traffic services. Canada also participates in the monitoring of hundreds of daily flights across the northwest Atlantic. We have heard doubts whether the *CTAISB Act* would allow the TSBC to investigate accidents happening while aircraft were flying in the Gander Oceanic Control Area (Gander Oceanic CTA). Given the important relationship between any sort of ground-based guidance or control system and passenger safety, the TSBC should not be limited by any uncertainty as to whether it can look into such systems.

RECOMMENDATIONS

41. 

The President of the Privy Council should introduce amendments to the *National Energy Board Act* and the *CTAISB Act* to clarify that the NEB only has jurisdiction to investigate occurrences arising from the construction or rebuilding of pipelines before they go into service and that the TSBC has exclusive jurisdiction to investigate operational occurrences for the *CTAISB Act* purposes only.

42. 

a) The President of the Privy Council should introduce amendments to the *CTAISB Act* defining "extraprovincial motor vehicle occurrence" and giving the TSBC authority to investigate such occurrences.

b) Concurrently with the passage of the *CTAISB Act* amendment, the TSBC should:

   i) amend the Regulations to provide for the reporting of extraprovincial motor vehicle occurrences; and

   ii) begin discussions with other governmental authorities on the co-ordination, compiling and analyzing of highway occurrence safety data at the national level.

43. 

The TSBC should amend its Regulations to extend the reporting of all pleasure craft occurrences involving death or injury requiring substantial medical treatment or involving substantial property loss or damage. These would be dealt with by the OCRS in the usual way. The new reporting requirements should be publicized through boating organizations.

44. 

The TSBC should continue its efforts to actively monitor and participate in the development of international conventions and practices for transportation occurrence investigations and extend its efforts to all modes.

45. 

When an international agreement or convention respecting a transportation occurrence investigation in any mode is anticipated to come into force for Canada, the TSBC should conduct a policy review and implement, pursuant to section 16 of the *CTAISB Act*, any required or desirable changes to the investigation procedures

and practices set out in the Regulations before or at the time the international agreement or convention comes into force for Canada. Such changes to investigatory policy should be developed by Board members.

46.

The President of the Privy Council should introduce amendments to the *CTAISB Act* to empower the TSBC to administer binational or multinational agreements for the granting of assistance to appropriate foreign authorities for the investigation of transportation occurrences within the TSBC's jurisdiction.

47.

The President of the Privy Council should introduce amendments to the *CTAISB Act* to extend the application of the *CTAISB Act* to:

a) all marine occurrences in the 200-mile Canadian economic zone; and
b) marine or aviation occurrences in any place over which Canada has assumed responsibility for air traffic control or vessel traffic systems.

Findings, Factors and Fault

IF SAFETY LESSONS ARE TO BE LEARNED in transportation, someone has to find out what caused an unsafe situation and what factors increased the chances of the situation happening. The work of safety analysts has proven that accidents rarely have a single cause. Instead, a series of failures to do things, combined with active mistakes, result in a dangerous situation. Sometimes the people involved can correct the situation before anyone is hurt or property is damaged. In other cases, the failures happen too quickly or the response makes the situation worse. Death or destruction results. This last situation is the one we most commonly define as a transportation accident.

To learn safety lessons, we need to understand everything that leads to a dangerous situation. Parliament recognized this when it assigned this function to the TSBC.

Public servants rely on facts from many sources to make a whole spectrum of decisions, sources that range from the daily office gossip to courts' formal decisions about peoples' criminal liability. The impact of these decisions on outsiders varies as well. Government fact-finding agencies have different jobs to do. A regulatory agency collects facts to see if a person is qualified to receive an operating licence and remains skilful enough to keep it. Like a court, a regulator's findings have an impact on people's reputations and abilities to make a living. Therefore, the law demands that a regulator not rely simply on suspicion and rumour to make its decision, but does not always require a regulator to follow the same strict rules of evidence as a court. There is another type of fact-finding body whose only job is to investigate and recommend. This distinct role is well understood by courts.[30] Unlike a court or a regulator, an investigative agency, such as the TSBC, does not itself make any regulatory decision which could affect a person's ability to make a living. Regulators, such as Transport Canada, are free to accept or disregard the TSBC's findings and recommendations. When it comes to affecting peoples' rights, the TSBC is much less than a court and less than a regulator.

The essential task of the TSBC, as expressed in section 7 of the *CTAISB Act*, is "...to advance transportation safety...by conducting independent investigations and, if necessary, public inquiries into transportation occurrences in order to make *findings* [emphasis added] as to their *causes* [emphasis added] and *contributing factors* [emphasis added]." Section 7 also emphasizes that it is not the function of the Board to assign fault or determine civil or criminal liability, but that the Board shall not hesitate from fully reporting on causes and contributing factors merely because fault or liability might be inferred by others from the Board's findings.

As our legal experts have said:

> It is clear from the history and the language of the Act that the function of the Board is not to displace the courts, or to interfere in any way with their adjudicative process. For the Board to focus on fault would confuse its role with that of the courts, and would encourage greater legal formality and structure than presently exists.[31]

Our review of the report production process has convinced us that the Board has been extremely reluctant to publish any finding from which blame may be inferred. This caution is misplaced. It is very clear to us that the Act gives the Board all the power it needs to expose relevant findings and recommendations without having to concern itself with what outsiders may speculate about who was at fault. Efforts to avoid any suspicion of assigning blame run the risk of reports being excessively cautious or appearing not to look behind proximate cause.

To identify contributing factors fully, as the Act directs, the TSBC must probe and examine areas such as human factors, company management practices, operating procedures and the regulatory environment. To understand these areas, investigators and the Board necessarily have to consider the attitudes and decisions of people in the transportation community. In preparing reports, the Board does not need to concern itself with protecting individuals. In some cases, to fulfil its responsibilities as an independent body, the Board may have to associate findings of causes with particular individuals. The sections of the CTAISB Act dealing with confidentiality and our recommendations on that topic are the appropriate ways to respect the rights of individuals.

By adopting the principle of making findings as to causes and contributing factors rather than the principle of determining *a* single cause or *a* probable cause, Parliament chose a broad approach. While we support the plural "causes" approach stated in the Act, rather than the single "cause" approach, we have some concern whether reports being published by the Board include all safety deficiencies.

In our view, the intent of the legislation will only be translated into practice by investigations and reports that are not restricted to determining the direct cause of an accident alone when significant safety benefits can be obtained from examining systemic factors not necessarily associated with "proximate" or "most probable" cause, but which did contribute to the creation of an unsafe situation overall. Use of words, such as these, not only detract from the purpose of the Act, but risk trapping the Board into making findings that could be interpreted as assigning blame. Board findings which look at multiple causes and factors are less likely to result in court challenges. If TSBC reports are written to emphasize a single cause, persons with an interest in the findings of the investigation will be more likely to attempt Federal Court challenges arguing that they are entitled to full procedural rights of natural justice as if they were the subject of adversarial legal proceedings.[32]

There is an international consensus that the only way to improve safety is to consider multiple causes.[33] We noted that in Australia the reports of the Bureau of Air Safety Investigation (BASI) specify only findings and do not attempt to differentiate between causes and contributing factors.

In other words, care should be taken to ensure that determination of cause is not limiting, but has the widest possible reach to support the goal of safety enhancement. Also, to minimize the possibility of outsiders attempting to infer fault from findings, care should be taken not to structure causes in order of perceived importance.

We strongly believe the Board must keep in mind the fundamental purpose of the Agency. Mr. Justice Willard Estey's comments on the CASB apply equally to the TSBC.

> It must at this stage be borne in mind once again that the purpose of investigations by the Board is to make recommendations with respect to aviation safety, rather than to arrive conclusively at a cause for an event such as this.... It is clear nonetheless that the finding of a cause is not a condition precedent to the making of safety recommendations.[34]

This different role of the TSBC means also a different use of the information it collects. In courts, legal rules of evidence have been developed for the protection of persons who may face imprisonment if convicted for crimes, or seizure of property to enforce civil judgments. For safety enhancement, where nobody's rights are directly at stake, a more appropriate standard of fact finding is: Would this information be taken into account by a reasonable transport operator or manager in improving the safety of trains, ships, pipelines or aircraft?

If strict rules of evidence are applied, the public may lose confidence in investigations and reports. Where investigations indicate there could be two or three causes, TSBC's silence on those possibilities can only give rise to public speculation.[35]

> The [evaluation] should lead to the formulation of a number of hypotheses which may then be discussed and tested against the background of evidence gathered during the investigation. The hypotheses which are not supported by the evidence should be eliminated, in which case it is important for the investigator in charge to state why a particular hypothesis has been rejected. The investigator in charge should then justify his reasons for sustaining the validity of the remaining hypothesis or hypotheses.
>
> *ICAO Manual of Aircraft Accident Investigation 4th Edition, Doc 6920-AN/855/4 Section 4.3.*

In this vein, we note that the ICAO investigation manual mandates that aircraft accident reports discuss alternative hypotheses for the cause of the accident to bolster public confidence that no relevant factors have been suppressed. If the Board does not discuss alternative hypotheses for which there is some basis in fact, it runs the risk that its constituents may think that such facts are being suppressed or that the Board has seized on one viewpoint.

We agree with Mr. Justice Moshansky's recommendation that the Board ought to establish a policy that it be prepared to draw reasonable inferences from the evidence before it in making findings.[36]

We also adopt this observation of one of our legal experts:

> Rather than finding the statutory language confusing and contradictory, it is our opinion that the wording of section 7 is appropriate to convey the idea that the Board's role is investigative, not adjudicative. It is a distinction that is fully capable of being understood through appropriate education of Board members, investigators, observers, other participants, the media and the general public, to the extent any confusion may presently exist...[37]

RECOMMENDATIONS

48. 

Because the purpose of a TSBC investigation or inquiry is only to determine causes and contributing factors and to make recommendations to enhance safety, the Board should not hesitate to make findings on the bases of relevance to safety and technical reliability. The Board should not be hindered by strict criminal or civil legal standards of proof.

49. 

In making findings as to causes and contributing factors, the Board should ensure that it does not restrict itself to proximate or probable cause. To this end, the Board should revoke its TSB Decision 6.

Outsiders' Contribution

From Observation to Participation

A REMARKABLE FEATURE of transportation accident investigation is the voluntary contribution to the process by those being investigated. This is very different from a typical criminal or regulatory investigation and underscores the fundamentally distinct objective of accident investigation. Historically, admiralty judges sitting as wreck commissioners relied on the expertise of experienced mariners as assessors in giving technical opinions on the causes of a shipping casualty. Aviation accident investigators developed a different procedure. Due to the technical complexity of aircraft and the urgent self-interest of those involved to find out what happened, government investigators have, from the very beginning, invited and received co-operation from aircraft operators and manufacturers. This process, adopted in the *CASB Act*, was carried over into the TSBC.

The *CTAISB Act* recognizes the contribution that outsiders can make to an investigation by permitting the Board to designate persons, such as airframe manufacturers and carriers, as observers. To be recognized as an observer, a person must be either an accredited representative of a foreign government, a representative of a federal department or a person having a direct interest in the investigation who can contribute to finding causes and safety lessons.[38] Although the *Act* gives the Board the power to recognize an observer, in practice it is the Investigator-in-Charge (IIC) who decides.

> Of these approximately 4,600 aircraft, there are 43 discrete models within that series. It is not possible that the investigating authority could or should know the subtle differences in these models. In most cases, only the manufacturer does.
>
> *Consultations, Bell Helicopter Textron, Montreal, July 8, 1993.*

Given the evolving complexity of technology, it would be difficult for the TSBC to be fully prepared for every contingency. It is unrealistic to expect that the TSBC could be staffed with all the necessary specialists in every possible area of all modes. How, then, can the TSBC ensure, in these times of fiscal restraint, its access to all necessary expertise and resources? The answer lies in the transportation community, through its increased participation in investigations.

In this context, we asked ourselves whether TSBC procedures offer the best level of stakeholder participation. We believe that they do not. We heard in consultations that the TSBC has been unnecessarily restrictive in granting outsiders observer status and very cautious in involving observers in field investigation work even when they are recognized.

We heard strong support for full party participation as called for under the recommended practices of ICAO Annex 13 and as practised by the U.S. National Transportation Safety Board.[39] We agree that these practices allow the greatest possible expertise into the investigation, generate better reports and provide carriers and manufacturers with *all* the pertinent information necessary to correct safety deficiencies quickly. This sort of participation also reduces the need for a time-consuming Board review of draft reports.

Advocacy of a full participatory model of investigation is not new within Canada or internationally. The Commission of Inquiry into the Air Ontario Crash at Dryden agreed with a model giving Interested Parties status as participants on investigation teams.[40] Mr. Justice Moshansky considered that the most effective investigations combine the management skills of investigators and the technical expertise of those in industry. This has also been expressed by Mr. Justice Dubin and Mr. Bernard Deschênes.[41]

As well, international trends indicate that full participant status may bring great advantages to air accident investigation. In fact, the United States, Australia and Germany all use this procedure. Further, a recent ICAO Accident Investigation Group meeting endorsed automatic participation of operators' state representatives in multinational investigations.[42] We believe these principles apply equally to accident investigations in other modes.[43]

Section 23 of the *CTAISB Act* currently allows the Board flexibility in setting guidelines for the extent of observer participation. Unfortunately, the word "observer" implies a passive bystander rather than a person actively contributing skills and experience to an investigation. It is the latter concept which gives the best results for identifying all causes and corrective measures.

We see no legal obstacle to the TSBC treating observers more like participants. Designating persons as observers does not give them the legal investigatory powers of a TSBC employee. The Agency already requires observers to sign an agreement with conditions that they will follow the direction of the IIC. It is our view that the anticipated contribution of the observer should determine the conditions for participating and the extent of participation. As a general rule, to avoid any concern that observers could take improper advantage of information learned during an investigation, or to use that information for secondary purposes, an additional agreement could be requested under the existing Act and Regulations. A suggested form of undertaking is found in Appendix 6.

But a word of caution is appropriate. Participation, in general, is highly desirable, but can have its negative aspects. Observers of the American scene have referred critically to what they describe as a climate of "investigation by negotiation." An appropriate balance is needed and will come through experience.

We carefully considered how increased participant status might affect the confidentiality of investigation evidence. The Agency is concerned that full party

participation and access to information would hinder the ability of investigators to offer confidentiality to witnesses. The TSBC fears this could, in turn, undermine complete disclosure. Confidentiality is seen as a more important investigatory tool than having the benefit of full participation. This is wrong because, in the present context, promising confidentiality of evidence is largely illusory. It is also not the most effective means for getting at the truth.

The recommendation for greater participant status is linked to our recommendation that the confidentiality rules in the *Act* be modified. We emphasize that participant status does not mean an automatic right to attend witness interviews. It does mean that participants would have access to all investigation evidence, including witness statements and on-board recordings. Witnesses should have the comfort that the information they give will not be used for litigation or disciplinary purposes.

In view of this, we consider section 10 of the Transportation Safety Board Regulations to be unnecessarily restrictive. The degree of participation should be a matter of publicly available policy rather than regulation.

We do not consider it necessary to impose any one model on the TSBC. Instead, the Agency should be able to pick and choose from a range of available customized approaches which can avoid the excesses of the U.S. system.

Fairness to Interested Parties

In the history of aviation accident investigation, there has always been co-operation. It began with the investigation itself and carried through to the development of reports. At first informally, and then as recognized in the *CASB Act*, persons with a direct interest in findings were given an opportunity to comment before reports were finalized. Given the recognition of this process, it is remarkable that Parliament saw fit to include in the *CTAISB Act* detailed procedures for such involvement. Normally, we would expect an act to require an outcome but not specify the means.

Historically, the law gave people involved in court-like hearings full procedural rights but offered little protection for those affected by other types of government decision making. It was "all or nothing at all." In the 1980s, Canadian lawmakers began to appreciate that people affected by government decisions deserved some procedural protection short of the full rights of a litigant.[44] Now, persons who may be affected by the findings of a government agency, such as the TSBC, have a right to know what the proposed findings are and a right to respond. However, courts allow government agencies considerable flexibility in designing systems to recognize these rights.

The *CTAISB Act* recognizes this legal concept of "fairness" by requiring the Board to send draft reports to persons "with a direct interest in the findings of the Board,"[45] in other words, Interested Parties. The Board is required to consider any response of an IP to the draft, and notify the IP of the Board's reaction to the IP's comments.

In practice, the Board has set up the two-member Initial Review Committee to issue draft reports to IPs. However, it is the TSBC staff who communicate with IPs and prepare a response on behalf of the Board. Under Board procedures, the staff response must be prepared and sent to IPs before the Board considers a final draft report. Although the *Act* expressly allows the Board to hold hearings for IPs to present their comments, the Board has restricted its dealings with IPs to writing.

Few parts of the *Act* received as much scrutiny and comment from those who approached us. Board staff told us that the IP process was cumbersome. Former IPs were frustrated that they did not have a real opportunity to explain their concerns to the Board itself. Some said they had heard nothing for months or even years and then were suddenly asked to comment on a report within 30 days. From the perspective of both internal experts and outside IPs, it would be much easier to explain their viewpoints on technical matters and accidents in an interactive hearing rather than an exchange of paper. The latter process is potentially alienating and more likely to invite hostile responses. As one industry source challenged: "*You* write a short description of how a turbine works!"

> I resent having 30 days to comment on a report which is two or three years old.
>
> *Survey subject quoted in Marinex Consulting Ltd. study.*

We compared the procedures adopted by the TSBC to those of the U.S. NTSB. Unlike the TSBC, its American counterpart involves observers extensively in field work and analysis. It holds public "sunshine" hearings where findings are aired and actively debated with staff.

The comparison underscored our concern that the potential advantages of the observer and IP systems of allowing a blame-free and co-operative search for all causes and corrective measures is lost in the Canadian approach. We agree with those who told us that the TSBC's system presents an adversarial face to observers and IPs who have strong doubts that their experience and perspective are taken into account effectively.

In addition, this cumbersome IP process results in the least benefit for the greatest time cost. The double review by the IRC and the staff consumes a great deal of time. In our view, a full participatory process increases the possibility that all parties will concur on important facts early in the investigation.

We do not see section 24 of the *CTAISB Act* as requiring the Board to review draft reports before they are sent to IPs. On the legal level, section 27 clearly allows the Board to delegate this function to staff. This is because the draft reports, as sent to IPs, do not contain draft recommendations. On the practical level, IPs are knowledgeable enough to appreciate that the draft reports are not, in a real sense, a Board product and that it is no reflection on the Board to have an IP comment on a draft. We are convinced that IPs would prefer to receive a draft report earlier

> The process to investigate transportation accidents [is intended] to be more open. Thus parties with a direct interest in the causes and effects of an accident will be invited to participate in the investigation. They will be able to delegate representatives and the Board will submit draft reports to them.
>
> *Hon. Benoît Bouchard, Minister of Transport, House of Commons Debates, April 17, 1989.*

than have to await IRC reviews. A draft report sent for IP comment is no less "the Board report" for being issued by staff under delegated authority. We conclude that the IRC process is neither required officially nor of significant value to the Board's product.

Our consultations and research revealed strong support for greater IP participation in developing reports. This has reinforced our belief that open and mutual exchanges of information and opinion among involved parties is the best way to achieve a consistently high level of findings and analysis. Most parties, such as operators and manufacturers, who have a direct interest in an accident investigation also have resources, expertise and insights that are invaluable. Several organizations working together will produce a better product than one organization acting alone.

We have already determined that the time and resources spent on the draft review process are far too high for the results achieved. The TSBC lacks a procedure which permits parties at the formal fact-finding level to exchange viewpoints on evidence and analysis with one another as well as the Board. The Board alone sits as a fact-finding agency without having to hold any hearings on the information referred to it.

IPs are only able to comment on draft reports in isolation without knowing what other IPs have said. If one party identifies fundamental factual or analytical errors in the draft, only the Board is alerted, leaving other IPs to continue to work from an inaccurate draft. We are satisfied that neither the Act nor fairness principles require such a complex and compartmentalized review process. If the IP process is to work in getting at the whole truth, it must be joint, open and consultative.

We do see a need for a review to satisfy procedural fairness requirements, but it does not have to be formal or time consuming. With broad participation in investigation, most differences should be settled before the report is drafted. In this context, the final draft report review conducted by the Board should take minimal time. Such a review could at times be conducted by teleconferencing or at summary Board hearings in the regions. As with written IP representations, the Board should keep a record of IP comments originating from public hearings. Given the flexibility that courts have given to government agencies to offer "fairness," we believe that the *CTAISB Act* does not require the present formal written response procedure.[46]

The Board can do a great deal to streamline the whole IP process without changes to the Act. The Board should not see the IP process as a burden, but rather

as an opportunity to draw from the transportation community's pool of expertise. Doing this will increase the Board's credibility and profile with that community.

Participants in the Board's fact-finding process should include, as well as observers, those with a direct interest in the report, but who do not have the technical expertise to qualify as observers.

Mr. Justice Moshansky recommended that the *CTAISB Act* give participants the right to make submissions to the Board and give Interested Parties the right to petition the Board for a reconsideration of its conclusions in certain cases.[47] We expect that our recommended models for an increased participants' role and field investigators' attendance during Board review of final reports should reduce the frequency of such petitions. However, these rights to petition are an important way to ensure that the TSBC will be seen as a credible agency.

■ ■ ■

RECOMMENDATIONS

50. 

The Board should develop a policy establishing criteria for increased participation by observers in investigations.

51. 

The TSBC should amend its regulations to provide for the flexible application of policy criteria to the extent of participation in investigations by observers.

52. 

The Board members should develop guidelines directed to IICs for a range of types of participation by observers in investigations. These could include:

a) **possible roles for the accredited representatives of foreign governments;**
b) **depending on the expertise of the observer, assisting the IIC in one or more aspects of the investigation such as evaluating human factors, analyzing operating procedures or reviewing the operator's management practices; and**
c) **conducting tests or simulations under TSBC supervision.**

53. 

The Board should promptly disband the Initial Review Committee and issue an instrument of delegation to TSBC staff to issue draft reports to the Interested Parties.

54. 

The Board members should develop by-laws setting out criteria and procedures for holding hearings with IPs when appropriate.

Confidentiality

IT IS OUR VIEW that if information is "confidential" the recipient has a duty to ensure it is not disseminated generally, and that if information is "privileged" the person who provided it has a right that the information will not be used to his or her disadvantage.

The Existing Rules

We have noted how accident investigation differs from other types of government investigations. Basically, those who are investigated have an interest in co-operating. The central reason for accident investigation is to find safety deficiencies so they can be corrected. Because safety deficiencies are often related to human failings, there is a tension between the need to get at the whole truth in order to avoid future danger and the concern of those involved that they may be held to blame if they reveal facts that point to mistakes in which they were involved.

The *CTAISB Act* tries to reduce this tension in two ways. The *Act* makes it very clear that the Board's findings are not to be construed as assigning fault or determining liability. The second method Parliament chose was to create a complex set of rules about how the TSBC and others can use information that the Board collects.

Most fact-finding bodies, including courts, are content with general rules about the use of information. The *CTAISB Act* is unusual in its detailed and different treatment of various types of information. Although TSBC investigators are instructed to tell witnesses that what they say will be used only as the *Act* permits, in reality, there is little confidentiality or privilege.

For example, the *Act* prohibits the Board from disclosing those parts of an on-board recording, such as a cockpit voice recorder, which are not related to safety. But it also requires the Board to disclose the whole recording to police with search warrants, coroners who request access, military investigators and the Minister of Transport's observer.

Although no explicit rule against public release is given to ground station communications records,[48] the TSBC is similarly required to disclose these to police, coroners and military investigators. The *Act* is unclear whether a radio message from a ship, locomotive or aircraft would be covered by the stricter rules about on-board recordings or the less strict rules about ground station communication records.

Witness statements, although explicitly privileged by the *Act*, must also be given to the Minister of Transport's observer, police or military investigators. Even this privilege is overridden by a general right of coroners and courts to order the release of a witness statement if "in the circumstances of the case...the public interest in the proper administration of justice outweighs in importance the privilege attached to the statement...."[49] Although courts have been reluctant to make such

orders if a person is available to be called to the witness stand,[50] the Supreme Court of Canada's recent loosening of evidence rules against hearsay may mean that courts may order the disclosure of more TSBC witness statements in the future.[51] If the present rules in the *Act* are not changed, TSBC investigators may face increasing resistance from witnesses to tell the whole truth if the transportation community believes that courts will order statements revealed anyway. This is a vital reason to rethink the rules.

Rules about privilege and confidentiality in the *CTAISB Act* are justified only if they are necessary to protect individual rights or to improve the workings of the accident investigation and safety enhancement system. The general law and the *Canadian Charter of Rights and Freedoms* already offer considerable protection for witnesses.[52] Particular *CTAISB Act* rules have arisen as a result of political perceptions and trade-offs and are based on a belief that some degree of protection is needed if investigators are to obtain the entire story. Our research and consultations lead us to conclude that the confidentiality and privilege provisions of the *CTAISB Act* are illusory and add little value, if any, to TSBC investigations and final reports. The Board and the transportation community pay too high a price in complexity and uncertainty for any value they might gain from the present confidentiality and privilege system.[53]

If the goal is to get at the whole truth after accidents are reported, then it is best served by the general privilege rules we are recommending. If, however, the goal is to alert the Agency to hidden safety deficiencies, then a confidential (or "anonymous") reporting system provides a solution.

We have been told that immediately after an accident, most witnesses are more than willing to tell investigators the whole truth as part of coping with traumatic memories. Despite TSBC head office instructions about what investigators are to say to witnesses, our consultations revealed widely differing practices in the field among regions and among modes. To us, it seems inappropriate to be inducing people to tell the truth by promising them confidentiality. Furthermore, it is fundamentally unfair and misleading to tell people that their statements are confidential when the reality is that any relevant information in their statements will eventually come out.[54]

Significantly, our consultations with the American National Transportation Safety Board (NTSB) and the Australian Bureau of Air Safety Investigtion (BASI) show these agencies have been able to obtain information easily from witnesses living in societies similar to Canada's. These agencies do not need witness protection specific to the accident investigation process. We were impressed to hear from a senior aviation insurance investigator with international experience and from marine investigators who had worked outside any framework of confidentiality that they were rarely unable to coax the whole truth from witnesses.

Safety will not be advanced if information is contained in a strait-jacket of confidentiality. Carriers ought to have ready access to accident information to improve management systems and crew training. Designers and manufacturers ought to have the same access for design analysis and systems engineering. The prompt use of information to improve safety may be hindered if it is diverted into litigation rather than into the management and engineering processes. Canadian law enforcement agencies, transportation regulators and private litigants have ample means of obtaining information for their specific purposes without needing exceptions to the Act's confidentiality "protection."

Is any protection beyond what is given by the *Charter* and the *Privacy Act* really necessary? The purpose of the investigation and inquiry systems is to enhance safety. It is not to subsidize the collection of information by litigants at public expense. Nor should the cost of enforcement efforts of police and transport regulators be subsidized from the TSBC budget.

Although courts generally prefer to hear the actual testimony of witnesses rather than rely on investigation reports as evidence, there have been cases where CASB reports were admitted into evidence.[55] We do not believe that this is appropriate. The Board should not confine its discussion to only those findings that meet legal standards of proof. The Board and the courts have different responsibilities. If observers and IPs think that a TSBC report may be used against them in future legal proceedings, they might be tempted to abuse participative processes in an effort to avoid providing facts or deflect blame. This would be contrary to a desirable approach to the investigation and report process where they would seek co-operatively to discover and state all the causes and contributing factors. We strongly endorse section 33 of the Act which guarantees that TSBC staff will not be used as experts for the benefit of private litigants.

A Workable System

In proposing an alternative, we are not actually abandoning confidentiality because the multiple exceptions to the existing confidentiality rules make any protection largely illusory. Field staff, well-trained in investigation techniques, can win the confidence of witnesses if the investigator understands the witnesses' work environment. This is a far more effective way of getting at the whole truth than a maze of overlapping rules riddled with exceptions. The important legal protection for witnesses is not to keep their information secret (and therefore less useful for applying safety lessons) but to prevent the safety information they reveal from being used against them or their employer. The answer is privilege, not confidentiality.

We have heard a considerable number of submissions on the issue of confidentiality for on-board recordings. Although we understand that the introduction of cockpit voice recorders was based on what was in effect a social contract between flight crew and their employers and regulators, granting this right was an extraordinary

concession which should not go any further.[56] Conferring special rights on distinct groups is now subject to review under sections 7 and 15 of the *Charter*. If crews press for complete protection, they risk losing protection altogether.

In our view, the United States *Independent Safety Board Act* of 1974 contains a more appropriate and workable model for the use of on-board recordings than the present section 28 of the *CTAISB Act*. The U.S. statute requires the NTSB to publish cockpit voice recorder transcripts with irrelevant sections removed.

Under this model, for example, carrier flight instructors or the TSBC could use excerpts from on-board recordings to emphasize safety lessons. These recordings still could not be used for litigation or regulatory purposes, unless a court or coroner ordered otherwise. We appreciate that an on-board recording may be the only source of some relevant evidence for litigants, so a controlled exception to the general prohibition on "collateral" use of TSBC information is justified.

We have heard concerns over the potentially damaging effect on individuals of premature release of incomplete information during TSBC investigations. Obviously, it is undesirable for an investigation to be hampered by speculation and rumour based on incomplete facts. A general rule for confidentiality of information during the investigation process would be useful, but we emphasize that such confidentiality would work only if reports are released more quickly.

There is a real possibility that accident investigations or voluntary reporting may reveal evidence of criminal activities or clear public hazards from which innocent persons may suffer if no immediate action is taken. Unofficial and informal practices now exist for alerting appropriate authorities to such dangers. The protection of confidentiality must be weighed against the risk to innocent persons' lives. We would support an exception for cases which may present a "clear and present danger."

The possibility of public inquiries being suspended because of individuals subject to related criminal proceedings,[57] poses a real challenge for the credibility of the Board's inquiry process. The intense debate surrounding suspension of the Westray Mine Inquiry shows that a new approach is desirable. We believe the public feels it would be more appropriate to grant witness immunity to allow an inquiry to proceed rather than to wait for criminal proceedings to work their way through the courts. This proposal would work as intended only if it was found to be consistent with the *Charter*.

The rights of individuals run parallel to the right of the public to enhanced transportation safety and to know how lives are being affected. Parliament recognized these interests in making the TSBC subject to the *Access to Information Act* and the *Privacy Act*.[58] The former law has already been used to obtain information from the TSBC before the release of final reports.

The amount of outside information flowing into the TSBC suggests that the Chairperson will likely be called on to make choices under section 20 (6) of the *Access to Information Act*. The Board should be prepared to justify a refusal to disclose information if it is challenged under this Act.

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RECOMMENDATIONS

55.

a) As general principles:
   i) the present *CTAISB Act* provisions granting differing degrees of confidentiality and privilege to various types of information acquired by the TSBC should be consistent; and
   ii) the present CTAISB provisions granting confidentiality to various types of information, with two exceptions referred to in recommendations 56 and 57, should be replaced with a general rule that information provided to the TSBC is public, but cannot be used against the persons giving such information or their employers in criminal, civil or regulatory proceedings.

b) The President of the Privy Council should introduce amendments to the *CTAISB Act* and consequential amendments to the *Access to Information Act*:
   i) substituting the privilege provisions and exemptions in sections 28, 29 and 30 for a general provision that information, other than physical evidence, obtained by the TSBC shall be used only for the purpose of advancing transportation safety;
   ii) providing that such information shall not be used by any person or authority for the purpose of determining criminal or civil liability or the entitlement to any right, interest or operator's licence;
   iii) providing that any report may not be used for any of the purposes referred to in ii) above;
   iv) providing that any safety advisory, safety information letter, hazard notification or other publication of the TSBC may not be used for any of the purposes referred to in ii) above; and
   v) permitting the use of such information for prosecutions under section 35 of the *CTAISB Act*.

56.

The President of the Privy Council should introduce amendments to section 28 of the CTAISB Act and consequential amendments to the *Access to Information Act* to provide that:

a) the Board, at the conclusion of an investigation, or the Inquiry Officer, in the course of a public inquiry, shall release to the public those parts of an on-board recording which are relevant to the advancement of transportation safety;

b) the remaining parts of an on-board recording shall be kept confidential by the TSBC and are not compellable as evidence unless their production is ordered by a coroner or court of competent jurisdiction, on notice to the TSBC; and

c) the coroner or court of competent jurisdiction shall not order the disclosure of confidential parts of an on-board recording, and a court shall not permit the use in legal proceedings of any part of an on-board recording, unless satisfied, after in camera hearing, that any release of any of the remaining parts is necessary in the interests of justice.

57. 

The President of the Privy Council should introduce amendments to the *CTAISB Act*, and consequential amendments to the *Access to Information Act*, that the TSBC and participants shall keep information obtained in the course of an investigation confidential from the public until the conclusion of the investigation or until testimony is given at a TSBC public inquiry. The amendment should confirm that the Board or a participant may use such information at any time for the purpose of issuing hazard notifications or correcting safety deficiencies.

58. 

The President of the Privy Council should introduce an amendment to the *CTAISB Act* that would:

a) authorize the Chairperson or his or her delegate to release any type of information obtained by the TSBC at any time under exigent circumstances involving an immediate perceived danger to life or public safety, to any governmental authority of Canada or a province; and

b) relieve the Chairperson or his or her delegate from any liability for acts taken in good faith under this section.

59. 

The President of the Privy Council should introduce an amendment to the *CTAISB Act* that, where an investigation or public inquiry is being held, the Board or the Inquiry Officer has the authority, on being satisfied that the enhancement of safety would be advanced, to grant immunity to a witness from civil, criminal or regulatory proceedings arising from the occurrence being investigated, except for prosecution of:

a) offences prescribed by section 35 of the *CTAISB Act*; and

b) Criminal Code offences against the administration of justice.

60. 

The Chairperson should develop a set of guidelines for the exercise of his or her disclosure powers under section 20(6) of the *Access to Information Act*. The purpose of these guidelines should be to assist the Chairperson and the Board to demonstrate that their disclosure of information is consistent with the intention of the *Access to Information Act* and the *CTAISB Act* to enhance public safety. The guidelines should be reviewed periodically.

Investigatory Powers

FROM WHAT WE HAVE SEEN, the TSBC's investigatory powers are both adequate for its purposes and consistent with the section 8 controls on powers of search and seizure in the *Charter*. The intrusiveness of these powers should be considered in the context of the Board's restricted mandate to investigate and recommend. However, the TSBC's power to compel medical evidence brings the *Charter* into play.

TSBC investigators may require physicians to disclose medical histories and may require persons to submit to non-invasive medical examinations. The results of such examinations are privileged, but the medical histories are not.[59] We feel that both sources of medical information should be governed by similar confidentiality rules.

Despite Parliament's choice to restrict the TSBC's powers to non-invasive medical examinations, some believe that invasive testing is vital if the TSBC is to find out accurately whether substance abuse contributed to an accident.

While the U.S. NTSB can obtain urine samples for safety analysis,[60] careful thought must be given to the use of such procedures in Canada. Because of the *Charter*'s general respect for personal privacy,[61] a delicate balance must be struck between public faith in transportation safety and an individual's rights.

We are aware that Transport Canada and the industry are currently engaged in planning for substance abuse testing. Any testing system involving a regulator undoubtedly will be influenced by the regulator's responsibility to enforce safety standards. Although the TSBC does not have enforcement powers, the importance given by Canadian law to individual privacy is so great that a distinct set of confidentiality rules may be necessary if a decision is taken to give the TSBC power to require invasive testing for substance abuse.

Evolving forensic technology and the trend to smaller crews in all modes suggest that the potential impact of substance abuse on transportation safety will grow in importance. Before the TSBC is confronted with a major accident in which there are allegations of substance abuse, it must think through its response to such issues and decide whether further legislative amendments will be necessary.

From Prototype to Production

NOWHERE ARE THE PHILOSOPHICAL ASSERTIONS of the *Act* more important than in their impact on the Board members of the TSBC. The first three years of operations have been marked by the Board's assumption of a passive role and by the distance it maintains between itself and TSBC staff.

Board members explain that these characteristics result from their interpretation of section 10(2) of the *Act* which grants the Directors of Investigations "exclusive authority" to direct the conduct of investigations.

The evidence compels us to conclude, reluctantly, that the Board's passivity limits its ability to deliver value in line with the resources it uses. This Board, with all its experienced and qualified members, has the potential to make a major contribution.

The inevitable question then arises: Do we need a Board at all? The Air Accident Investigation Board in the United Kingdom is entirely a bureaucratic agency reporting to a minister, and it is one of the most respected in the world.

But Canada's organization was modelled on the U.S. design, which has, as one of its most important features, independence from the regulators and an open, consultative approach to Interested Parties. The Canadian process was deliberately designed to give Interested Parties an opportunity to present their views to the Board so the Board could consider those views along with the views of the investigators. A board is essential to do this.

We also question whether an entirely bureaucratic agency can, over time, retain an image of independence from the rest of the public service. An appointed board with fixed periods of service is by definition independent of the "system."

As we noted earlier, the *Act* arose in an atmosphere strained by the deterioration of the CASB. The *Act* established a single agency out of four distinctly different organizations, each reflecting the different technologies and cultures of the transportation community. As we have seen, the TSBC remains heavily oriented to aviation in terms of staff, spending, workload and output.

In the coming years, this organization must continue to evolve. One price of independence is that direction cannot come from outside, that is, the people in the organization must build on the foundation. This requires aggressive leadership from the Board, whose collective loyalty transcends the modes.

The Board and the Act

As a result of the crisis of confidence in the CASB, Parliament specified, in detail, the internal lines of authority within the Board and the relationship between the Board and the TSBC staff. Hoping to avoid Gander-like controversies, Parliament took the unusual step of giving the DOIs "exclusive" control over the conduct of

investigations.[62] However, Parliament was careful to counterbalance this grant of "exclusive" authority by giving the Chairperson exclusive control over personnel and budgets;[63] giving the Board the right to require further investigation;[64] and requiring that the Board make policies concerning the classes of accidents to be investigated and the conduct of investigations.[65] Further, Parliament required that such Board policies be made available to the public. This was to build confidence within the transportation community that investigations would be carried out under open and understandable procedures — an important way to bolster the Board's public credibility.

Two kinds of policies are explicitly asked for in section 8 of the *CTAISB Act*. The first deals with occurrence classification and the second with the conduct of investigations. In July 1990, the Board approved the Occurence Classification and Response System concept,[66] the merits of which we have already discussed.

We found little expression of policies pertaining to investigation. And it is clear to us that whatever does exist is not effectively accessible by the public.[67] The Board maintains that its policies are fully recorded in its Minutes and Records of Decision. Aside from express adoption of the regulations, these sources show three instances of policy pertaining to the conduct of investigations.[68]

We note that the Board has developed certain policies on recognizing observers or working on site with other agencies and on media communication at accident sites. As well, the Board is working on a discussion paper about public inquiries. However, any policies adopted to date are purely operational and fragmented in Records of Decision and Board Minutes. Such records are not accessible to the public in any practical sense. Also, as we have discussed, these policies are aimed at short-term efficiency rather than long-term effectiveness.

This lack of comprehensive and truly accessible policies does not meet Parliament's intention and has thrown the intended balance out of kilter. Moreover, by the absence of such policies, the Board has lost an opportunity to build a public profile and credibility.

Most federal statutes creating independent boards and tribunals do not require appointees to have particular knowledge or experience. When the *CTAISB Act* was passed, the very inclusion of knowledge requirements was an improvement over previous enabling legislation.[69]

The Passive Board

Throughout the course of consultations, we were often told that the TSBC essentially has been passive. There was some speculation that the Board was not interested in interacting with the community because the members felt they had to remain "neutral." Others did not view Board members as sufficiently high-profile representatives of major transportation interests. We were struck that this Board's profile is quite unlike that of the U.S. NTSB, whose members and staff are often seen and

heard in the media. From staff inside the TSBC and the transportation community we heard that the Board was virtually invisible.

Most people outside government said that they really did not know much about the TSBC. Many thought that it was part of Transport Canada — the regulator. It is unfortunate that the TSBC is not better known, because Board members have told us that they sincerely believe they have an obligation to advance transportation safety.

They also believe, however, that the *CTAISB Act* requires them to sit as "independent judges" between the staff investigators' interpretation of the facts and the IPs' beliefs in what happened. To act as such independent judges, the Board believes it must keep its distance from both its own investigation staff and from government and transportation communities.

This is a fundamental error of perception. After extensive research and analysis, we believe that neither the statute nor public policy forces the Board to act this way. Indeed, if the Board is to fulfil Parliament's intentions, it must revitalize its role to become an effective force directing the organization and participating in public debates over transportation safety.

Because the Board is not a court, there is no need to isolate itself from staff or the outside community. As discussed earlier, the *CTAISB Act* gives the Board its independence. We agree with Mr. Justice John Sopinka, who, in his opinion to the Minister of Transport at the time the *CASB Act* was reviewed in 1988, stated:

> The rationale for separation of the investigators from the Board is that the Board is adjudicating on the findings of the investigators. This is an erroneous concept. The Board is an investigatory body and its report is not a judicial or quasi-judicial finding. Indeed the Act expressly prohibits the Board from finding fault or liability. The field investigation and the preparation of the report of the Board are one process and should not be bifurcated.[70]

Six years later, our outside legal experts came to the same conclusion in reviewing the present *Act*.

> The exclusive authority conferred by s.10(2) of the Act on the three Directors of Investigation does not, however, preclude the Board from establishing general investigation policies or even from recommending further specific areas of investigation before completing a review of the draft report. It simply keeps Board members from exercising hands-on control of an investigation, which could give a particular Board member an investment in the outcome of an investigation that might detract from the neutrality and impartiality desired of Board members in approaching the investigators' reports as a cohesive unit. This reflects a policy decision about the effective management of the Board; it does not imply that Board members are required to be impartial because they are exercising adjudicative functions.[71]

The Board's independence is fully established in the *Act*. It is not being enhanced by its self-imposed court-like isolation. However, it will be enhanced by interaction with both Board staff and the outside transportation community.

Many TSBC staff expressed their frustration to us at being confined to written communication with Board members. The Board members in turn wish they could have more contact with staff but feel precluded from doing so because of a necessity to remain neutral and impartial. We strongly agree with our legal experts that Parliament did not intend this to happen.

> Board members have no mandate to adjudicate differences of view that may arise between investigators and interested parties. Their function is to consider the findings of the investigators in light of representations as to those findings, with a view to stating the findings of the Board as an entity.[72]

The Board is not and should not be independent from its staff. Constant interaction would boost Board members' and staff morale and increase mutual understanding and confidence. This would also have the major advantage of making the TSBC, as a whole, more resilient in the face of public concern and media scrutiny after a transportation catastrophe.

Nor should the Board operate in isolation from the transportation community: reliance on staff views exclusively can only have a negative impact on Board members' credibility. Being open to outside opinion will increase stakeholders' confidence in Board members.

An Alternative Model

In the course of our inquiries, we examined options involving investigatory agencies with no board or temporary board members. We thought that one of these models might suggest a solution to the present difficulties we perceive in the TSBC. Among the most interesting was the model adopted by Australia for its BASI, which essentially replaced the appointed board structure with a single senior public service administrator who supervises a professional investigation staff. Under the Australian model, inquiry commissioners are appointed on an ad hoc basis to hold hearings on major accidents.

We rejected this concept for several reasons. First, we believe that an appointed board would be more vigorous in its pursuit of the public interest in investigating transportation accidents. A full-time bureaucracy would tend, over time, to focus on organizational self-interest which might override the public interest. Second, bureaucracies tend to be more sensitive to operational and budgetary considerations and would not be as well attuned to the needs and concerns of their external constituencies. Finally, a professional bureaucracy is essentially a part of the government machinery. Such an organization would not be perceived as capable of challenging

the government system if that became appropriate. The appointment of knowledgable individuals from outside the public administration to oversee the accident investigation process is vital to counteract these tendencies.

We therefore believe that the present legislation, with some modification, is basically sound and can be interpreted to empower the Board to fulfil Parliament's mandate effectively. To do so, the appointed Board must divest itself of its present cautious outlook and become much more dynamic and proactive.

Composition

We heard repeatedly that the transportation community would view an accident investigation board as credible only if the board were large enough to include commercially and technically knowledgeable people from all modes. Although the community, other than the pipeline industry, now accepts the concept of a multimodal body, we were told this acceptance is conditional on the TSBC representing all major transportation interests.

We feel that the pressure for special interest representation has arisen out of frustration with the Board's isolation. This model of constituent representation is being advanced by stakeholders because the Board has not achieved a public profile with the community or produced timely reports. We gave this model serious consideration, but in the end concluded that it was not suitable.

Almost all those who wanted a representative board saw the need for more board members to represent various industry sectors. The history of the CASB shows that a large Board risks being divisive and unwieldy. If particular Board members are seen as representing particular constituencies, the Board's impartiality and independence may be called into question. Moreover, the use of technical specialists as Board members invites the danger of undue interference with staff professional judgment.

On balance, we conclude that the present model with five "collectively knowledgeable" members is appropriate if the power to use outside experts is properly exercised. We caution, however, that Cabinet must continue to take care in selecting appointees. Given the strong independent framework in the *Act*, there is little or no way for outside intervention if there are internal divisions. One can only recall the example of the CASB where outsiders had to watch helplessly as the conflict deepened.

We think the *Act* should be amended to ensure that a board of the present number can meet future challenges. Because transportation accidents occur unpredictably, we realize that a five-member board could at times become overworked in having to deal with a major accident while at the same time having to ensure the continued timely release of reports. For such occasions, the Board should have the authority to appoint temporary members on a case-specific basis. It is not our intention that this power be used to inflate the Board membership.

The Board–Staff Relationship

In practice, Board members do not appear at accident sites and do not usually communicate with investigators, observers or the Interested Parties. Board members may, in fact, not see draft reports until many months after accidents have occurred. After the passage of time, evidence may have perished, and witnesses may begin to rationalize and modify their views. In the context of present procedures, the Board's statutory power to reconsider is of little value.

Parliament conferred "exclusive" authority on DOIs to conduct investigations for a specific reason. We believe this was an experiment which has not worked. We find this balancing of powers to be flawed and believe it has created confusion. We are at a loss to identify any benefits and certainly have found no evidence to suggest that the approach is suitable. We found nothing, for example, to suggest that anyone has ever tried to wrongfully influence a DOI.

In any case, we must question the de facto exclusivity in this process. Since DOIs do not control overall staffing or budgets, they cannot thus exert total control over their investigations. As well, the autonomy of safety analysis means that DOIs do not control output. The word "exclusive" has a particular and restrictive meaning. We believe it acts as an impediment and has led to confusion at the TSBC.

Is it to mean control of the physical site but not control over what goes to the Board? In our view, the confusion can be eliminated and the Board can more effectively carry out its own work simply by removing this word and clarifying the intent of the legislation. Internal lines of authority should be set by the Board and not by statute.

It is difficult to understand, under the present arrangement, how the Board could, in most cases, give DOIs meaningful direction regarding further investigations. We believe that, while Parliament intended clearly that the Board have some supervisory power over DOIs, existing Board practices are an obstacle.

We are not suggesting that appointed Board members become accident investigators. For any given accident there can be only one DOI and one IIC. What we do believe is that the Board must strike a reasonable balance between its present isolation from field staff and its personal participation in field operations. In our view, for major occurrences, there is nothing inappropriate in Board members having a chance to view the site before wreckage is cleared.[73] They should, however, have established policies regarding their on-site role. These policies would make it clear that Board members do not involve themselves in the actual field investigation.

Public suspicion of involvement by appointed Board members on site is, in our view, unfounded. In our discussions in Canada and the United States, we were regularly reminded of a 1973 incident where a member of the NTSB, at the site

> Judicial inquiries and the Transportation Safety Board need to develop a greater realization that public relations is a very important part of what they do. The public, through the media, will always demand to know what progress is being made on an accident investigation. To pretend that the needs of reporters are unimportant is illusory and usually counterproductive.
>
> *Consultations with the Honourable Mr. Justice Nemetz June 28, 1993.*

of an aircraft accident, dramatically and wrongly identified as "the cause of the accident" something which was later found to be erroneous. That episode was frequently offered as evidence that appointed board members were prone to unprofessional behaviour. Rarely was there any recognition that the NTSB had investigated thousands of accidents in the 20 years since that event without any high-profile embarrassments. Here in Canada, individuals who described the last years of the CASB usually failed to mention the difficulties and internal disputes which damaged the credibility of the Aviation Safety Bureau in Transport Canada, and which triggered both an RCMP investigation and a royal commission.

It is interesting to contrast the TSBC's method of operations with that of the NTSB, which loosely served as a model for its design. NTSB investigations feature full participation of the Interested Parties under the direction of the IIC. There is no defined IP process as a distinct entity.[74]

At the NTSB, when an investigation into a major accident is complete, the document, including staff draft recommendations, is forwarded to the Board which typically reviews it for several weeks before holding an open hearing in which Board members question staff directly before accepting, amending or rejecting the report.

Interested Parties attend this major accident hearing as observers. During the preceding review, Board members may contact staff directly to question them about aspects of the report. They occasionally receive phone calls or visits from the Interested Parties who are anxious to challenge certain aspects of the draft report or recommendations. As a result, there is a high level of awareness of the report and its recommendations within the community. Basic questions of fairness are addressed through the transparency of the process and the availability of Board members to all parties. Combined with a studied effort to publicize the reports and recommendations in the media, the NTSB process creates significant pressure on the regulator to respond promptly to concerns and recommendations.

Staff at the U.S. Federal Aviation Administration estimate that a large majority of NTSB recommendations produce some safety action by the regulator, and that NTSB recommendations are responsible for approximately 70 percent of *all* actions taken by the regulator.

We speculate that the aggressive advocacy role of the NTSB, combined with its technical quality, creates a strong political imperative for response, while the regulators use the pressure of the NTSB to encourage the transportation community to take safety actions in light of risks acceptable to both the public and industry.

The American model for both routine and major accident investigations has attributes which would be of great advantage here in Canada. In all cases, the direct exchange between the Board and staff simplifies the Board's task of understanding complex technical issues. Staff presentations frequently feature photographs, maps and the suspect equipment itself, which Board members can examine directly. Board members can also evaluate for themselves the degree of objectivity shown by the investigators and challenge them on questions of fairness and thoroughness. For staff, it is an obvious morale booster to be called to head office to present their work in person and to understand the concerns raised by Board members. Misunderstandings of fact or wording can be resolved immediately. For major accidents, presentations by staff in an open forum assure the public that no relevant facts have been distorted or suppressed.

Toward the Managerial Board

In reaction to the CASB controversy, Parliament concentrated administrative powers in the hands of the Chairperson. We believe this concept was a mistake. The Board cannot translate its section 8 policies into effective administrative action if it has no say in personnel and budgetary policy. Given the TSBC's crucial mandate to audit transportation risk decisions in the public and private sectors, we agree with Mr. Justice Sopinka's 1988 observation that "[i]t is fundamental to its image as an independent body that its direction be vested in a board and not one individual."[75] It is possible to structure enabling legislation so the Board members' collective responsibilities to the taxpayer are focused through one individual.

A dynamic agency requires a dynamic board. The Board should be given the power to carry out the objectives of the *Act*. The Chairperson and, through him or her, the staff, should be delegated with the operational administration of these objectives. This is the corporate board model.

In his 1988 opinion to the Minister, Mr. John Sopinka, Q.C. recommended that the Board appoint the Directors of Investigations. We agree and would go further in advocating that the Board appoint all senior management within the TSBC including the Executive Director. It is important that the Board and senior staff have confidence in each other.

> When the Bureau makes recommendations as a result of its investigations or research, safety is our primary consideration. However, the Bureau fully recognizes that the implementation of recommendations arising from its investigations will in some cases incur a cost to the industry.
>
> Consequently, the Bureau always attempts to ensure that common sense applies whenever recommendations are formulated.
>
> BASI does not have the resources to carry out a full cost-benefit analysis of every recommendation. The cost of any recommendation must always be balanced against its benefits to safety, and aviation safety involves the whole community. *Such analysis is a matter for the Civil Aviation Authority.* [Emphasis added.]
>
> *Bureau of Air Safety Investigation, Australia, inside front cover of reports.*

Advocacy

To be an effective safety watchdog, the Board must become an advocate for the public. Although it must proclaim safety deficiencies, detailed remedies should be left to industry and regulators. The TSBC, through its reports and studies should identify goals for safety improvement. And the TSBC's Board members should use their independence to full advantage in challenging the regulator when the occasion arises.

There are several ways for the TSBC to be an effective public advocate. The first is to use its publications to greater effect. To do this, the TSBC has to bolster its monitoring and follow-up processes to track the response of government departments and industry to safety deficiencies. Such actions would provide concrete data for the study of safety trends and usefulness of Board recommendations. The Board must know if its constituents hear and heed its safety lessons.

First, the Board's annual report should comment on the success of regulatory and industry response to Board recommendations. The issuance of the TSBC annual report should be as much a media event as the report of the Auditor General. (Were it not for a deliberate communications program, the Auditor General would be a little-known adjunct of Parliament rather than a significant public institution.)

Second, the Board should take more effective advantage of its appearances before the Transport Committee of the House of Commons to alert lawmakers and the media to unresolved safety deficiencies and broad safety issues.

Third, the Board should enhance its media relations to raise awareness and understanding of its mandate. With a high public profile, governments and the public will look to the Board as the natural and professional forum for major accident inquiries.

RECOMMENDATIONS

61. 
The TSBC should increase its efforts to participate in and co-operate with the transportation community by consulting transportation regulators, carriers and private operators.

62. 
The President of the Privy Council should introduce amendments to the *CTAISB Act* that the Board have the power to appoint temporary member(s) on an ad hoc basis for a specific investigation or safety study, as assigned by the Chairperson.

63. 
The President of the Privy Council should introduce amendments to the *CTAISB Act* to delete the word "exclusive" in section 10(2) to clarify that the Board has overall managerial responsibility.

64. 
The Board members should develop a policy for the role of Board members in representing the TSBC at accident sites.

65. 
Although the DOIs should continue to have responsibility for conduct of investigations subject to published Board policies, the Board should discuss draft reports directly with staff field investigators and analysts.

66. 
The President of the Privy Council should introduce amendments to the *CTAISB Act* that the Chairperson, on the recommendation of the Board:

a) establish qualification criteria and approve the hiring of senior staff; and
b) determine budgetary allocation.

Less Tangible Factors

Toward an Organizational Culture

BEYOND THE SPECIFICS of enabling legislation is an intangible quality which helps to define an organization. It comes from the work culture and spirit of the employees and affects their own image of themselves as well as the image they present to the outside world.

At this stage in its evolution, the TSBC has adopted a culture described as "quiet professionalism." It appears to be more than a declaration of pride in the Agency's particular work culture; it seems also to signal a rejection of "louder" (more public) activities. TSBC staff are rightfully proud of their technical work. They display less involvement, however, with the impact of their work on the larger community than we would have expected, concentrating instead on report production as an end in itself. The culture of the TSBC seems to regard public attention as undesirable or improper.

We feel that one of the most important messages we can convey as a result of our review is the urgent need for the TSBC to expand its concept of its mission: it must not only be an excellent technical agency but it must also be an excellent public agency.

Mandated to advance transportation safety, the TSBC must recognize that such a function requires its Board and staff to be more active in the transportation community, to advocate more aggressively the recommendations made to the regulators and to exert pressure generally on the transportation system to enhance safety. Accepting a more broadly interpreted mandate would require the TSBC to publicize its recommendations and conclusions of reports more aggressively; to evaluate the response of the regulators and operators to recommendations with a degree of scepticism; to seek a higher profile in the transportation community at both the Board and regional staff levels; to conduct more safety studies not necessarily related to specific accidents; to conduct more public inquiries; and to bridge the gap between the Board and TSBC staff to ensure a more cohesive and resilient organization.

It is essential to remember that Transport Canada and other safety regulators are not seeking to make the system "as safe as possible" but rather "as safe as practicable." It is uniquely the function of the regulator to balance economic and safety considerations and to satisfy a multitude of clients. The TSBC should function by adding the weight of its recommendations and commentary to one side of the scale, confident that the economic interests of operators will sufficiently balance the other side.

Public Confidence

Although the TSBC will investigate hundreds of occurrences each year, we recognize that its credibility is measured particularly in high-profile, serious incidents in

which there has been significant loss of life. While difficult to define, part of the TSBC's role, unquestionably, is to satisfy the public's need to know that a thorough investigation takes place and that the transportation system will be exposed to an inquiry which neither favours nor excuses practices which have failed.

Throughout this century, the most significant accidents have been assigned to special inquiries conducted by judges who have examined both the circumstances of the accident and any relevant systemic factors. Since 1957, Canada has had professional transportation accident investigators. Nonetheless, major, higher-profile accidents have been lifted out of their hands and assigned to royal commissions or judicial inquiries. Many of these inquiries have produced work of insight and enduring value. However, there are difficulties in the commission or inquiry model, including the lack of continuity, the high cost of establishing such investigations and the inherent duplication of creating a new temporary body to do what Parliament has already established a full-time board to do.

There is also an implied rebuke in the practice of removing high-profile incidents from a professional agency's review — a suggestion that the investigators are either a part of the system that must be independently evaluated or incapable of meeting the public's expectations.

During our review, we began to consider the TSBC's ability to retain responsibility for an occurrence investigation — in effect, to make the appointment of a judge unnecessary — as a key measure of its success.

What do such appointments bring to a public inquiry? Is the TSBC able to duplicate these qualities? First, the public recognizes that judges will conduct their inquiries according to clearly established rules of procedural fairness. No one, no matter how powerful, will be immune from investigation. Neither media hype, nor spending restraint, nor political interference will deter or distort the inquiry.

As we indicated earlier in this Report, our Commission supports the principle that transportation accident investigation should not be a punitive exercise and should be undertaken primarily to reveal safety deficiencies which can be avoided in the future. However, the Board must not take this principle to mean that its work should, in some way, avoid identifying the people or organizations responsible for the factors or contributing factors of an accident. The Board must also recognize that findings of individual culpability differ significantly from findings of systemic failure, and these must be identified clearly and firmly.

Fortunately, the TSBC has not had to deal with a major catastrophe in its first three years. However, it was apparent to us that in one of the only incidents which did capture widespread public attention (the B.C. Ferries accident at Nanaimo, British Columbia), the TSBC did not appreciate the need to act in an urgent fashion in response to public concern. Instead, the TSBC delayed its Nanaimo inquiry while it awaited a court ruling concerning the access of lawyers to TSBC interviews with their clients.

Provincial authorities in British Columbia and officials of the B.C. Ferries Corporation were under pressure to respond to the concerns raised by a rash of incidents; they could not tell the public that the investigation would begin at some future date after the courts had ruled on a complex issue from another investigation. Instead, the province commissioned retired British Columbia Chief Justice Nathan T. Nemetz to conduct a full inquiry.

In the case of the Air Ontario crash at Dryden, the very public disputes within the CASB meant that public office holders were likewise unable to rely on the professional Agency at a crucial time when Canada had experienced its most serious aviation accident since Gander.

We have already commented on the divisions within the CASB. We should, however, also note that the judicial inquiry subsequent to the Dryden accident was sweeping in its scope and findings. Mr. Justice Moshansky interpreted his mandate broadly enough to inquire into issues such as de-icing practices at Pearson Airport, and the adequacy of staff in the Aviation Regulation Group of Transport Canada — both issues somewhat removed from the actual events of Dryden. The alacrity with which Transport Canada accepted the bulk of the Dryden inquiry recommendations indicates that these additional considerations were of value. We must ask ourselves then whether the TSBC would be similarly inclined to cast such a wide net over a case even if, as in Dryden, it was clear from the outset that there were very few obvious additional safety lessons to be learned from the flight itself.

In the years to come, the taxpayer has the right to expect that governments in Canada will become less inclined to initiate royal commissions or judicial inquiries as a response to catastrophic transportation incidents. Instead, we see the TSBC filling this role, as it continues to evolve as a public agency, growing in influence and gaining confidence with each step.

Ironically, though our report contains many criticisms, we are anxious that the TSBC not respond with more caution and more restrictions on itself. To the contrary, the road to a better agency lies in less caution and more willingness to face controversy. In a number of places we have recommended the organization move from regimented systems to more flexible ones, in its relationship with IPs for example or in the conduct of public inquiries and safety studies. But flexibility involves discretionary choices, and this will inevitably lead to controversy and contention.

The various features of the *Act* which we have said are unnecessarily restrictive — the use of confidentiality, the restricted privileges accorded observers, the strict balancing of roles between the Board and staff of the TSBC — were all established with the best of intentions and on a high philosophical level. But we have found that the overall benefit — the sum of these various good intentions — is not as great as we might expect from an organization guided by less formal but more effective procedures.

NOTES

1. *Phillips v. Nova Scotia* (Westray Mine Inquiry), 117 N.S.R. (2d) 218, 100 D.L.R. (4th) 79 (N.S.S.C. App.Div.) reversing (1992) 116 N.S.R. (2d) 34.
2. Australia has achieved this goal by making its Civil Aviation Authority autonomous from government and having the Bureau of Air Safety Investigation report to the Minister.
3. The TSBC operational plan for 1993-94 states as one of the mission activities, independence.
4. *Coronation Insurance Co. v. Taku Air Transport*, [1991] 3 S.C.R. 662, 131 N.R. 241, 85 D.L.R. (4th) 609. We are satisfied that under procedures in force at the time in question and now, Coronation would have been able to obtain information on its insured from the CASB or its successor, the TSBC. Two occurrence reports relating to that insured had been published by the CASB up to the time the insurance coverage had been requested.
5. There is a broader justification for this unified structure of investigation. Modal integration of accident investigation reflects the industry operating concept of multimodalism. Beginning in the 1950s, emerging technologies and economic pressures resulted in this new operating concept, which was the impetus for a fundamental restructuring of transport systems. The carriage of multiple packages by separate methods has given way to a general logistics approach of "unitized" cargo moving from the place of production to the customer through the use of common information systems and multiple types of transport. With transport viewed increasingly by users and carriers as a generic logistics concept, rather than mode specific, it makes sense that concepts of transport accident investigation be consistent with operating and management concepts prevalent in the transport industry.
6. Although the Marine Casualty Investigation Unit was, by 1989, administratively autonomous, some of its staff had begun their careers as steamship inspectors, whose regulatory role is to enforce safety regulations. The commodity pipeline and rail accident investigators transferred from the National Transportation Agency had been associated with a regulatory body. The petroleum pipeline investigation staff transferred from the National Energy Board had an immediate background in working for a regulatory agency.
7. Marinex Consulting Ltd. *Quality Assessment of Transportation Safety Board Marine Mode Reports*, (Research report prepared for the CTAISB Review Commission, Halifax, September 1993) and industry consultations.
8. *Directions: The Final Report of the Royal Commission on National Passenger Transportation* (Ottawa: Supply and Services Canada, 1992), Volume 2, Table 8(2-1), p. 246.
9. *Ibid.*, p. 246.
10. We have been told by the Council of Boating Organizations of Canada that over half of the Canadian population uses pleasure craft every year.
11. The *CTAISB Act*, under section 3, gives the TSBC jurisdiction over all aviation and marine occurrences in or over Canada including its internal waters and territorial sea and all railway and pipeline occurrences if they fall under the legislative authority of Parliament. However, the TSBC's jurisdiction is subject to restrictions in respect of defence-related activities, as stated in section 18 of the *CTAISB Act*.
12. Charles L. Dubin, *Report of the Commission of Inquiry on Aviation Safety* (Ottawa: Supply and Services Canada, 1982), p. 176.

13. Mr. Justice Grange in *Report of the Mississauga Railway Accident Inquiry* (Ottawa: Supply and Services Canada, 1981), pp. 126-127, 187-189 commented that public and industry perceptions of what is safe differ.
14. In 1989, in the former Soviet Union, a gas cloud from a ruptured pipeline ignited, destroying two passenger trains and killing 462 people. In March 1990, a liquid propane pipeline fire in the United States caused nine casualties and destroyed 14 houses. Also, 36 Venezuelans died on September 28, 1993 when a gas line was breached during a telephone line excavation.
15. A proposed amendment to the Bill to include these sectors was ruled out of order. *House of Commons Standing Committee on Transport, Minutes of Proceedings and Evidence* (Ottawa: Supply and Services Canada, June 5, 1989), Issue 11, p. 34-35.
16. *Motor Vehicle Transport Act 1987*, R.S.C. 1985 (3rd supp. c.29).
17. Transmode Consultants Inc., *Highway Transportation Safety* (Research report prepared for the CTAISB Review Commission, Vancouver, October 1993); *Motor Vehicle Safety Act*, R.S.C. 1985, c. M-10.
18. In F.F. Saccomanno. *Perspective on Large Truck Highway Accidents* (Consulting and Audit Canada, Environmental Management Practice, 1993), p.1.
19. *Ontario Ministry of Transportation Road Safety Annual Report* (ORSAR 1988-89) cited in F.F. Saccomanno, *ibid.*, p. 1.
20. Transmode Consultants Inc., *Highway Transportation Safety, op cit.*, ch.2.
21. Trucking and bus companies operating within a province are under provincial regulatory jurisdiction. Such companies which operate between provinces or internationally are subject to federal regulatory jurisdiction, *Motor Vehicle Transport Act*.
22. Melville Shipping Ltd., *Transportation Safety Board Measurement of Safety Effectiveness — Marine and Pleasure Craft*, (Research report prepared for the CTAISB Review Commission, Ottawa, September 1993), section 2.0.
23. *CTAISB Act*, section 16.
24. The June 1992 founding meeting was hosted by the TSBC.
25. Current differences in rules are discussed in Lavery, de Billy, *Aviation Accident Investigation and Safety Promotion in an International Context*, (Research report prepared for the CTAISB Review Commission, Montreal, September 1993), pp. 94-113.
26. For example, the Annex 13 definition of "incident" is broader than the definition of a "reportable aviation incident" in the *CTAISB Act* Regulations.
27. *International Convention on Oil Pollution Preparedness, Response and Co-operation*, 1990 International Maritime Organization, London, 1991.
28. *CTAISB Act*, sections 7 and 11.
29. Vessel traffic systems provide clearance to ships entering congested waters and guidance to ships using harbours and channels.
30. For example, *Thomson v. Canada* (Deputy Minister of Agriculture), [1992] 1 S.C.R. 385, *Irvine v. Canada* (Restrictive Trade Practices Commission), [1987] 1 S.C.R. 181.
31. Gowling, Strathy & Henderson, *Report of Study of Miscellaneous Legal Issues Arising Out of Various Public Policy and Other Trade-Offs Which Affect the Structure and Mandate of the Canadian Transportation Accident Investigation Safety Board*, (Research report prepared for the CTAISB Review Commission, Ottawa, September 1993), p. 12.

32. Administrative law concepts of natural justice and procedural fairness are a continuum. Re *Nicholson v. Haldimand, Norfolk Regional Board of Commission Police*, [1979] 1 S.C.R. 311, [1978] 88 D.L.R. (3d) 671, 23 N.R. 410 (S.C.C). The fairness doctrine already has been applied to the TSBC in judicial granting of a right to counsel of persons being questioned by agency investigators. *Canadian Accident Investigation and Safety Board v. Parrish*, [1993] 60 F.T.R. 110 (Rouleau, J.) Administrative law review applications have been made against accident investigatory bodies: *Canadian Pacific ltd. v. Canada* (Canadian Transport Commission) (November 1, 1983), unreported action No. A-1301-83) (F.C.A.) and judicial review is available where a determination of cause is required to be made; *Canada (Employment and Immigration Commission) v. Lewis* (1985), 60 N.R., 14 [1986] 1 F.C.70 (F.C.A.).
33. See, for example, ICAO Annex 13, Chapter 1, and Merchant Shipping (Accident Investigations) Regulations 1989, section 6 (U.K.).
34. Willard Z. Estey, *Report Respecting the Arrow Air Accident at Gander, Newfoundland*, December 12, 1985 (Ottawa: Transport Canada, 1989), p. 28.
35. See, for example, *Maclean's*, June 27, 1977, p. 22 and June 12, 1978, p. 18.
36. Virgil P. Moshansky, *Commission of Inquiry into the Air Ontario Crash at Dryden, Ontario* (Ottawa: Supply and Services Canada, 1992), Recommendation 189, Vol. III, p. 1243.
37. Gowling, Strathy & Henderson, *Report of Study of Miscellaneous Legal Issues*, *op. cit.*, p. 14.
38. The *CTAISB Act* specifies in section 23:
    (2) Subject to any conditions that the Board may impose, a person may attend as an observer at an investigation of a transportation occurrence conducted by the Board if the person
        (a) is designated as an observer by the Minister of Transport in order to obtain timely information relevant to the responsibilities of that Minister;
        (b) is designated as an observer by the Minister responsible for a department having a direct interest in the subject matter of the investigation;
        (c) has observer status or is an accredited representative or an adviser to an accredited representative, pursuant to an international agreement or convention relating to transportation to which Canada is a party; or
        (d) is invited by the Board to attend as an observer because, in the opinion of the Board, the person has a direct interest in the subject-matter of the investigation and will contribute to achieving the Board's object.
    (3) The Board may remove an observer from an investigation if the observer contravenes a condition imposed by the Board on the observer's presence or if, in the Board's opinion, the observer has a conflict of interest that impedes the conduct of the investigation.
39. Lavery, de Billy, *Aviation Accident Investigation and Safety Promotion in an International Context*, *op. cit.*, p. 48; *Independent Safety Board Act*, [1974] 49 U.S.C. 1901 sections 304 (b) (6) (A) to (E).
40. Virgil P. Moshansky, *Commission of Inquiry into the Air Ontario Crash at Dryden, Ontario*, *op. cit.*, Vol. III, p. 1147.
41. Charles L. Dubin, *Report of the Commission of Inquiry on Aviation Safety*, *op. cit.*, Volume 1, p. 253 and Bernard M. Deschênes, *Study on Marine Casualty Investigations in Canada* (for the Minister of Transport)(Ottawa: Supply and Services Canada, 1984), p. 227.
42. ICAO Annex 13, Recommendation 5.26.

43. At the second meeting of the Marine Accident Investigators International Forum (MAIIF) held in Cyprus May 19-21, 1993 the application of the participation principle to marine accident investigations received favourable comment.
44. *Re Nicholson op. cit.*
45. CTAISB Act, section 24(2).
46. CTAISB Act, section 24(4)(d) which requires only that the Board "notify in writing each of the persons who made those representations, indicating how the Board has disposed of that person's representations."
47. The specific circumstances noted by Mr. Justice Moshansky were where it is shown new and material evidence has been discovered subsequent to the conclusion of the investigative process and which might reasonably affect such conclusions or where it is shown that the Board's factual conclusions are erroneous. Virgil P. Moshansky, *Commission of Inquiry into the Air Ontario Crash at Dryden*, Ontario, *op. cit.*, Recommendations 180, 181, Vol. III, p. 1241.
48. Section 29(1) of the CTAISB Act defines communications record as a record of radio or other types of communication between ships, locomotives or aircraft and traffic controllers or the Coast Guard.
49. CTAISB Act, paragraph 28(6)(c), 30(5).
50. *Moore v. Reddy* (1990), 44 C.P.C. (2d) 61 (Ont.Ct.Gen.Div.), *Braun v. Zenair* (1993), 13 O.R. (3d) 318 (Ont. Ct. Gen. Div.).
51. *R. v. Smith* [1992], 2 S.C.R. 915, *R. v. K.* (G.B.), [1993], 1 S.C.R. 740.
52. In a series of recent decisions, Canadian courts have decided that public inquiries cannot be conducted in ways that undermine individuals' protection against self-incrimination under the *Canadian Charter of Rights and Freedoms*. The application by other courts of these principles suggests that individuals may not be compelled to testify publicly before inquiries if the individuals are being subject to criminal or regulatory proceedings. Even in the absence of any specific rules in the CTAISB Act, the *Charter* affords individuals significant legal protection. *Thomson Newspaper Ltd. v. Canada (Director of Investigation and Research)*, [1990] 1 S.C.R. 425 (1990), 67 D.L.R. (4th) 1366. *Starr v. Houlden*, [1990] 1 S.C.R. 1366. *Phillips v. Nova Scotia*, *op. cit.*
53. We can see some value to witnesses in an absolute rule of confidentiality where a TSBC investigator is trying to probe human factors (for example, a supervisor orally directing staff to falsify records) where there is little if any associated physical evidence. However, given the present reluctance of the Agency to probe systemic contributing factors, a rule of this type would create greater administrative and legal difficulties than the possible advantage to be gained.
54. The CTAISB Act provides that, in the context of civil proceedings, a court may abridge privileges created for recordings or statements where that court determines that the public interest in the proper administration of justice outweighs the importance of privilege. One of the studies made for this Commission concluded that a reading of the relevant case law demonstrated the courts' willingness to abridge privilege where relevant information was not otherwise available. Gowling, Strathy & Henderson, *Report of Study of Miscellaneous Legal Issues*, *op. cit.*, p. 85.

55. *Swanson Estate v. Canada* [1990] 2 F.C. 619 (T.D. Walsh, J.). At trial, the judge admitted the CASB report as evidence.
56. Although flight crews considered the introduction of technology to record cockpit conversations an extraordinary invasion of workplace privacy, originally they tolerated the introduction of this technology on the understanding it would be used only to promote safety.
57. *Phillips v. Nova Scotia, op.cit.*
58. The *Access to Information Act* R.S.C. 1985 c. A-1 recognizes the importance of safety by permitting the head of a government agency to release third-party technical or commercial information. Section 8 of the *Privacy Act* R.S.C. 1985 c. P-21 allows the TSBC to share information in multinational investigations.
59. *CTAISB Act*, sections 19(9)(b), 19(9)(c), 19(11), 19(13).
60. *Independent Safety Board Act* of 1974, 49 USCS. 1901 (b)(ii) as amended.
61. See, for example, *Baron v. Canada* [1993] 1 S.C.R. 416, per Sopinka, J. at p. 444.
62. *CTAISB Act*, section 10(2).
63. *CTAISB Act*, section 5(2).
64. *CTAISB Act*, sections 8(1)(d), 10(2)(b).
65. *CTAISB Act*, section 8(1)(b)(c).
66. During the July 10-11, 1990 meeting, the Board agreed that the OCRS should have the classification levels A, B and C. During the September 11-12 meeting, the Board considered the OCRS flowchart. At the May 14, 1991 meeting, the Board requested that the OCRS terminology be rewritten to its present form.
67. It is important that policies be accessible because administrative law recognizes that a person's interests may be affected as much by government organizations' policies as by formal regulations. See for example *Re Webb* and *Ontario Housing Corporation* (1978), 22 O.R. (2d) 257 (C.A.) *Council of Civil Service Unions* v. *Minister for the Civil Service* [1985] A.C. 374 (H.L.). In *Goolian v. Minister of Citizenship and Immigration* (1987), 63 D.L.R. (2d) 224, the Manitoba Court of Appeal held that it was a breach of natural justice if a person could not get access to government organizational directives that affected him or her.
68. TSB Decision 4 (June 12-13, 1990) reflects the Board request that a courtesy letter be sent to marine, rail and air IPs at the end of one year, advising them of the investigation status.
TSB Decision 29 (March 13, 1992) in which the Board asserted that, although it was important to co-operate with other authorities, it was essential that the TSBC's investigation remain objective and independent and not be compromised in any way. Consequently, any interference or obstruction to a TSBC investigation would "be dealt with in the terms of the Act in particular, Section 35."
TSB Decision 34 (July 15, 1992) in which the Board stated that where it had jurisdiction to investigate an accident involving the Board staff, appearances of conflict of interest might be avoided by requesting that an independent agency investigate. The chairperson was authorized to identify such occurrences.

69. Section 4(2) of the *CTAISB Act* requires "...[appointment] as members persons who...are collectively knowledgeable about...transportation."
70. Opinion of John Sopinka to the Minister of Transport, February 1988, referred to in *Canada, House of Commons Debates*, April 17, 1989, p. 550.
71. Gowling, Strathy & Henderson, *Report of Study of Miscellaneous Legal Issues*, *op. cit.*, p. 15.
72. *Ibid.*, p. 14.
73. The practice of judges taking a view of accident sites to obtain a better understanding of the circumstances is well recognized.
74. In our discussions in the United States, we heard favourable comment on the concept of legislation explicitly recognizing IPs.
75. Opinion of John Sopinka to the Minister of Transport, February 1988, *op. cit.*, p. 549.

CHAPTER FOUR

Implementation Plan

WHILE "QUIET PROFESSIONALISM" may have served the TSBC well to restore calm to Canada's accident investigation system in the aftermath of the CASB controversy, our review forces us to conclude that although the legislation, with some modification, is basically sound, the organization itself is in need of substantive structural, policy and procedural change.

The future holds many challenges for transportation accident investigation in general and the TSBC's task in particular. The resources of government regulators to monitor safety are shrinking. Transport operators face extreme market pressures which are forcing the separation of formerly integrated marketing, operation and ownership activities. These market pressures are also driving the introduction of new technology and shrinking crew sizes. All such factors, if not properly managed by regulators and operators, could increase the TSBC's workload. Although, in absolute numbers, accidents are declining, increasing passenger and cargo capacities heighten the possibility of fewer but more catastrophic accidents. The TSBC must have plans and procedures in place to master such challenges in the face of continuing internal resource constraints.

Some people have raised questions as to whether a useful review could be conducted of this Agency after only three years. Our findings indicate that Parliament's instincts were correct and that many lessons are already evident. In some circumstances, a longer incubation period would only exacerbate problems. With such significant and critical duties, the TSBC cannot afford the luxury of a longer trial run.

Included among the actions we consider essential is a revamping of the TSBC's report production process which we first mentioned in Chapter 2. In our view, this is so significant that it warrants mention again in our implementation plan. We have developed a model which we believe could streamline and improve the effectiveness of TSBC report production. (See Appendix 1.)

The plan summarized in Table 14 contains all the necessary elements of a successful agenda for action. Sorted by priority and responsibility, our 66 recommendations are clustered according to whether the issue concerns the Board, its jurisdiction, its process, its products or its relationships with the transportation community, both inside and outside government. We match our recommendations relating to these issues with the people who are responsible for their implementation.

Eighteen of our recommendations are addressed to the TSBC Chairperson, 49 to the Board, and 19 to the President of the Privy Council or Parliament. Some are addressed to more than one authority. To accomplish the best results, the Chairperson and Board must work together on 15 recommendations, and the TSBC and the responsible minister should co-operate on three recommendations.

Table 14

Implementation Plan for Our Recommendations

P = administrative or policy action
R = amendments or additions to *CTAISB Act* Regulations
S = statutory amendments
Action on recommendations marked **A** should be implemented within nine months of the release of this Report, those marked **B** within 18 months and those marked **C** within three years.

	Chairperson	Board Members	President of Privy Council/ Parliament
BOARD — Powers, Structure, Staff	P1A, P23B, P24A	P2A, P14B, P15B, P23B, P24A, P64B	S25B, S62B, S63B, S66B
JURISDICTION — Pipelines, Road Transport, Pleasure Craft, Geographical		R43B, R45C	S41B, S42B, S47B
PROCESS — OCRS Investigations, Public Inquiries, Confidentiality	P5B, P6B, P7A, P8B, P33A, P34A, P35A	P3A, P5B, P6B, P7A, P9B, P16B, P17C, P18B, P19C, P20B, R21B, P33A, P34A, P35A	S4B, S55B, S56B, S57B, S59B
PRODUCTS — Recommendations, Other Products, Voluntary Reporting Systems	P40B	P10B, P11C, P12B, P13B, P40B, P48B, P49B, P65B	
TRANSPORTATION COMMUNITY — Governments: MOUs, Co-ordination, Independence	P30A, P31A, P32C	P30A, P31A, P32C, P44C, P52B	S29B, P30A, P31A, P32C, S46B, S58B
TRANSPORTATION COMMUNITY – Industry/Users: Profile, Observers, IPs,	P27B, P28A, P40B, P60C	P26B, P27B, P28A, P36B, P37B, P38C, P39B, P40B, P50B, R51B, P52B, P53A, P54C, P61B	S22B

We assign a high priority to 12 of our recommendations and urge that their implementation be completed or well under way within nine months of the release of this Report. Forty-five recommendations have intermediate priority and should be adopted within 18 months. Except for the completion of MOUs with other government organizations, most of these recommendations can be completed within the existing statutory power of the TSBC.

Nine recommendations are less pressing but still desirable if the TSBC is to act most effectively.

For the most part, the initiative for change rests with the Board itself. The plan, however, requires parliamentary action on two key recommendations. First, Parliament must create the new confidentiality scheme we have designed in Chapter 3. Parliament should as well give the Board the power to end or downgrade an investigation if the Board is satisfied that assigning resources to the particular investigation is unlikely to yield safety lessons.

Parliament must clarify the TSBC's jurisdiction and resolve uncertainties arising from the detailed statutory administrative structure it imposed on the Agency. We fully recognize the complexities of the parliamentary process and timetable, but urge that these changes be given the earliest possible consideration.

We urge strongly that those changes which *can* be made at administrative levels and by regulatory action not wait for statutory amendment. The most important are those which we have coded with priority A in Table 14. They address these vital issues:

- improving readiness for a major accident;
- producing timely reports after an accident;
- reaching understandings with other government organizations; and
- communicating effectively with the transportation community.

The TSBC has spent its first three years attempting detailed remedies to achieve a more efficient process. Many of these are impeding the organization's overall effectiveness. We believe a wholesale reorganization is required now; a much more flexible model must be implemented. No single recommendation in our Report provides the answer. Success will come only from looking upon our recommendations as a network of interdependent solutions. We have structured them with a view to urging co-ordinated action to plan, measure and provide for long-term effectiveness.

We are confident that within two years, our plan will result in a stronger Board and a renewed Agency which will be able to demonstrate its effectiveness and justify its budget. The result will be an integrated transportation accident investigation regime that will include a high-profile Board and an organization that uses risk management effectively to target public resources on the basis of accident and safety trends.

In the end, the challenge to contribute continually to the advancement of transportation safety rests with the TSBC. We hope our Report and its recommendations will make a positive contribution and will benefit both the Canadian public and the TSBC. We believe that with renewed confidence, higher visibility and more flexibility, the TSBC can build on its existing expertise and our proposed changes to mature from a good technical Agency into a good public Agency.

Appendices

Appendix 1

A Model for Streamlining the Process for Production of TSBC Reports

Analysis

We perceive a relationship between TSBC's report timeliness and the shortcomings our reviewers identified in the final reports. Key to this is how the Board presently concerns itself with the form of the report rather than the process and standards by which the substance of that product is developed. Another factor which we perceive is the present minimal communication from the Board to the staff of expected standards for producing reports.

Recognizing that there is overlap between report quality and process effectiveness, we have nonetheless separated our assessment of these two areas.

Improving Report Quality

The most certain guarantee of quality in a product or service is a high standard of work by all members of an organization and a commitment to a philosophy of *getting it right the first time*. The latter is achievable only if everyone in an organization knows and has agreed to do what is expected of them. This requires a consultative process in developing operational policy and quality standards and a clear communication of those standards to everyone involved.

Members of the investigation team must not be treated, as they now appear to be, as mere Interested Parties (IP). This is an important part of the solution. The Investigator-in-Charge (IIC) and the appropriate Director of Investigations (DOI) should be accountable to the Board for investigations conducted. This could be achieved by allocating resources now applied in editing reports to support investigators in report production. Investigators should be assisted in the writing of better reports through training and an organizational commitment to total quality management.

In addition to setting and communicating standards, the Board must reinforce its message through direct contact with staff whenever it believes standards have not been met. The Board, naturally, will have the prerogative of making changes to reports. However, if a change is to be made by the Board to an investigation finding, members of the investigative team should be present to explain and defend their work.

An enhanced level of contact between the Board and the investigators is vital. It is important that the people who conduct the investigations and write the draft reports find out — with a minimum of interpretation by intermediaries — what the Board thinks is wrong in their draft reports and why.

Improving Process Effectiveness

Given the present state of productivity and timeliness of TSBC reports, we believe important changes are required in its report development process. We note that the IP and Board review process which existed in the CASB has strongly influenced the evolution of the TSBC's classification system which in turn determines what the report, in relation to an occurrence, will contain. The nine-member Board at the CASB had only one mode with which to deal. It tried to, but could not, review all the output of investigations. The five-member Board at the TSBC has a four-mode responsibility and thus cannot be expected to deal effectively with all possible occurrences. The report review requirements imposed on the TSBC in the *CTAISB Act* have unfortunately been interpreted in such a way as to clog the process. This interpretation has resulted in a reduction of the level of investigators' output to a fraction of what it could be.

The *Act* calls for Board members to review investigation reports and make findings as to causes and contributing factors. Also, the Board must distribute a copy of the draft report to IPs for review before final release. But this does not require Board members' detailed scrutiny of every draft report. Certainly, the Board should be responsible for the product of the TSBC. This can be better accomplished, however, through developing clear standards and policies for the conduct of and reporting on investigations, rather than through reviewing every investigation report. Report files can be reviewed on an as-needed basis. The Board's review of reports should be extensive when required, and minimal or on an audit basis otherwise. The need for an extensive review can be determined through an examination of IP responses and the level of agreement among all members of the investigative team and support specialists as to the interpretation of occurrence facts.

Although some 4,000 occurrences are reported annually to the TSBC and captured in its data base, there would be no purpose in Board members reviewing each case to make findings. Nonetheless, information with respect to causes and contributing factors for all those occurrences will be relevant to safety analysis.

There is scope for the TSBC to undertake simpler, more assessment-oriented occurrence investigations to verify facts and to gauge causes and contributing factors. Investigators should not be compelled to ignore reporting what may appear to be obvious findings just to avoid the burdens and expense of the present report review process. It counters both logic and intuition to scale full investigations back to mere assessments (because causes are obvious and do not require further investigation) and yet not report on cause findings contained in assessments simply because they have not undergone the review process. Rather than lose such findings, the review process itself should be tailored to meet the requirements of particular occurrence investigations. If the findings are obvious and IPs do not question the facts or the findings, why is there need for a rigorous review?

On the one hand, the review process is burdened with investigation reports which often appear to be designated as reports simply to retain findings in what turn out to be straightforward investigations without safety concerns. On the other hand, investigators are at times underutilized because the process does not take full advantage of their investigative capabilities. We believe the Board should, as it is authorized by the *Act*, delegate the determination of findings as to cause and contributing factors to its staff where such findings are obvious, rather than opting not to report such findings as is now the case for assessments.

We note that in the United States, the NTSB Board and staff together review a small number of reports in public hearings. All other NTSB reports and briefs are reviewed by that Board and published in either summary or synopsis format. The complete file for each NTSB report is available to the public on request. The system is not burdened with an elaborate review process for the bulk of its investigation activities; rather, it focuses its detailed efforts on a few major occurrence investigations.

In addition to the reduction of the number of reports reviewed by the TSBC, we also believe other elements of the report process should be modified.

Our Proposed Report Process Model

Table 15 illustrates the process we have in mind. The focus is on sequence and points of information release. The essential difference from the existing process is that our model has a number of parallel activities and clearly separates the draft accident investigation report from the Board's final report into which the draft will ultimately evolve.

In our model, desired information is made available to those immediately concerned via an expanded participant process at the investigation stage. The process recognizes as well that for some accidents potential participants may choose not to attend the investigation. Within 30 to 60 days of the occurrence, the IIC's factual report should be distributed to all parties with a designated interest, regardless of whether they were involved in the site investigation. This release would be for information purposes only, and recipients would not be required to respond unless significant errors were found. We envisage any subsequent changes to factual statements being noted in a separate attachment to the report as it develops.[1]

The ongoing development of the report, including analysis, findings and safety concerns associated with the accident should be undertaken with the concurrence of the IIC, under the direction of the appropriate DOI. Our model would augment the time allocated to the initial investigation and development of the IIC's report.

Table 15

A New Report Process Taking From 8 Months to 12 Months

Activity			Attribute/ communication	Target recipient
Steps 1 to 5 Take Place Sequentially				
1. Site investigation			Enhanced participation in process	IPs who can take safety action
			News release	Public
2. Follow-up factual investigation				
3. IIC interim factual release (30–60 days)			IP information copy	All IPs
4. Analysis and supporting lab input — IIC draft report				
5. DOI report released			Draft report	All IPs
Steps 6, 7 and 8 Take Place Concurrently	6. Draft safety recommendation	7. IP review	8. Board review/staff hearing if necessary	
9. IIC/DOI review comments				
10. Board review of report/IP hearing if necessary			Discuss comments	IP
11. Board report released			Final report	Public

The fundamental change from the present process occurs at this stage of our model. We believe that the DOI's report should be released directly to IPs for their review, because, while the *Act* calls for review of draft Board reports, we think that at this stage "Board" should be interpreted as meaning the TSBC as a whole. Before

reviewing an investigation report in detail and adopting it, the Board members should wait to see IP comments on the DOI report and evaluate those comments for their possible inclusion in its final report.

The draft DOI report (with any draft recommendations excluded) should be sent to IPs who would, at the same time, be informed that laboratory reports could be made available. The IPs should be asked not only to review the draft DOI report for overall content, but also to comment specifically on safety concerns raised. The IPs would suggest suitable safety actions and indicate any actions they are considering or actually implementing.

In parallel with the IP review, the Safety Analysis group would review the draft DOI report with two objectives. The first objective, on a shorter time line than the second, would be to formulate proposed recommendations (considering any suggestions of the IIC and DOI) and conduct an associated safety impact assessment for consideration by the Board.

The second objective of the Safety Analysis group would be to assess all contributing factors associated with the occurrence in the context of industry-wide trends and circumstances to see if there is any evidence of systemic safety problems. This information should be included in the report wherever possible. Within this framework, we believe that safety analysis related to long-term systemic problems, rather than to specific occurrences, should continue as a function distinct from the report process, and result in findings and recommendations not necessarily related to particular occurrences.

During the time that IPs are preparing their comments, the Board could begin its own initial review of the file and technical data with a complete set of communications and report development materials, including the draft DOI report and attachments. If the Board wished to revise the draft DOI report in a substantive way, it would arrange to meet with the investigative team to discuss the relevant issues. The Board would then review IP comments.[2] Depending on the nature of those comments raised in writing or otherwise, an IP process for consideration of the draft DOI report might be conducted through a public hearing or by less formal means. TSBC staff would either be in attendance or available for such hearings.

This new IP process would take much less time than the present process. The more active participation of at least some IPs in investigations and early circulation of interim factual releases should ensure that the most useful and substantive comments of IPs are received before both the draft DOI's report and the Board's final report are prepared.

We envisage that the overall process should, on average, take between eight and 12 months.

NOTES

1 These could be used for staff training and skill improvements or to inform IPs.

2 We believe that this package of materials, together with the Board's assessment of the draft DOI report and IP comments, should be obtainable under the *Access to Information Act*.

Appendix 2

Description of Commissioned Research Studies and Papers

Technical Studies

1. Hickling Corporation (Ottawa, Ontario) *Comparison of National Level, Non-Carrier Affiliated Accident Investigation Functions*

   This study examines the accident investigation organizations of the United Kingdom, France, Germany, Australia and the United States. Key characteristics of these organizations are compared with those of the TSBC.

2. Hickling Corporation (Ottawa, Ontario) *Review of TSBC's Reporting Process*, Volumes I and II

   Volume I of this report examines the TSBC's reporting process in the air mode and compares it with that of the National Transportation Safety Board (U.S.), commenting on major differences. The focus is on the processes in place within each organization; the volume of incoming occurrence notifications; the treatment of occurrences and reports; and safety actions arising from the occurrences reported. Volume II provides data on the TSBC's investigation and reporting of occurrences related to the rail and marine modes.

3. The Research and Traffic Group (Ottawa, Ontario) *Quality of TSBC Rail Mode Reports*

   This study examines the quality of the TSBC's rail reports, including: rail occurrence assessments, rail occurrence briefs, rail safety advisories, safety information letters and final reports. Thirty-nine representatives from 21 different organizations were interviewed either face to face or by telephone. The findings included the following points. The major railways have serious concerns about the quality of the draft reports; timeliness is seen as a major problem; and the distribution of final reports is concentrated within the National Capital Region — members of the House of Commons and Senate and the national press corps dominate the list of recipients.

4. Lennox Professional Services Ltd. (Gloucester, Ontario) *Quality of TSBC Air Mode Reports*

   This study reviews in detail the quality of TSBC reports in the air mode, particularly through a sampling of industry opinion. The survey results indicate that TSBC reports are generally supported by industry as providing some

benefit to aviation safety. The reports issued by the TSBC are for the most part considered comparable in quality to the previous standard established by CASB reports.

The study brought to light a number of shortcomings: timeliness of TSBC report publication, clarity of reports and the practicality of TSBC recommendations.

5. Marinex Consulting Limited (Halifax, Nova Scotia) *Assessment of Quality of TSBC Marine Reports*

This study, based on direct personal consultations with, and an evaluation questionnaire of, readers and interested parties, assesses the quality of marine occurrence reports. Detailed technical assessments of individual marine mode reports were also done. The findings include the following conclusions.

Reporting delays were the most frequent criticism of TSBC occurrence reports, with the average lapse of time between the date of incident occurrence and report release being 28 months.

There is a need for more and "better" reports, bulletins, safety advisories and other information for the marine industry. Extremely fragmented with numerous committees dedicated to safety, the industry relies on investigation reports to take their own remedial action over and above any recommendations of a major nature which have been made by the Board.

6. D.R. Harley Consultants Ltd. (Ottawa, Ontario) *Stakeholder Perceptions of the Transportation Safety Board of Canada*

This study surveys the perceptions of the TSBC's profile and reputation in both the transportation and broader public communities. Variations in these perceptions within and among the stakeholder groups are also identified. The methodology included telephone interviews with 35 respondents involved in selected occurrences; executive interviews conducted face to face with stakeholders who have a continuing relationship with TSBC staff or Board members; an expert review of 12 TSBC publications; and an analysis of media coverage of selected TSBC investigations. In general, awareness of the TSBC by respondents within the transportation industry and those individuals involved in accident investigations (police, medical, insurance, media) was high, while awareness among the other respondents was considerably lower.

7. IBI Group (Toronto, Ontario) *Measurement of Safety Effectiveness — Rail*

To the extent that existing data permit, this study identifies the key actions taken in the rail mode to improve safety and traces the impetus for these actions. Particular attention is given to the examination and evaluation of data bases. The findings include the following two points. Of the data bases

available in Canada and the United States on rail occurrences, the most versatile for the purposes of the TSBC is RAPIDS — the new rail data base developed by staff of the TSBC. And, the improvement in safety performance of the Canadian railways between 1980 and 1991 has been quite remarkable — the average annual decrease in the derailment rate from all causes was over 10 percent.

8. University of Montreal (Montreal, Quebec) *Measurement of Safety Effectiveness — Air*

   This report discusses procedures for measuring the level of air safety; exposure to risk; Canadian and international data available on occurrences; and certain actions and their origins that have contributed to improving air safety. The report identifies the main sources of national and international data on accidents and incidents, and assesses their relevance for measuring air safety. It first examines the various air safety measurements and identifies the ones the TSBC uses in its official analyses and reports. A key finding was that the TSBC should insist that carriers submit information on the number of departures they make outside the area designated by the *National Transportation Act*, 1987. The report also suggests that the TSBC should make maximum use of the data from information reports on airworthiness; it is possible to obtain from Transport Canada breakdowns of data on hours flown with a view to calculating much more specific information on accident rates; and the TSBC should consider using data on aircraft movements in Canada and from the Canadian Automated Air Traffic System which should be operational in 1995.

9. Melville Shipping Ltd. (Ottawa, Ontario) TSBC — *Measurement of Safety Effectiveness — Marine and Pleasure Craft*

   This report identifies the sources and content of domestic and relevant international data bases on occurrences; assesses the limitations of historical data in supporting safety analysis; and the role which the TSBC plays in promoting better data development. The findings include the following points. Effective measures for identifying trends in the data are not readily available for any of the marine operations. Pleasure craft are not covered by the TSBC, and there appears to be a need for some additional statistics. Delays in final report release are compensated, to some extent by issuance of marine safety advisories, marine safety information letters and interim recommendations. Industry fragmentation is something which must be considered in the TSBC's communication to Interested Parties, in making recommendations and in discussing safety concerns. Recommendations made to improve safety are not always practical.

10. Pearmain Partners (Ottawa Ontario) *A Review of Resource Allocation in the Transportation Safety Board of Canada*

    This study reviews the allocation of human and financial resources within the TSBC. The methods used to make these allocations are also examined for the study period fiscal years 1990-91 to 1992-93 and estimates for fiscal year 1993-94. The study was carried out by means of interviews with senior management of the Board, with Directors of Investigation and with regional Air Investigation Managers. Extensive review was made of financial and person-year utilization data. The findings included several points. There is a lack of adequate guidelines in the area of resource allocation and little relationship between resource inputs and outputs. Expenditures have remained level in terms of current dollars. Risk analysis is not used routinely to assess occurrences, and there are inadequate resource utilization data to support resource allocations.

11. Baggaley and Bell Associates (Ottawa, Ontario) *The Transportation Safety Board Advancement of the Safety Mandate*

    In safety studies and promotion, this report examines the mandate, level of effort and quality of work at both the TSBC and Transport Canada. The report also recommends how several areas of overlap and duplication of effort between the two organizations could be reduced. The findings included several key points. Senior TSBC and Transport Canada officials have a clear understanding of their respective mandates in safety promotion and analysis. The private sector indicates an awareness of the TSBC mandate to investigate and the Transport Canada mandate to regulate, enforce and promote, but lacks the detailed awareness to comment on any perceived overlap of the two agencies. Most agreed that the current safety functions of the two do not require significant change.

12. Transmode Consultants Inc. (Toronto, Ontario) *Highway Transportation Safety*

    This study investigates the effectiveness of the current federal delegation of responsibility to the provinces for interprovincial trucking in the context of accident investigation and safety advancement. The study also discusses the policy implications of an expanded federal role in these areas. To address these areas, the study encompassed three parts: a comprehensive review of the Canadian and U.S. highway safety regimes, a look at the safety environment in other modes to evaluate the existing highway safety regime in Canada against the effectiveness of the overall system, and a discussion of the alternatives, issues and implications of rearranging the present system, predicated on a larger federal role. A key finding of the study was that the Canadian highway safety record is similar to that of the United States in terms of fatality rates per population. In Canada, the commercial vehicle safety record, relative

to all vehicles, has improved since 1986 when all levels of accident severity (i.e., fatality, personal injury and property damage) are considered. However, commercial vehicles demonstrate, over time, a slowly increasing involvement in collisions resulting in fatalities compared to all other vehicle classes. Commercial vehicle accidents may be relatively less frequent, but when a commercial vehicle accident occurs, it tends to be more serious.

Papers

1. Peat Marwick (Montreal, Quebec) — *CTAISB Act Review Commission Focus Paper*

   This paper, commissioned early in the review, highlights important issues related to the operations of the Transportation Safety Board of Canada and compliance with the *Canadian Transportation Accident Investigation and Safety Board Act*. This paper was not intended to contain an exhaustive list of issues, but rather to promote reflection on issues.

2. John Shortreed (Institute for Risk Research, University of Waterloo) and R.S. Wallace (Ottawa, Ontario) — *Measuring Safety and Risk Analysis*

   This paper provides an overview of methods used in risk management for the measurement of safety and the analysis of risk. The findings included two points. The Transportation Safety Board should be using the risk management framework as defined by documents such as CAN/CSA-Q634-91. Reliance on the traditional approach to safety is likely to be ineffective.

3. F.F. Saccomanno, Ph.D. (Waterloo, Ontario) — *Perspective on Large Truck Highway Accidents*

   This paper addressed three commonly held perceptions: larger and heavier trucks are involved in more accidents and these accidents result in a disproportionate number of deaths and injuries, competitive pressures lead to drivers taking undue risks that result in accidents, and car occupants are at greater risk in car-truck crashes.

4. Sypher:Mueller International Inc. (Ottawa, Ontario) *Trends in Aviation that Will Impact the Transportation Safety Board*

   This report discusses a selection of potential trends which may influence the mandate of the TSBC's aviation accident investigation function, including future demand levels for aviation; the introduction of new navigational and aircraft manufacturing technologies; economic pressures; and institutional changes such as the globalization of carriers and privatization of airports and air traffic services.

Appendix 3

Description of Commissioned Research Studies

Legal Studies

1. Fraser & Beatty, Barristers & Solicitors (Ottawa, Ontario) *Measuring the* CTAISB Act *Against the Recommendations of Recent Major Transportation Inquiries in Canada*

This study is a synthesis of the recommendations of previous major federal transportation inquiries, as summarized in Table 1 of this Report, and a section by section correlation of the present *CTAISB Act* to those recommendations. The study examines the *Act*'s implementation of such recommendations.

The study finds that the *Act* generally reflects the Agency structure and independence recommendations made by the Sopinka, Dubin and Deschênes reports, but does not implement the Foisy report's separation of rule-making from supervision, enforcement and investigation. The *Act*'s resolution of the relationship between the Board and Transport Canada is in accordance with recommendations made by the Dubin and Sopinka reports.

While the Board does make its final report available to the public (Dubin, Deschênes and Hickling reports), it does not open its entire process and preliminary findings to the public. Limited third-party observer status is in accordance with the Dubin report recommendation. The provision for Interested Party (IP) representations pertaining to the draft report is contrary to the Moshansky report's recommendation, the scheme of full IP participation advocated by the same report has not been legislated, and, overall, fewer limits are placed on the Board than advocated by that report. However, present IP rights to make representations on the draft report and the Board's obligation to respond meet the generally expressed opinion that it is important that Interested Parties be able to make useful representations to the Board.

The *Act*'s delineation and distribution of powers among the Chairperson, Board members, and the Directors of Investigations (DOI) significantly reflect the Sopinka report's recommendations. The exclusive authority given the DOI in respect of investigations is a reflection of the explicit recommendations of the Deschênes and Hickling reports.

The study concludes that the *CTAISB Act* implements the Dubin and Deschênes reports' privilege recommendations.

2. Fraser & Beatty, Barristers & Solicitors (Ottawa, Ontario) *The* CTAISB Act: *Has It Successfully Addressed the Problems Identified to Exist in the Legislation/Agency It Replaced?*

   This study measures the effectiveness of the *CTAISB Act* and the Board in addressing the problems identified in respect of predecessor agencies and investigates whether any new problems have arisen.

   At its outset, the study identifies four basic policy objectives in the legislative creation of the Board. Although it concludes that the new legislation is a satisfactory response to those objectives, and to the problems experienced with the *CASB Act* and the CASB itself, certain inadequacies are found in respect of the structure and administration of the current legislation, and in respect of the Board's activities and relationship with its staff. In particular, the preferential status given ministerial observers in the current Regulations is problematic; the current TSBC public inquiry is not an adequate substitute for a full-blown judicial inquiry; and in respect of the Board's oversight of the investigative process, there are aspects in need of improvement.

3. Gowling, Strathy & Henderson, Barristers & Solicitors (Ottawa, Ontario) *Report of Study of Miscellaneous Legal Issues Arising out of Various Public Policy and Other Trade-Offs which Affect the Structure and Mandate of the Canadian Transportation Accident Investigation and Safety Board*

   This study considers the *CTAISB Act*, examining, among other issues, the Board's mandate, legal and constitutional issues raised by the investigators' powers under the *Act*, resolution of competing claims for confidentiality and sharing of the information gathered by the Board.

   The study finds that the TSBC's closed investigations merit the greatest criticism based on the *Canadian Charter of Rights and Freedoms* because of the extent of their departure from a due process model. While the investigators' powers to compel evidence will not, in the general case, offend the *Charter* protection against self-incrimination, problems may arise where the individual testifying has been charged with a criminal offence, or is the subject of criminal investigation. In a similar vein, the study recommends repeal or amendment of those provisions in the *Act* which require the Board to forward evidence it has gathered.

   The statutorily prescribed standard for prior authorization by warrant may not meet the *Hunter v. Southam* standard. Moreover, the lack of a system of prior authorization of the exercise of the investigators' powers to compel medical examinations, production by a physician of patient information and release of a body for post-mortem examination is identified as a significant failing.

The *CTAISB Act*'s present scheme of confidentiality is problematic in respect of its constitutionality, consistency and practicality. The study recommends changes to the confidentiality presently attaching to on-board recordings, communication records and statements in general. Still, the necessity of some guarantee of confidentiality to encourage reporting must be balanced against the necessity of verifying the information thus received by the Board. The study also warns of the possible danger of privileged information escaping through an investigator's affidavit evidence.

Jurisdictional overlap with other federal departments and agencies ought to be resolved through the conclusion of Memoranda of Understanding, and the study notes, with approval, that such MOUs are under negotiation. The study also concludes that nothing would be gained by pursuing exact uniformity of terminology across all interacting legislation.

4. Paterson, MacDougall, Barristers & Solicitors (Toronto, Ontario) *Developing an Enhanced Process for Marine Accident Investigation and Safety Promotion in an Increasingly Global Transportation System*

This study considers and compares the marine accident investigation schemes in Canada and several other maritime nations, and examines areas for improvement demonstrated by investigations into several major international marine accidents.

With respect to the overall Canadian scheme, the study notes jurisdictional confusion between the TSBC and the Canadian Coast Guard.

Internationally, the study considers the International Maritime Organization's (IMO) accident reporting and listing system but is critical of the limited effect of the Organization's Resolution A.637 (16) which addresses co-operation in casualty investigations.

In general, there is a large measure of co-operation between maritime nations with respect to accident investigations, and genuine efforts are made to comply with existing international conventions and resolutions. Still, difficulties arise where national legislations differ, particularly where one participating nation holds that the safety promotion is the primary investigative purpose, while another nation's investigations deliberately lead to criminal and/or disciplinary sanctions. The study concludes that in all the countries considered, including Canada, disciplinary and criminal sanctions are a possible outcome even if indirectly. In the end any protection officially afforded a witness against such eventualities is illusory.

The evolution of the marine accident investigation process has been toward a more public and more participatory model in Canada, Australia, the United Kingdom and the United States, and a similar evolution is following, or likely to follow, in the Netherlands, France and Germany. Despite

its recognition of difficulties created by existing divergences in national approaches to marine accident investigation, the study concludes that such differences are not a fundamental hurdle to a meshing of processes by way of international convention.

The study asserts that there should be a single convention governing marine accident investigation governed by the IMO, and that effective guidelines should replace what is presently a system of co-operation dependent on good will. The ICAO Annex 13 is a useful model for the strengthening and improvement of IMO Resolution A637(16), and has in fact played a role in the noted pending amendment to the Resolution.

5. Lavery, de Billy, Barristers & Solicitors (Montreal, Quebec) *Aviation Accident Investigation and Safety Promotion in an International Context*

This study discusses means for the advancement of trans-national accident investigation and safety promotion. Its analysis is based on a detailed examination of the development of the current air mode scheme and ongoing developments. Particular focus is given to Article 26 of, and Annex 13 to, the Chicago Convention.

Based on its examination of the compatibility of TSBC and International Civil Aviation Organization (ICAO) procedures and practices, the study concludes that the *CTAISB Act* and Regulations generally exceed international requirements, although there are divergences in respect of record disclosure, the obligation to investigate, appointment of public inquiries and dealing with other states' comments on Canadian investigation procedures.

The study provides a generally positive review of Canadian involvement in the investigation of aviation accidents outside Canada and foreign involvement in the investigation of aviation accidents within Canadian territory, although the theoretical potential for complications is noted.

The study concludes with a look at the adoption of recommendations amending Annex 13 made at the February 1992 ICAO Accident Investigation Divisional Meeting, and recommends future international co-operation through the auspices of the ICAO.

6. Connell, Lightbody, Barristers & Solicitors (Vancouver, British Columbia) *The Relationship Between the* CTAISB Act *and Other Transportation Legislation — Can and Should the Legislative Regime Pertaining to Accident Investigation and Safety Be Further Rationalized?*

This study examines various federal and provincial regulatory statutes and bodies which deal in the regulation and enforcement of transportation safety and accident investigation. Such examination is directed toward an identification of instances of overlap, duplication and gaps in the overall legislative scheme, and toward further rationalization of the existing scheme.

In its general discussion of duplication and overlap, the study raises the public interest issues of expense of time and money by those investigated, public confidence in and co-operation with an apparently duplicative or confusing regime, and potential for witness self-incrimination and abuse of process.

Overall, despite findings of duplication and overlap with other bodies that have more extensive mandates and corrective or remedial powers than the TSBC, both the TSBC and all the other statutory bodies should be maintained. However, the study found a statutorily irreconcilable jurisdictional conflict with the *National Energy Board Act*, and a need for better co-ordination with other federal and provincial investigatory bodies.

Appendix 4

Expert Evaluation Questionnaire

The evaluation questionnaire was developed independently for the assessment of accident investigation reports.* It was provided to each reviewer along with the relevant TSBC reports. Neither the TSBC Investigators-in-Charge nor others involved in the report development are identified in the reports. The reviewers were asked to use the form for consistency and to add separate comments on topics not covered by the form or requiring elaboration.

1. Are there sections in the report you had to read several times in order to grasp their meaning or their bearing on the accident?
   [ ] No [ ] Yes (Identify these sections and your problem with them)

2. Does the report contain the illustrations (diagrams, charts, etc.) needed for the understanding of complex technical matters?
   [ ] Yes [ ] No (Explain)

3. Did the study of the report answer all your questions about: (1) What happened, (2) How it happened and (3) Why it happened?
   [ ] Yes [ ] No (Explain which of your questions remained unanswered)

4. Are all reasonable hypotheses (accident theories) developed, evaluated and presented to your satisfaction?
   [ ] Yes [ ] No (Explain)

5. To the extent that behavioural factors played a role in this mishap, was a reasonable attempt made to identify the controllable elements of this behaviour?
   [ ] Not applicable [ ] Yes [ ] No (Explain)

6. Is the report balanced with regard to the amount of coverage devoted to the various elements of the accident and its consequences?
   [ ] Yes [ ] No (Explain)

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* Adapted by G.M. Bruggink from: *In Support of Investigation Authorities*, Bruggink G.M. (ISASI Forum, Fall 1981).

7. Is there logic and consistency in the report, that is, does the factual evidence and its analysis fully support all the findings?
   [ ] Yes [ ] No (Explain — See also the next question)

8. Based on the evidence presented in the report, would you have made additional findings, or would you have modified or deleted some of the findings?
   [ ] No [ ] Yes (Explain)

9. Does the report present significant crash injury and survival data in sufficient detail to judge the effectiveness of existing protection criteria, procedures and equipment?
   [ ] Not applicable to this case [ ] Yes [ ] No (Explain)

10. Does the causal statement address all correctable elements of the accident mechanism?
    [ ] Yes [ ] No (Explain)

11. Are all safety recommendations supported by concrete evidence of a specific and controllable problem?
    [ ] Yes [ ] No (Explain)

12. Does the wording of the recommendations allow the action agency sufficient latitude to achieve the desired objective in the most efficient way when the investigating authority is unsure about the available options?
    [ ] Yes [ ] No (Explain)

13. Are any of the recommendations so broad in nature that it is impossible to monitor the progress and completion of their implementation?
    [ ] Yes [ ] No (Explain)

14. Are there aspects of the investigation that you consider extremely well, or poorly, handled?
    [ ] Yes [ ] No (Explain)

15. Recognizing that an accident report may not do justice to the depth and completeness of the total investigative effort, how would you characterize the overall quality of the investigation as reflected in the report?
    [ ] Excellent [ ] Adequate [ ] Lacking in some areas (Explain)

16. Do you have any suggestions for the application of investigative techniques or procedures that might have been of assistance to the investigation team?
    [ ] Yes [ ] No (Explain)

Appendix 5

Letter of February 3, 1988 from John Sopinka, Q.C. to the Minister of Transport

[During the 1988-89 debate which led to the creation of the TSBC, the following letter to the Minister of Transport re the CASB was but one point of view available for consideration by members of Parliament. While Commissioners do not endorse this letter in its entirety, it is revealing and of interest as a policy document].

[JOHN SOPINKA, Q.C.
Counsel to
Stikeman, Elliott]

3 February 1988

The Honourable John C. Crosbie
Minister of Transport
Transport Canada Building
Place de Ville
330 Sparks Street
Ottawa, Ontario
K1A 0N5

Dear Mr. Crosbie:

Re: Canadian Aviation Safety Board

INTRODUCTION

By letter dated December 16, 1987 I was retained as a consultant to provide you with policy and policy-related advice in respect of the proposed Act relating to the Multi-modal Transportation Accident Investigation Board. The terms of reference required that I review the structure, planned role and separation of powers and authorities of the Chairman, Board Members and Directors of Investigation of the proposed Board.

My review consisted of an examination of the documentation referred to in the terms of reference, interviews with the Chairman of the CASB, its members, members of the drafting team, representatives of the Hickling group, a legal advisor and a member of the NTSB, as well as numerous interested parties. I have also read and considered the submission of the CBA.

Problem Areas

Very early in my review I identified certain problem areas which I will address in this report. The main problem, generally stated, is that the CASB is not operating as a cohesive unit in pursuance of its object of identifying safety deficiencies and making recommendations to remedy them. Rather it has become fractious to the extent that some of its members are in open conflict with the Chairman and there is a rift between members and the accident investigators who view themselves as independent of the Board members.

The result of this dissension is that many members of the Board feel powerless to carry out their mandate. On occasion some of the Board members have been unable to obtain investigation of facts which they consider essential in order to carry out their function. The investigators have taken the position that the material upon which the Board is to operate is the report prepared by the investigators. Suggestions or requests that the investigators examine other facts or causes have been met with the observation that the investigation is exclusively within the prerogative of the Director of Investigations.

I have observed that, in the position they have taken, the investigators are supported by the Chairman. The latter has interpreted the provisions of s. 5 of the CASB Act and the provisions of Public Service Employment Act and the Financial Administration Act as conferring on him virtually exclusive power to run the Board and its staff subject to his right to delegate to Board members such powers as he deems appropriate. This view does not extend to the Board's power to review the accident reports but as I point out because of the limitations placed upon the Board members by the Director of Investigations the Board is precluded from conducting a meaningful review in many instances.

The discontent of the Board is exacerbated by the fact that although there are able and well qualified persons on the Board there is not enough for them to do having regard to their limited role and the number of persons on the Board.

There is still concern by the industry that the Board is not sufficiently independent of Transport and that there is an appearance of conflict. This is no doubt partly due

to the splintering of the role of the Board as noted above. Since the investigators have not been firmly placed under the control of the Board it is more difficult to view them as having been separated from Transport. In addition there are several other factors which are alleged to contribute to the perception of a conflict of interest.

The investigators are dependent on Transport Canada for career progression inasmuch as the CASB is not large enough to permit them to rise in the ranks. They may therefore be seen as keeping one eye on their own advancement and therefore tending to soften their criticism of Transport Canada. The fact that the CASB reports to Parliament through, and has its estimates presented by the Minister of Transport, has also been referred to as contributing to the appearance of conflict.

Finally the view in the industry is that the competence of the investigators and the quality of their investigations and reports has deteriorated in recent years. Some feel that there is insufficient investigation of human factors and that the Board lacks technical expertise and facilities. The investigators, on the other hand, complain that they spend valuable time attending as witnesses in court or at coroner's inquests.

Not all of these problems, particularly the last, can be solved by changes in the legislation. Much of the success of the future Board, as in the case of any body or organization, will depend on the quality of people appointed and the resources provided. I have however identified a number of specific areas within the ambit of my terms of reference which will aid in the ameliorization of the problems referred to above.

I Respective Powers and Duties of the Board and Chairmen

II The Relationship of the Director of Accident Investigation and the Board

III Independence of the Board from Transport Canada

IV The Name of the Board

V The Number of the Board

VI Procedural Fairness - Circulation of Draft Reports

VII Investigators as Witnesses

I will deal with each of these referring, where possible, to the findings and recommendations of the Hickling Report and how the matter is dealt with in the Draft Act followed by my comments and recommendations.

I RESPECTIVE POWERS AND DUTIES OF THE BOARD AND CHAIRMAN

HICKLING: Findings

The report contents itself with providing an interpretation of the current Act. The Report states:

> In this regard, some provisions of the CASB Act invite various interpretations. In part at least, this because (sic) the wording of the Act does not distinguish between 'board' as a synonym for CASB and 'board' as a synonym for the CASB board. Absent is a statement of the philosophy underlying the Act.
>
> However, it is clear, and we so find, that the Chairman, as Chief Executive Officer of the CASB, is alone responsible for the supervision and direction of the work and staff of the CASB. He may delegate to others on the board or staff of the CASB any and all tasks, in regard to direction and supervision, that he would be able to carry out as CEO. (Summary, page 8)

Inasmuch as the report finds that "there is a fundamental split within the CASB about the roles of the Chairman and other Board members" it is not productive to simply accept the present Act as a given. It is necessary to determine whether the provisions of the present Act have caused or contributed to this split and to recommend change.

Furthermore I am perplexed by the statement in the first paragraph quoted above that "the Act does not distinguish between 'board' as a synonym for CASB and 'board' as a synonym for the CASB board." I do not see the distinction between the "Canadian Aviation Safety Board" and the "Canadian Aviation Safety Board Board".

HICKLING: Recommendations

The only recommendation is (iv) on page 13, which is as follows:

> iv) distinguishing clearly between the TAIB (as corporate legal entity) and the board members collectively.

I do not agree that there is a distinction or that one is necessary.

DRAFT ACT

Section 5

This section and the use of the word Chairman in place of Board in other sections strengthens the role of the Chairman and makes the Chairman more independent than did the CASB Act.

Sections 7 and 11

Section 7 sets out the objects of the Board but does not state that it has the power to carry them out. Indeed as a result of the limitations placed on it the "Board" as such does not have the power to carry out its objects.

Section 11(3) entrenches this limitation by omitting any reference to the object of the Board, stated in section 7(1)(a), i.e. conducting independent investigations.

In my opinion the Board must be given the power to carry out its objects although that power may and should be delegated in part to the Chairman and the Director of Investigations. I will elaborate on this hereunder.

COMMENTS

In recommending an independent Aviation Safety Board the Dubin Report envisaged a strong board which would function as a unitary investigatory body. It is fundamental to its image as an independent body that its direction be vested in a board and not one individual. The board is an investigatory body and its sole function is to determine the facts as to the cause or causes of an aviation occurrence and to make recommendations to promote safety. It has no adjudicative role and therefore it is erroneous to speak of its quasi-judicial function. Its role is similar to that of a public inquiry under the Public Inquiries Acts. In an inquiry while the evidence is assembled by the staff it is done under the general direction of the commissioner. No separation between the commissioner and his staff is required because the commission operates as a single investigatory unit.

The CASB Act as it has been interpreted in practice and by the Hickling Report has fragmented this agency to such an extent that it has crippled its effectiveness. This has served to make it appear less independent. This state of affairs would be exacerbated by the provision of the Draft Act referred to above.

In my opinion there is no point in appointing a Board of five members unless they are to be the ultimate authority to do the job. The concept that was intended by the **Dubin Report** was a Board under whose direction accidents were investigated.

Although the appointment and supervision of the investigators and other staff and the conduct of investigators would be delegated to the Chairman and Directors of Accident Investigation respectively, these functions would be performed under the general policies and procedures adopted by the Board. In this connection I note that the **National Transportation Safety Board Act** provides in part as follows:

> (a) The Board shall —
>
> (1) investigate or cause to be investigated (in such detail as it shall prescribe), and determine the facts, conditions, and circumstances and the cause or probable cause or causes of any —
>
> (A) aircraft accident which is within the scope of the functions, powers, and duties transferred from the Civil Aeronautics Board under section 1655(d) of this title pursuant to title VII of the Federal Aviation Act of 1958, as amended; etc.

Authority over field investigation has been largely delegated to investigators.

RECOMMENDATIONS

Based on the above concept I recommend that **Sections 5, 7 and 11** be amended as follows:

(1) Section 5 be replaced by the following:

S. 5(1) The Chairman is the Chief Executive Officer of the Board and subject to section (2) hereof, shall have responsibility for the administration of the Board and such powers and duties as are delegated to him by the Board.

(2) In exercising the powers conferred on him by subsection 1, by the **Public Service Employment Act**, and the **Financial Administration Act** and by this Act, the Chairman is subject to and shall act in accordance with the general policies, resolutions, rules and regulations of the Board.

(3) In the event of the absence or incapacity of the Chairman, or if there is no Chairman, the Governor-in-Council may authorize a member to act as Chairman for the time being and a member so authorized, while so acting, has and may exercise and perform all the powers and duties of the Chairman.

For administrative purposes the **Public Service Employment Act** and the **Financial Administration Act**, the Chairman is vested with authority to appoint, promote and remunerate the staff. (Details are set out in a memo to me from Rhoda Barrett which is attached as Appendix 'A'.)

Although not dealt with in the findings of the Hickling study these two statutory provisions are in part the source of the claim to exclusive power of the Chairman over staff, including investigators. I am of the view that no change to those Acts would be necessary. They would still delegate administrative matters to the Chairman who would carry them out subject to the general direction of the Board.

Alternatively in delegating this power to the Chairman a condition to this effect could be imposed by the Public Service Commission and the Treasury Board respectively. If this is considered inappropriate a consequential amendment to those Acts may be necessary.

(2) S. 7(1) be redrafted as follows:

S. 7(1) The object of the Board is to advance transportation safety and in furtherance thereof the Board is empowered:

(a) to conduct independent investigations and, if necessary, public inquiries into transportation occurrences in order to make findings as to their contributing factors and causes;

(b) to conduct independent studies with respect to transportation occurrences;

(c) to identify safety deficiencies through investigations and studies of transportation occurrences;

(d) to report publicly on its investigations, public inquiries and studies and on the findings in relation thereto;

(e) to make recommendations designed to eliminate or reduce safety deficiencies.

(2) In determining the factors which caused or contributed to a transportation occurrence it is not the function of the Board to assign fault or determine civil or criminal liability provided that the Board shall not refrain from fully reporting on the cause or contributing cause because fault is incidentally inferred thereby.

(3) No finding of the Board in relation to a transportation occurrence shall be deemed or construed to be a determination or apportionment of fault or liability.

Section 7 is amended to make it clear that the Board has power to carry out its objects. Subsection[s] (2) and (3) are added to ensure that the prohibition against finding fault and liability do not unduly inhibit the Board while providing adequate protection to affected parties. In this regard I have been impressed by the opinion of Board members and others which is summarized by the following finding of the Hickling Report:

"too much effort is made to avoid attributing blame, thereby undermining the overall effectiveness of the CASB's work."

No recommendation is made however in the report and the **Draft Act** does not address the subject.

(3) Section 11(3) be amended by adding to it as the first lettered subsection the following and re-lettering the remaining subsections (b), (c) and (d) respectively:

S. 11(3)(a) establish policies, rules and procedures for the conduct of investigations and for the role and participation therein of investigators, observers and Board members.

The policies, rules, etc. adopted by the Board will typically leave the onsite investigation under the direction of the Directors of Investigation. A Board member may be assigned to an investigation as in the practice of the NTSB.

II THE RELATIONSHIP OF THE DIRECTOR OF ACCIDENT INVESTIGATION (DOI) AND THE BOARD

HICKLING: Findings

The report correctly finds that the DOI is, by virtue of the Act, independent of the Board. (Summary, page 9)

HICKLING: Recommendations

Provisions to ensure the independence of the investigative and adjudicatory functions of the TAIB from one another. This can be achieved by:

i) having each of these functions report separately through the Minister,

ii) creating a clear distinction in the wording of the Act between the adjudicator (the board of the TAIB), the Director of Investigation and other staff functions,

iii) setting out the respective roles and responsibilities of these functions and the Chairman in either the legislation or regulations; and

iv) distinguishing clearly between the TAIB (as corporate legal entity) and the board members collectively. (Summary, page 13)

There is no analysis of the wisdom of this separation but is apparently based on the answers to the questionnaire (page 40 - Report), the results of which are dominated by the staff, who have an interest in wishing to be independent.

DRAFT ACT

Section 9 of the **Draft Act**, as did the **CASB Act**, vests exclusive authority over investigations in the DOI. It provides for appointment of investigators and the DOI by the Chairman.

COMMENT

The rationale for separation of the investigators from the Board is that the Board is adjudicating on the findings of the investigators. This is an erroneous concept. The Board is an investigatory body and its report is not a judicial or quasi-judicial finding. Indeed the Act expressly prohibits the Board from finding fault or liability. The field investigation and the preparation of the report of the Board are one process and should not be bifurcated. In recognition of this and the fact that the Board bears the responsibility, ultimately, for the quality of the reports, it should appoint the DOI's.

To the extent that separation of the investigative and so-called adjudicative stages is supported on the basis of American and English experience (a brief reference is made to this in Hickling), I point out that:

(1) The NTSB is required by its Act to

> "investigate or cause to be investigated (in such detail as it shall prescribe), and determine the facts, conditions and circumstances and the cause or probable cause or causes of any—
>
> (A) aircraft accident which is within the scope of the functions, powers, and duties transferred from the Civil Aeronautics Board under section 1655(d) of this title pursuant to title VII of the Federal Aviation Act of 1958, as amended; (S. 1903)

If the investigator in charge (IC) is allowed to take exclusive control of the field investigations it is because the Board has delegated this function to him. (See s. 831.1, 49 C.F.R. Ch VIII (10-1-86 Edition))

In fact during the Dubin Inquiry, and recently, I was advised by the NTSB legal counsel and Board members that the "IC is very flexible" and would not challenge the Board if it sought to make suggestions. No doubt this is because he knows that he is a delegate on the Board.

(2) In England, traditionally, there has been no permanent Board. Board members are appointed ad hoc and have acted as if they are adjudicating. This is not our concept and cannot be simply transplanted to Canada.

Finally I note that the CBA, in its Working Paper entitled "Submission on Transport Accident Investigation Board Bill" states in part:

> "The section is strangely silent on the question of who appoints the Director. It should be clear that it is the Board, for otherwise the independence of the board is directly threatened.
>
> It should be clear that the Director performs any assigned functions on behalf of the Board which must be seen to retain the overall responsibility for all aspects of its mandate.

It is important with respect to this last point to avoid a bifurcation of responsibilities and powers. Thus, with the Director being appointed by the Board, the Act should then avoid conferring powers or authority on the Director in any manner that could tie the Board's hands. It is a mark [of] independence that a tribunal controls its own procedures."

RECOMMENDATIONS

S. 9(2) Redraft by substituting Board in place of Chairman in the second line. In order to conform with the Public Service Employment Act and the Financial Administration Act 9(1) remains the same but, as pointed out above, the Chairman acts subject to the limitations of s. 5.

S. 9(3) Redraft by adding at the end "all subject to and in accordance with the policies and rules of the Board."

III INDEPENDENCE OF THE BOARD FROM TRANSPORT CANADA

Reporting Minister

HICKLING: Findings

Reporting through the Minister of Transport creates an appearance of conflict. (Summary, page 2)

HICKLING: Recommendations

None

DRAFT BILL

Section 2 — definition section. Define 'Minister' to mean such member of the Queen's Privy Council as is designated by the Governor-in-Council.

COMMENT

The Cabinet would ordinarily designate a Minister knowledgeable about the work of the CASB and it could be the Minister of Transport. I do not therefore disagree with this provision. It is in accordance with the Dubin Report.

RECOMMENDATIONS

No change.

Observer Status for Transport Canada

HICKLING: Findings

The provisions of CASB whereby the Minister of Transport is empowered to "appoint a representative to attend at any investigation" — creates an appearance of favouritism inasmuch as no other party is accorded the same consideration. (Summary, pages 2-3)

HICKLING: Recommendations

None

DRAFT ACT

Section 22

(2) Subject to conditions imposed by the Board a person designated by the Minister may attend an investigation as an observer.

COMMENT

Under s. 11 (3) (a) the Board can provide for observer status for others. No doubt any party with the same interest as Transport Canada will be recognized. The provision in s. 22(2) simply recognizes that Transport Canada has an interest in every occurrence. No other party is in the same position. Parties with a similar interest must be determined ad hoc because they will be different for each accident. It is not a case of favouritism but a recognition of this fact of life.

An appearance of conflict is defined as follows by the Supreme Court of Canada in Committee for Justice and Liberty v. NEB, [1978] 1 S.C.R. 369:

> ...the apprehension of bias must be a reasonable one, held by reasonable and right-minded persons, applying themselves to the question and obtaining thereon the required information. In the words of the Court of Appeal [at p. 667], that test is 'what would an informed person, viewing the matter realistically and practically — and having thought the matter through — conclude.' (p. 735)

and at p. 741:

> ...what would a reasonable and right-minded person have discovered if he had taken the time and trouble of informing himself of the true situation.

No reasonable person in possession of the basic facts would conclude that the investigators were biased just because Transport Canada has observer status.

Investigator Career Opportunities in Transport Canada

HICKLING: **Findings**

Career opportunities in Transport Canada for investigators have potential to influence findings. (Summary, page 2)

HICKLING: **Recommendations**

None.

DRAFT ACT

No provision.

COMMENT

RECOMMENDATIONS

The perception that an investigator will favour Transport Canada because he has one eye on the job with Transport Canada would be eliminated if an investigator were prohibited from accepting employment from Transport Canada while he is an investigator or for a suitable period after he has terminated his employment. This would be too drastic a measure. The perception of conflict would be lessened if approval of the Board were required for an investigator to obtain employment in Transport Canada. I therefore suggest that s. 9 be amended by adding to it such a provision as s. 9(5).

RECOMMENDATIONS

S. 9(5) No person who has been designated under s. 9(1) while he holds a certificate of such designation, or for a period of one year after he ceases to hold a certificate of designation, shall be employed by Transport Canada without the approval of the Board.

IV THE NAME OF THE BOARD

HICKLING: Findings

None.

HICKLING: Recommendations

None.

DRAFT ACT

It is suggested that the Board be called "Transport Accident Investigation Board".

COMMENT

The Dubin Report stated:

> "In most cases, the name given to a tribunal may not be of particular significance. In this case, however, I think it is important to emphasize the real objective of the tribunal. For that reason, I think the word 'safety' should be included in the name of the new independent tribunal."

The proposed name would not emphasize the real object of the Board as stated in s. 7.

RECOMMENDATIONS

I therefore recommend that the Board be called the "Canadian Transportation Safety Board".

V THE NUMBER OF THE BOARD

HICKLING: Findings

The Board is too large. (Summary, page 9)

HICKLING: Recommendations

Consider reducing size of CASB. (Summary, pages 11 & 13)

DRAFT BILL

Section 4 provides for 5 members.

COMMENT

I agree that the Board is too large. There should be at least one member for each mode of transportation so that at least one person with experience in each mode can be appointed. With a 5 member Board, the composition should be:

Aviation	2
Marine	1
Railway	1
Commodity Pipeline	1
	5

RECOMMENDATIONS

No change from Draft Act

VI PROCEDURAL FAIRNESS — CIRCULATION OF DRAFT REPORTS

HICKLING: Findings

No finding.

HICKLING: Recommendations

Allow interested parties to express their views before the independent board. (Summary, page 13)

DRAFT ACT

Section 24(2). This carries on the practice of circulating the draft report to parties affected.

COMMENT

The circulation of draft reports was popular in the industry before the CASB was set up. Its continuation was recommended by Justice Dubin. The Draft Act continues this practice. Recent English authority approved by the Supreme Court of Canada holds that

even a purely investigatory body is subject to basic rules of procedural fairness and therefore some form of notice is necessary to parties who may be referred to adversely in the report. The CBA however points out that the circulation of drafts creates the impression that the parties and not the tribunal are drafting the report. This practice has been frowned on by the courts. I would therefore suggest that a summary of the proposed findings relating to the interested party would overcome this objection.

RECOMMENDATIONS

Redraft s. 24(2) to provide for "a summary of the relevant proposed findings" rather than a copy of the draft report. As well I would add after "a direct interest in" "or may be adversely affected by" so that the subsection reads:

> S. 24(2) Before issuing a report under subsection (1), the Board shall, on a confidential basis, send a summary of the relevant proposed findings to any Minister or other person where, in the opinion of the Board, that Minister or other person has a direct interest in or may be adversely affected by the findings of the Board, and shall afford that Minister or other person a reasonable opportunity to make representations to the Board with respect to the summary of relevant proposed findings before the final report is prepared.

VII INVESTIGATORS AS WITNESSES

HICKLING: Findings

None.

HICKLING: Recommendations

Consideration be given to the use of written depositions (in lieu of viva voce evidence) of investigators.

DRAFT ACT

No provisions.

COMMENT

Investigators complain about the time that is consumed in testifying in court proceedings and coroner's inquests.

They also complain that they are asked for opinions which assign fault. Inasmuch as most of the fruits of an investigator's labour are hearsay or are protected by provisions of the Act (s. 29) it would appear that the admissible portion of an investigator's evidence is what he has observed. Opinions as to fault or liability are arguably not admissible because the investigator is not an expert in assigning blame. That is the court's function. Perhaps the Board has not been sufficiently aggressive in asserting this position when an investigator is subpoenaed.

I therefore recommend that a provision similar to the Evidence Act provisions (s. 29) which are designed to save the time of bank officials be added to the Act. An affidavit as to the physical findings of the investigator would be made admissible in any proceeding, unless the court or coroner made an order for the attendance of the investigator. Such order would only be made if special cause were shown. The section would also provide that the opinion of an investigator as to fault or liability is inadmissible.

RECOMMENDATIONS

A new section be added to the Act as follows:

S. 29(1) The affidavit of an investigator designated under s. 9(1) and who has conducted or participated in the investigation of a transportation occurrence deposing to his personal observations shall be admitted as prima facie evidence of the truth thereof in any legal proceedings or coroner's inquest.

(2) Where evidence is offered by affidavit pursuant to this section it is not necessary to prove the signature or official character of the person making the affidavit if the official character of that person is set out in the body of the affidavit.

(3) An investigator, whose evidence can be proved under this section, is not compellable to appear as a witness in any legal proceeding or coroner's inquest unless by order of a court or coroner for special cause.

(4) An opinion of an investigator, who appears as a witness in any legal proceedings or coroner's inquest as to the fault or legal liability of any person in connection with a transportation occurrence, is inadmissible.

Yours very truly,

"John Sopinka"

APPENDIX "A"

Question 1(a):

What are the powers/responsibilities of the chief executive officer of the Canadian Aviation Safety Board (CASB) as deputy head for the purposes of the Public Service Employment Act?

Comments:

Subsection 5(2) of the Canadian Aviation Safety Board Act ("CASB Act") provides that the Chairman of the Board is the chief executive officer of the Board and he shall have the supervision over and direction of the work and staff of the Board. Section 8 of that Act provides that the employees of the Board shall be appointed in accordance with the Public Service Employment Act ("PSE Act").

Under the PSE Act the Public Service Commission ("Commission") has the exclusive right and authority to make appointments to and from within the Public Service for whose appointments there is no authority in or under any other Act of Parliament (section 8). The Commission also establishes selection standards for appointments at the request of the deputy head concerned (section 10). Accordingly, the Commission runs the competitions, the appeals and generally oversees the functioning of the merit system underlying the Act. However, under section 6 of the PSE Act, the Commission may authorize a deputy head and only a deputy head to perform, subject to conditions as the Commission may direct, all the powers of the Commission above-mentioned except the ones related to appeals and enquiries. The deputy head may in turn authorize other persons to perform those powers given to him. In practice all deputy heads have been given that delegated authority.

In addition, a deputy head is specifically given under the PSE Act, several responsibilities or powers relative to the tenure of employees. It is a deputy head who, may accept resignations of an employee, who may declare, in some circumstances that an employee has abandoned his position, who may release an employee under probation, who may lay off an employee and finally, who may release an employee for incompetence or incapacity.

It is important to note both the definition of "department" and of "deputy head" under the PSE Act which provide as follows:

> " 'department' means a department named in Schedule A to the Financial Administration Act and any division or branch of the Public Service designated by the Governor in Council as a department for the purposes of this Act;"

" 'deputy head' means

(a) in relation to a department named in Schedule A to the Financial Administration Act, the deputy minister thereof, and in relation to any division or branch of the Public Service designated under the definition 'department', such person as the Governor in Council may designate as the deputy head for the purpose of this Act, and

(b) in relation to any other portion of the Public Service to which the Commission has the exclusive right and authority to appoint persons, the chief executive officer thereof or, if there is no chief executive officer, such person as the Governor in Council may designate as the deputy head for the purposes of this Act;"

Because of its section 8, the CASB Act comes under the umbrella of the PSE Act. I am not aware of any order by the Governor in Council that would have designated the Board as a department for the purposes of the PSE Act. It appears that paragraph (b) of the definition of "deputy head" under the PSE Act is applicable and it is therefore the Chairman of the Board, as chief executive officer, that is to be considered as deputy head for the purposes of the PSE Act. I am told that indeed the Chairman has received a delegation, as deputy head, from the Commission.

Where paragraph (b) of that definition is applicable there can be no other "deputy head" for the Board but the Chairman. However, I have examined the possibility that, if the Board was designated a "department" for the purposes of the PSE Act, whether the Board could be appointed by the Governor in Council as "deputy head" since paragraph (a) of the definition of "deputy head" would be applicable and since under the Interpretation Act a person includes a corporation. Although some argument could be made, I have rejected that possibility because the end result would be that the Board would be at the same time, the department and the deputy head. The better view, from the wording of paragraph (a) of the definition of "deputy head", is that the intent of the Act is to differentiate between the "department" and the "deputy head".

Question 1(b):

What are the powers/responsibilities of the chief executive officer of the Canadian Aviation Safety Board as a result of the CASB being designated as a department corporation, for the purposes of the Financial Administration Act?

Comments:

The CASB has been included in Schedule B to the Financial Administration Act ("FAA") and is therefore for the purposes of that Act a departmental corporation.

Under section 7 of the FAA the Treasury Board, which has under that Act the responsibility for the management of personnel once appointed under the PSE Act, may authorize the deputy head of a department or the chief executive officer of any portion of the public service to exercise and perform, in such manner and subject to such terms and conditions as the Treasury Board directs, any of the powers and functions of the Treasury Board in relation to such personnel management. A person above-mentioned which is so authorized, may in turn authorize other person[s] to exercise those powers.

Under section 24 of the FAA, it is the deputy head or a person charged with the administration of a service who has the responsibility of submitting allotments for the items provided in the estimates before the House of Commons or for items included in the Appropriation Acts. They are also vested with the responsibility of ensuring that there are appropriate controls for those allotments. Under section 25, that deputy head or other person has the responsibility for the control of the commitments made in respect of the funds appropriated for his service. In section 27, reference is made to the deputy of the appropriate minister or another person authorized by such minister as the ones that are to certify that services have been performed and goods delivered so as to justify payment by the Crown. Section 53 of the Act puts in charge "the deputy head of every department" for the maintaining of adequate records in relation to public property. Overall, it is the deputy head that answers for the service for which he is responsible.

It is to be noted that the expression "deputy head" is not defined for the purposes of the FAA. The Interpretation Act does not provide any such definition either. According to the Senior General Counsel of the Treasury Board, in practice, "deputy head" is equated to deputy minister. In the case of the CAS Board, since the Chairman is the chief executive officer, he would be the person responsible for the financial, personnel and property management, coming under the expression of "other person" where the expression "chief executive officer" is not used.

Appendix 6

Sample Form for Agreement and Undertaking

Made under authority of the *Canadian Transportation Accident Investigation and Safety Board Act Regulations* SOR 94/... .

Occurrence File No. _____ Date _____ Location _____

Name of Participant _____

The Transportation Safety Board of Canada (TSBC) investigates transportation occurrences for the purpose of advancing transportation safety by identifying safety deficiencies and making recommendations intended to correct such deficiencies. The TSBC does not have the function of assigning fault or determining civil or criminal liability and the findings of the TSBC are not binding on the parties to any legal, disciplinary or other proceedings.

The TSBC may authorize a person to be a Participant in an investigation if the person has a direct interest in the occurrence being investigated and will contribute to the purpose of the investigation. The TSBC may remove a person as a Participant if the person contravenes a condition imposed by the TSBC or, if in the TSBC's opinion, the Participant's acts or omissions impede the investigation.

Upon your signing this Agreement and Undertaking, the TSBC hereby authorizes you, on the following terms and conditions, to be a Participant in the investigation of the above occurrence both on your own behalf and, in the case of a corporate Participant, on behalf of your directors and officers, and, unless any of such have been authorized to be Participants in this investigation, your employees and independent contractors:

1. You shall comply with the directions of the Investigator-in-Charge as to the conduct of the investigation.

2. You shall ensure that your activities do not interfere with or restrict the investigation.

3. Except for the purposes of the conduct of the investigation, the taking of safety action and the correction of any safety deficiency, you shall ensure that any information you gain as a result of your status as Participant shall be kept confidential from the public until the issuance of a report of the TSBC on the occurrence, or the commencement of a public inquiry and thereafter that such information shall be used or disclosed only as permitted by law.

4. You shall ensure that any information you gain as a result of your status as Participant shall not be used for any purpose collateral to the finding of causes and the implementing of systems to correct safety deficiencies and particularly shall not be used against individuals.

5. You shall not commence any legal proceedings against the TSBC or Her Majesty the Queen caused by or arising from your use or occupation of any real or personal property during the course of the investigation.

In signing this Agreement and Undertaking, I confirm that I have read and understood its terms and conditions and agree to be bound by them and, as the case may be, that I have the authority to agree to such terms and conditions on behalf of the corporate Participant and its directors and officers, and, where applicable, its employees and independent contractors who similarly agree to be bound by them.

SIGNED: _____

DATE: _____

Appendix 7

Amendments to the CTAISB Act Regulations Suggested by Stakeholders

RAIL

s.2 The definition for "reportable rail incident" be amended to incorporate an emission of up to 10 percent of the "lower explosion limit" (LEL) for liquefied petroleum gas (LPG).

s.2 Item (b)(iii), as part of the definition of a "reportable railway accident," be changed to read "is involved in a dangerous occurrence as defined in the TDG (Transportation of Dangerous Goods) regulations."

s.2 Item (h), as part of the definition of a "reportable railway incident," be changed to read "any dangerous goods are released on board or from the rolling stock as prescribed in the dangerous occurrence reporting requirements in the TDG (Transportation of Dangerous Goods) regulations."

s.2 Item (b)(iv), as part of the definition of a "reportable railway accident," be changed to read "sustains damage that is likely to cause a threat to the safety of the public or a railway employee if it is moved in that condition."

s.2 All derailments that incur damage over $10,000 be reported as a railway incident or accident.

AIR

s.2. For the definition of a "reportable aviation incident," an additional subparagraph be added as follows: "(n) an object(s) is dropped from or separates from the aircraft."

s.2. A minimum number of hours threshold be established for hospital admittance to be a criterion for determining "serious injury."

s.2. The definition of accident and incident be expanded to better define the meaning of operation of an aircraft. The TSBC should look to the former definition under the *CASB Act*, which read "....where, at any time during the period commencing when the first person boards an aircraft for the purpose of flight and ending when the last person disembarks from the aircraft after flight."

s.6. The TSBC review the list of reportable aviation incidents and update its reporting requirements with an eye toward taking into account current technology and flight safety issues. That the mandatory incident list be subject to review at least biannually.

s.6 Subsection 6(2)(a) be changed to read "(a) the type, model, manufacturer serial number and nationality and registration marks of the aircraft:"

s.6 An additional requirement for reporting be established for non-flight accidents.

s.6 The list of report incidents be extended to the operation of any aircraft, regardless of weight, operated by a commercial air carrier.

s.6 The list of reportable incidents be expanded to include failure to achieve certificated or predicted performance, failure or malfunction of any aircraft system(s) that adversely affects the safe operation of the aircraft, and risk of collision with the ground.

s.9 Subsection 9(1) regarding the chain of custody of aircraft accident parts and documents be clarified by adding the following to the last sentence: "until the chain of custody is passed to the investigation authority."

MARINE

s.2 A definition for "board" should be added.

s.2 A definition for "crew member" should be added, adopting the meaning ascribed to "seaman" by the *Canada Shipping Act*.

s.2 The definition of "reportable marine accident" be changed to cover other accidents not *directly* related to the operation of the ship, such as beachline accidents.

s.2 Item (b)(v), as part of the definition of "reportable marine accident" be amended by the deletion of the phrase "or renders it unfit for its purpose."

s.2 The definition of "reportable marine accident" be amended to reflect inclusion of oil rigs or oil platforms.

s.2 Item (d), as part of the definition of "reportable marine incident," be amended to remove ambiguity, particularly in respect of the operations of fishing vessels.

s.2 Item (e), as part of the definition of "reportable marine incident," which reads "the ship sustains a total failure of any machinery," be replaced by the phrase "the ship sustains a breakage of its machinery."

s.2 The definition of "risk of collision," which collectively addresses the air, rail and marine modes, be redrafted so that "risk of collision" is defined separately for each mode.

s.23 The meaning of "quorum," as used in Item (a) governing the exercise of Board powers, duties and functions, be defined.

Glossary

Air Traffic Services
Air Traffic Services control, expedite and maintain an orderly flow of air traffic operating under instrument flight rules and visual flight rules. Services are provided in relation to airport, approach, departure and en route operations by air traffic controllers and flight service stations.

Chicago Convention
This 1944 multilateral treaty established the framework for international air commerce. It recognizes the general principle that aviation safety regulation is the primary responsibility of the country in which an aircraft is registered. Under Article 26, a country has responsibility to investigate aviation accidents involving foreign aircraft in its territory.

Commodity Pipelines
The *CTAISB Act* gives the TSBC the authority to investigate occurrences involving commodity pipelines. These are defined in the *Act* as those pipelines transporting commodities and their associated equipment and facilities but do not include municipal sewer or water pipelines.

Communication Record
In the *CTAISB Act* this means a record of radio or other types of communication between ships, locomotives or aircraft, and traffic controllers or the Coast Guard. The use of such records is governed by specific confidentiality rules in section 29 of the *Act*.

Extraprovincial Transport
This refers to the transport of goods from a point within a province to another point outside the province, either within or outside Canada.

Gander Oceanic CTA
A multinational special planning group has divided responsibility for Air Traffic Services across the North Atlantic to several countries under ICAO auspices. The area of airspace assigned to Canada is known as the Gander Oceanic Control Area Flight Information Region (Gander Oceanic CTA).

Human Factors
Human factors describes those elements which influence the performance of persons operating equipment or systems — including behavioural, medical, operational, task-load, machine interface and work environment factors.

ICAO Annex 13

The International Civil Aviation Organization issued this set of guidelines in 1951. Annex 13 sets out recommended practices for the investigation of multinational air accident investigations.

ILO Convention 147

This international treaty was developed by the United Nations International Labour Organization and came into force in 1981. Countries which ratify Convention 147 agree to establish laws setting minimum international standards for ships' crews, including competency, employment contracts, crew numbers, hours of work and shipboard conditions.

Interested Party

A person or representative of an organization who is granted status under section 24 of the *CTAISB Act* to comment on a draft Board report is referred to as an Interested Party. The *Act* refers to such an individual as "a person with a direct interest in the findings of the Board." The TSBC generally grants such status if the person is an observer, or the report may comment on a product of a company or person's behaviour, or a person's rights might be seen to be adversely affected by the report.

ISO 9004.2

The International Organization for Standardization is a worldwide federation of national standards bodies. It has developed the ISO 9000 series of standards for management quality assurance. Among these standards is ISO 9004.2 — *Quality management and quality system elements*, which establishes guidelines for private and public sector organizations offering services, including those in the transportation sector.

Multimodalism

The term is used when referring to more than one method of transport, be it by land, sea or air.

Non-Invasive Medical Examination

An examination or procedure in which there is not any surgery, perforation of the skin or any external tissue, nor any entry into the body of any drug or foreign substance is referred to as non-invasive. Under section 19(13) of the *CTAISB Act*, the TSBC must restrict itself to such procedures when requiring a person to submit to a medical examination. Taking a blood sample, for example, would be precluded.

Observer
Section 23 of the *CTAISB Act* permits the Board to allow outside persons or representatives of organizations to become involved in an investigation if they have a direct interest in what is being investigated and if they also have expertise to contribute to the findings of causes and contributing factors. In practice, observer status is granted by the Investigator-in-Charge (IIC).

Occurrence
The TSBC's powers to investigate and study are based on the happening of occurrences which are defined by the *CTAISB Act* and Regulations to include accidents, incidents and special situations.

Occurrence Classification and Response System (OCRS)
OCRS is a written decision matrix used by the TSBC to classify occurrences reported to it for the purpose of applying criteria to decide the level of investigative response.

On-Board Recording
In the *CTAISB Act*, on-board recording means recordings of voice communications and other signals or sounds in locomotive cabs, aircraft cockpits or ships' bridges or control rooms. The use of such records is governed by specific confidentiality rules in section 28 of the *Act*.

Pleasure Craft
The *CTAISB Act* Regulations define pleasure craft as ships used for pleasure or recreation which do not carry goods or passengers for hire or reward. The owners or operators of pleasure craft are exempted from having to report occurrences to the TSBC.

Risk Management
This system is designed to reduce the impact of risks by first measuring exposure to risk based on analyzing the severity of the risk and the probability that the risk will occur and then determining goals for and methods of achieving reduction of that risk.

Short-Line Railway
This is a railway which carries on its undertaking within a single province whose operation, including safety aspects, falls under provincial jurisdiction.

Special Situation
This is any situation or condition that the TSBC has reasonable grounds to believe could, if left unattended, induce an accident or incident.

Abbreviations

AAIB	Air Accident Investigation Board (U.K.)
ATS	Air Traffic Services
BASI	Bureau of Air Safety Investigation (Australia)
CAI	Civil Aviation Inspector (Public Service Job Classification)
CAMU	Civil Aviation Medicine Unit (Health Canada)
CASB	(former) Canadian Aviation Safety Board
CASRP	Confidential Aviation Safety Reporting Program
CTAISB	Canadian Transportation Accident Investigation and Safety Board (legal name for the TSBC)
DND	Department of National Defence
DOI	Director of Investigations
FAA	Federal Aviation Administration (U.S.)
FRA	Federal Railroad Administration (U.S.)
FRC	Final Review Committee of the Board
IAMSI	International Association of Marine Safety Investigators
ICAO	International Civil Aviation Organization
IFR	Instrument and Flight Rating
IIC	Investigator-In-Charge
ILO	International Labour Organization
IMO	International Maritime Organization
IP	Interested Party
IRC	Initial Review Committee of the Board
ISO	International Organization for Standardization
ITSA	International Transportation Safety Association
MAIB	Marine Accident Investigation Board (U.K.)
MARS	Marine Accident Reporting Scheme (U.K.)
MCI	(former) Marine Casualty Investigation Unit of Transport Canada
MOU	Memorandum of Understanding
NAFTA	North American Free Trade Agreement
NASA	National Aeronautics and Space Administration (U.S.)
NEB	National Energy Board
NTA	National Transportation Agency
NTSB	National Transportation Safety Board (U.S.)

OCRS	Occurrence Classification and Response System
RCMP	Royal Canadian Mounted Police
RPID	(former) Railway and Pipeline Investigations Directorate of the National Transportation Agency
TI	Technical Inspector (public service job classification)
TSBC	Transportation Safety Board of Canada (applied name under Federal Identity Program)
TSIS	Transportation Safety Information System (TSBC data base)
VTS	Vessel Traffic Services

Order-in-Council

P.C. 1993-165

CANADA

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 29th day of January, 1993.

The Committee of the Privy Council, on the recommendation of the President of the Queen's Privy Council for Canada, (hereinafter the Minister) advise that, pursuant to Part I of the Inquiries Act and to subsection 63(1) of the Canadian Transportation Accident Investigation and Safety Board Act, (hereinafter the Act)

(a) Louis Davies Hyndman, Edmonton, Alberta, as Chairperson, and

(b) Warren E. Everson, Ottawa, Ontario

(c) Johanne Gauthier, Montreal, Quebec
as Members

be appointed to carry out a comprehensive review of the operations of this Act for the purpose of assessing its effect on the safety of air, marine, rail and commodity pipeline transportation and to complete and submit a report in both official languages to the Minister on or before January 31, 1994.

The Committee do further advise that

(a) the persons appointed may engage the services of experts, professionals and other staff deemed necessary for carrying out the review, at such rates of remuneration and reimbursement as the Treasury Board approves;

(b) the persons appointed be directed to file the records and papers of the review with the Clerk of the Privy Council as soon as reasonably may be at the conclusion of the review; and

...2

P.C. 1993-165

(c) the Minister pursuant to subsection 63(4) of the Act shall cause a copy of the report to be laid before each House of Parliament on any of the first thirty days on which that House is sitting after the report is received by the Minister.

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Submissions

Aerospace Industries Association of Canada
Air Canada
Air Transport Association of Canada
Aircraft Operations Group Association
Alberta Natural Gas Company Ltd.
Atlantic Pilotage Authority

Bell Helicopter Textron
Bonder, Ted
British Columbia Ferry Corporation
Brotherhood of Maintenance of Way Employees

CP Rail System
Calgary Airport Authority
Camp, Church & Associates
Canada Maritime Services Limited
Canada Steamship Lines Inc.
Canada–Nova Scotia Offshore Petroleum Board
Canadian Air Line Pilots Association
Canadian Air Traffic Control Assocation
Canadian Airlines International Limited
Canadian Association of Petroleum Producers
Canadian Auto Workers
Canadian Energy Pipeline Association
Canadian Ferry Operators Association
Canadian Gas Association
Canadian Labour Congress
Canadian Maritime Industries Association
Canadian Maritime Law Association
Canadian Merchant Service Guild and Canadian Marine Pilots' Association
Canadian National
Canadian Owners & Pilots Association
Canadian Power and Sail Squadrons
Canadian Railway Labour Association
Canadian Shipowners Association
Canadian Union of Public Employees, Airline Division
Colgan, J.A
Company of Master Mariners of Canada
Company of Master Mariners of Canada, Maritimes Division
Consumers Gas
Council of Boating Organizations of Canada
Council of Marine Carriers

Doctors Hospital

Energy, Mines and Resources Canada
Energy, Mines and Resources Canada, Oil and Gas Branch
Environment Canada

Fednav Limited
Foothills Pipe Lines Ltd.
Former Pilots of Eastern Provincial Airways

Gouvernement du Québec — Ministère des Transports
Government of Alberta — Department of Justice
Government of Alberta — Department of Transportation and Utilities
Government of British Columbia — Ministry of Attorney General (Office of the Chief Coroner)

Government of Manitoba — Department of Highways and Transportation
Government of New Brunswick — Department of Transportation
Government of Ontario — Ministry of Transportation
Government of Ontario — Ministry of the Solicitor General
Government of Saskatchewan — Department of Justice and Attorney General
Government of Yukon — Department of Community and Transportation Services
Great Lakes Pilotage Authority, Ltd.

Haldane, G.R.
Health and Welfare Canada
Hillier, Roland

Institute of Marine Safety Auditors
International Air Transport Association
International Association of Machinists and Aerospace Workers
International Society of Air Safety Investigators
Interprovincial Pipe Line System Inc.

Labour Canada

Marine Atlantic
Metro Toronto Residents' Action Committee for Rail Safety

National Defence
National Energy Board
National Research Council Canada
National Transportation Agency of Canada
Northwest Territorial Airways Ltd.

Ontario Natural Gas Association

Port of Montreal
Propane Gas Association of Canada Inc.

Railway Association of Canada
Royal Canadian Mounted Police

Shipping Federation of Canada
St. Lawrence Seaway Authority
St. Lawrence Shipoperators Association Inc.

Trans Mountain Pipe Line Company Limited
TransCanada PipeLines Limited
Transport 2000 Canada
Transport Canada
Transportation Safety Board of Canada

Union Gas
United Fishermen and Allied Workers' Union

Vancouver Port Corporation
Via Rail Canada Inc.

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