

# Transportation Safety Board of Canada

## Departmental Performance Report

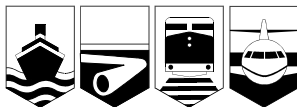
for the period ending  
March 31, 2004

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Charles H. Simpson  
Acting Chairperson  
Transportation Safety Board of  
Canada

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Lucienne Robillard  
President  
Queen's Privy Council for  
Canada



Canada<sup>!</sup>



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## **Section 1: The Chairperson's Message**

A review of transportation accident rates in Canada over the past 10 years reveals a progressive downward trend. Our investigators observe an increased attention to safety and signs of the development of a safety culture among government agencies and industry stakeholders. These tangible signs of progress in safety across all transportation modes confirm that the efforts of the Transportation Safety Board of Canada (TSB) toward advancing transportation safety, in concert with those of many others, are paying off.

The TSB continues to enjoy a solid reputation as a professional and technically competent organization that consistently contributes to the advancement of transportation safety in Canada and internationally. This was formally recognized in December 2003 when the members of the Swissair Flight 111 investigation team received the Head of the Public Service Award for Excellence in Service Delivery. The TSB is also recognized as a leader among small federal departments and agencies for its efforts on management renewal and for its contribution to the broader modernization of the Public Service. It is on this track record of excellence that the TSB will continue to build and to enhance its value for Canadians.

In 2003-2004, the TSB focussed its efforts on the improvement of its response to stakeholder needs, the improvement of its response to employee needs, and the improvement of its management frameworks. Significant progress was achieved in all three areas, due in part to the temporary incremental resources provided by Parliament. However, our work is not done and sustained efforts will be required over the current year to ensure the completion of our improvement agenda and the implementation of strategies to ensure the sustainability of our program over the longer term.

As we look to the future and the challenges that lie ahead, we are committed to sustaining our efforts and to contributing to a transportation system that is safe and reliable, one upon which Canadians can rely.

## MANAGEMENT REPRESENTATION STATEMENT

I submit, for tabling in Parliament, the 2003-2004 Departmental Performance Report (DPR) for the Transportation Safety Board of Canada.

This report has been prepared based on the reporting principles and other requirements contained in the *2003-2004 Departmental Performance Report Preparation Guide* and represents, to the best of my knowledge, a comprehensive, balanced, and transparent picture of the organization's performance for fiscal year 2003-2004.

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Charles H. Simpson, Acting Chairperson

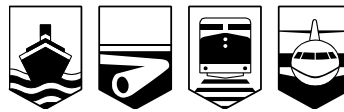
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## Section 2: Strategic Context

### 2.1 Mandate and Mission

The Transportation Safety Board of Canada (TSB) is an independent agency created in 1990 by an Act of Parliament (*Canadian Transportation Accident Investigation and Safety Board Act*). Under this legislation, the TSB's only objective is the advancement of transportation safety in the marine, rail, pipeline and air transportation systems. This mandate is fulfilled by conducting independent investigations including, when necessary, public inquiries into selected transportation occurrences. The purpose of these investigations and inquiries is to make findings as to the causes and contributing factors of the occurrences and to identify safety deficiencies, which in turn may result in recommendations designed to improve safety and reduce or eliminate risks to people, property and the environment.

**Our mission: to advance transportation safety.**



The jurisdiction of the TSB includes all federally regulated marine, rail, pipeline and air transportation occurrences in or over Canada. The Board also represents Canadian interests in foreign investigations of transportation accidents involving ships, railway rolling stock, or aircraft registered, licensed or manufactured in Canada. In addition, the Board carries out specific elements of Canada's transportation safety obligations to the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO).

The TSB reports annually to Parliament on its activities, findings and recommendations through the President of the Queen's Privy Council. As such, the TSB is not part of any portfolio to which Transport Canada, the Canadian Coast Guard or the National Energy Board belong. The creation of the TSB as an independent agency eliminated any potential, real or perceived, for a conflict of interest within government bodies regulating or operating transportation activities, who were also investigating the failures associated with their own regulations and operations. The legislation gives the TSB the exclusive authority

to investigate for the purposes of making findings as to causes and contributing factors and provides that other departments (such as Transport Canada and the National Energy Board) may investigate for any other purposes.

## **2.2 Key Co-Delivery Parties**

The TSB operates within the context of the very large and complex Canadian transportation system (see the Transport Canada web site at [www.tc.gc.ca/pol/en/anre/transportation\\_annual\\_report.htm](http://www.tc.gc.ca/pol/en/anre/transportation_annual_report.htm) and the National Energy Board site at [www.neb.gc.ca/energy/index\\_e.htm](http://www.neb.gc.ca/energy/index_e.htm) for details). Many individuals and groups cooperate with the TSB in the fulfilment of its mandate. During the course of an investigation, the TSB interacts directly with:

- Individuals, such as survivors, witnesses and next-of-kin;
- Operators;
- Other organizations and agencies, such as coroners, police, manufacturers, owners and insurance companies; and
- Other federal government departments and agencies.

Their cooperation is essential to the conduct of the TSB's business, whether they contribute as providers of information or of support services. For more details on the investigation process, visit the TSB web site at [www.tsb.gc.ca/en/investigation\\_process/index.asp](http://www.tsb.gc.ca/en/investigation_process/index.asp).

The TSB is one of many Canadian and foreign organizations involved in improving transportation safety nationally and internationally. While it operates at arm's length from other federal departments involved in the transportation field, it can only succeed in fulfilling its strategic outcome through the actions of others. The TSB presents findings and makes recommendations that call upon others to act, but it has no formal authority to regulate, direct or enforce specific actions. This implies ongoing dialogue, information sharing and strategic coordination with organizations such as Transport Canada, the National Energy Board and the Canadian Coast Guard.

Similarly, the TSB must engage in ongoing dialogue and information sharing with industry and foreign regulatory organizations. Through various means, the TSB must present compelling arguments that will convince these "agents of change" to take action in response to identified safety deficiencies. The TSB can therefore be deemed successful when others, such as regulators, operators and manufacturers, implement actions to mitigate risks using the TSB outputs.

The TSB has established memoranda of understanding with a number of federal government departments for the coordination of activities and the provision of support services. These agreements provide the Board with access to a range of

support services that can rapidly supplement internal resources (e.g. assistance for the recovery of wreckage, the documentation of information and the examination or testing of components). The agreements also define operating practices to ensure coordination of activities and to avoid potential conflicts that could arise from the simultaneous implementation of various organizational mandates. Such agreements are currently in place with National Defence, the Royal Canadian Mounted Police, the Canadian Coast Guard, Human Resources and Skills Development Canada and the National Research Council. Similarly, the TSB has established strategic cooperation alliances with provincial and territorial coroners/chief medical examiners.

Further alliances have been established with the TSB's counterpart agencies in other countries, such as the United States, Australia, the Netherlands, France and the United Kingdom. The TSB cooperates on a reciprocal basis with foreign safety investigation agencies through the ad hoc exchange of specialized services or the provision of assistance as a means of coping with capacity gaps. As a world leader in its field, the TSB regularly shares its investigation techniques, methodologies and tools. For example, the Recorder Analysis and Playback System (RAPS), developed by the TSB for decoding and analysis of flight data recorders and cockpit voice recorders, is now being used in more than 10 countries to aid in safety investigations. Similarly, the TSB has contributed to the training of safety investigators from numerous countries either by integrating foreign investigators into its in-house training programs or by sending senior staff to teach abroad. The TSB also shares data and reports with sister organizations and participates in international work groups and studies to advance transportation safety.

## **2.3 Risks and Challenges**

The TSB faces many risks and challenges that could have a potentially significant impact on the organization's ability to fulfil its mandate. Recent announcements regarding government expenditure controls and the new expenditure review process call for flexibility among TSB managers, who must adapt to evolving accountability and management demands. Managers at all levels within the organization are expected to manage risks by applying established management principles. The most important challenges are described in the following paragraphs.

### **2.3.1 Providing Information in a Timely Manner**

The TSB has a variety of stakeholders and clients with diverse information needs. The stakeholder needs analysis conducted in 2002-2003 provided important insights. Initial feedback indicated a preference for shorter and more timely reports and reflected a belief that safety information could be made

available to stakeholders earlier and more effectively. The challenge is to respond to these needs with available resources. The ability to provide the information required by stakeholders, the industry and the public, when they need it, is key to successfully achieving the TSB's mandate.

### **2.3.2 Maintaining a Discernible Edge in Our Investigative and Technical Knowledge and Skills**

The success of the TSB and its credibility as an organization depends largely on the expertise, professionalism and competence of its employees. Rapid technological changes in the transportation industry, along with the development of new materials, are making the task of investigation and safety analysis increasingly complex and specialized. The TSB must not only maintain an appropriate infrastructure of technical and scientific equipment, but must also keep up its technical expertise and knowledge base in order to maintain credibility within the industry. In recent years, the TSB has made a concentrated effort to "catch up" on essential training for employees and managers to ensure they have the knowledge and skills to meet mandatory job requirements. However, the challenge of retaining technical currency requires ongoing attention and allocation of resources.

### **2.3.3 Maintaining a Healthy, Representative and Motivated Workforce**

To be successful, the TSB must recruit, train, develop and retain highly motivated and competent people. As a federal government organization, the TSB must also strive to achieve a diverse workforce representative of the Canadian population. However, the TSB has experienced significant staff turnover and it is expected that more will leave due to retirement or other career opportunities. Heavy workloads, limited career development and limited advancement opportunities are some of the reasons given for staff departures. The challenge for the organization is to make the TSB as responsive as possible to employees' career needs and aspirations, thereby encouraging people to remain with the organization longer. This challenge is particularly difficult to address in a small organization, where there are limited opportunities to move people around for development purposes.

### **2.3.4 Achieving Excellence in Information Management**

The TSB's primary products are information and knowledge. The effectiveness and value of the TSB rest in its ability to collect and analyze factual information and to communicate new knowledge to those who need it. It is crucial that the TSB manage information in a responsive and timely way. However, it continues to struggle with the storage, retrieval, analysis and sharing of information used to support its business processes. With special funding received for the renewal of

information management systems, it is expected that the TSB will adopt better tools to gather, create and control information. Improving the use of current applications and technologies will position the TSB to provide more effective and integrated tools to its investigators and to implement a more efficient process for producing investigation reports.

### **2.3.5 Improving Communications**

An important preoccupation for the TSB is communications at all levels. TSB employees and stakeholders have told us that the organization needs to improve its internal and external communications capabilities. Internal communications have become increasingly important in recent years as the TSB continues to manage its change agenda. At a minimum, managers at all levels are expected to communicate with employees in an open and collaborative manner in order to implement organizational goals and objectives. Employees, in turn, are expected and encouraged to provide managers with suggestions and feedback and to share important information within the organization.

With respect to external communications, significant work is underway on the development of a Corporate Communications Plan and subplans that will assist in the effective and efficient delivery of the redesigned communications products and services. These plans will clearly identify roles and responsibilities. In concert with the public awareness initiative, the Corporate Communications Plan will make the most of alliances, partnerships and linkages to advance the mission of the TSB.



## Section 3: Departmental Performance

### 3.1 Performance Management Framework

In 2002-2003, the TSB undertook the development of an integrated performance management framework. The framework consists of five key documents. The five-year *TSB Strategic Plan* is used to set the strategic directions. The annual *Business Plan* is then used to set the short-term priorities and to guide the activities and resource allocation decisions for the coming year. The *Report on Plans and Priorities*, based on the *Business Plan*, defines the commitments to Parliament and Canadians. The *Balanced Score Card* defines specific performance indicators and is used by management to measure and monitor progress. Finally, the departmental *Performance Report* closes the accountability loop by reporting to Parliament on the results achieved.

#### 3.1.1 Plans and Priorities Commitments

In its 2003-2004 *Report on Plans and Priorities*, the TSB defined one strategic outcome and five intermediate outcomes. The following logic model identifies the linkages between the activities of the TSB and the achievement of its outcomes. The logic model is a road map showing the chain of results connecting resources and activities to outputs and to expected intermediate and final outcomes.

**Table 1: Logic Model**

Strategic Outcome
Advancements in safety through independent, objective and timely analysis of safety failures in the federally regulated transportation system.
Intermediate Outcomes
<ul style="list-style-type: none"><li>• Increased and justified public confidence in the safety of the transportation system.</li><li>• Timely implementation of appropriate safety actions.</li><li>• Increased awareness of safety issues and a strengthened safety culture on the part of government, industry and the public.</li><li>• Increased level of safety through the reduction of risks.</li><li>• Effective organizational performance.</li></ul>

Immediate Outcomes		
<ul style="list-style-type: none"> <li>• Identification and communication of safety deficiencies.</li> <li>• Safety actions taken by stakeholders.</li> <li>• Responses to safety recommendations.</li> <li>• Media pick-up and dissemination of safety messages.</li> </ul>		
Plans and Priorities		
<ul style="list-style-type: none"> <li>• Implement the key elements of a planning and resource management framework.</li> <li>• Reshape the TSB's product and service mix based upon the results of the stakeholder needs analysis.</li> <li>• Improve the quality and timeliness of TSB products.</li> <li>• Establish the department as a learning organization.</li> <li>• Ensure a responsive workplace atmosphere within the department.</li> <li>• Implement required changes to the governance structure.</li> <li>• Renew the management of information within the TSB.</li> </ul>		
Activities, Outputs and Resources		
Activities	Outputs	Actual Spending
Safety Investigations	<ul style="list-style-type: none"> <li>• Safety recommendations</li> <li>• Safety advisories and information letters</li> <li>• Investigation reports</li> <li>• Statistical reports</li> </ul>	\$25.6 million and 181 FTEs
Corporate Services	<ul style="list-style-type: none"> <li>• Financial services</li> <li>• Human resource services</li> <li>• Information management services</li> <li>• Informatics services</li> </ul>	\$6.5 million and 46 FTEs

### 3.1.2 Measurement Methodology

As noted, the TSB has been working on the development of a balanced score card, which will be the main tool used to measure organizational performance in the future. This score card will track performance along four major perspectives: financial, client/stakeholder, internal business process, and learning and growth. Current plans call for the full implementation of this new tool for fiscal year 2004-2005, as described in the 2004-2005 *Report on Plans and Priorities* (see [www.tsb.gc.ca/en/publications/RPP/2004/rpp2004.asp](http://www.tsb.gc.ca/en/publications/RPP/2004/rpp2004.asp) for details).

Although the indicators and data collection methodology are not yet finalized, some of the indicators are already being used. Various methods are used to identify and capture performance information. Most of the data used in the analysis came from TSB information systems, supplemented by Transport Canada information where appropriate. Information was also extracted from the stakeholder needs analysis report and TSB reports on media analysis of TSB investigation reports. Anecdotal evidence that supports the performance assessment was obtained from various sources such as magazine articles, press clippings and individual testimonials. Where sources of information external to the TSB are used, they are identified.

Proper care and attention to data quality and limitations were ensured throughout the production of this report. This report presents an accurate picture of the state of TSB business and affairs on March 31, 2004. The financial statements have been audited by the Auditor General of Canada, and her audit report is included in Appendix C. Other performance information is not currently subjected to an independent review or validation process. However, the TSB is in the process of implementing an internal audit function that will be able to provide such assurance services in future.

### **3.1.3 Parliamentary Committee Recommendations**

During the reporting period, there were no Parliamentary Committee recommendations addressed specifically to the TSB.

## **3.2 Performance Accomplishments**

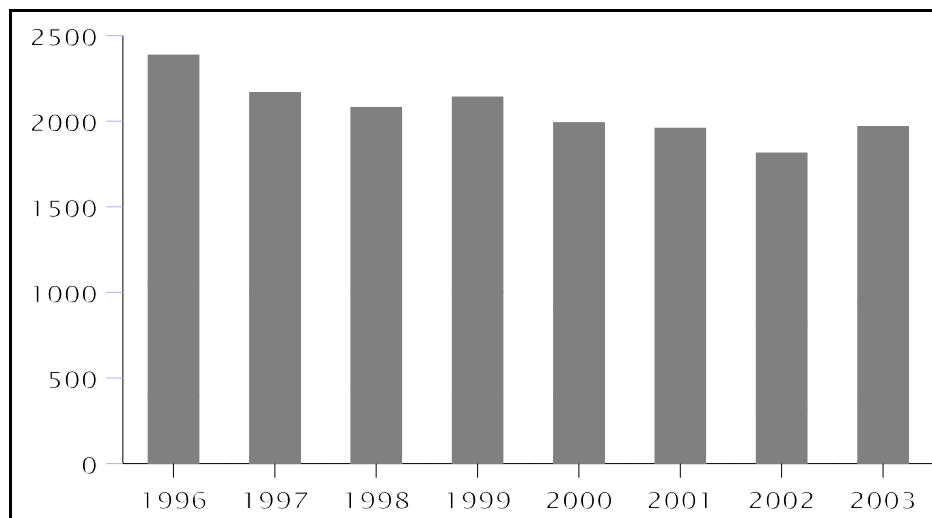
Canada's transportation system is considered one of the safest in the world. However, an average of 3,500 transportation occurrences are reported each year in accordance with federal reporting requirements. The TSB bases its decision to investigate on its Occurrence Classification Policy (see [www.tsb.gc.ca/en/common/policies/occurrences.asp](http://www.tsb.gc.ca/en/common/policies/occurrences.asp) for details) using a comprehensive risk management process aimed at evaluating the consequences of operational decisions. The prime criterion for deciding to investigate is whether an investigation is likely to lead to a reduction in risk to persons, property or the environment. Based on these considerations, the TSB does not investigate some accidents that are less likely to result in safety actions, even when they involve fatalities.

Approximately 141 investigations are currently in progress. Of that total, about 11% are more than two years old, representing a significant improvement over previous years. For a relatively small organization, it is an ongoing challenge to

manage this backlog and the sustained opening of new cases in a way that meets the expectations arising from a high level of public interest and demand for investigations.

In 2003, 1,968 accidents and 1,388 incidents were reported in accordance with the TSB's regulations for mandatory reporting. The number of accidents in 2003 represented a 9% increase from the 1,812 accidents reported in 2002 (see Figure 1) but a 2% decrease from the 1998-2002 annual average of 1,999 accidents. There were also 670 voluntary incident reports. Fatalities totalled 172 in 2003, down from 187 in 2002 and the 1998-2002 average of 263.

**Figure 1: Accidents Reported to the TSB** (by calendar year)



This year was marked by increases in the number of accidents reported in all the modes except pipeline (see Appendix A for details). There were 546 marine accidents reported to the TSB in 2003, a 13% increase from the 2002 total of 485 and a 2% increase from the 1998-2002 average of 537. In the pipeline sector, 20 accidents were reported to the TSB, equal to the 2002 total and the 1998-2002 average, and no serious injuries resulted. The last fatal pipeline accident in the portion of the industry under federal jurisdiction occurred in 1988. A total of 1,030 rail accidents were reported to the TSB in 2003, a 5% increase from the previous year's total of 984 but a 3% decrease from the 1998-2002 average of 1,062. Aircraft were involved in 372 accidents reported in 2003, an increase of 15% from the 2002 total of 323. However, this is a 2% decrease from the 1998-2002 average of 380. Despite fluctuations in the number of accidents and incidents reported on an annual basis, the trend over the past 10 years shows a progressive decline in accident rates in all modes (see the graphs in Appendix A). These reductions cannot be directly attributed to the efforts of any

specific organization. Improvements in transportation safety are the result of the combined efforts of many participants including manufacturers, carriers, crews and regulators, as well as the TSB.

It is virtually impossible to accurately measure the impact of the TSB on transportation safety. No two investigations are identical. Some lead to significant safety improvements, and others do not. There is also no good way to link costs incurred by the TSB directly to specific improvements in transportation safety. However, the TSB has certainly been successful in achieving its strategic outcomes over the past year, as evidenced by the numerous safety actions taken by change agents within the transportation sector using the TSB's findings and outputs.

The next few pages summarize the results and outcomes of the TSB's work over the past year as measured against the stated performance indicators.

**Table 2: TSB Score Card**

<b>Performance Indicators</b>	<b>Results</b>
Increased and justified public confidence in the safety of the transportation system.	✓
Timely implementation of appropriate safety actions.	□
Increased awareness of safety issues and a strengthened safety culture on the part of government, industry and the public.	✓
Increased level of safety through the reduction of risks.	✓
Effective organizational performance.	✓
Implementing modern comptrollership	★
Modernization of human resources management	✓
Responding to resource pressures (see Table 8 for details)	□
Legend: ★ = exceeded expectations    ✓ = successfully met expectations    □ = not yet fully met expectations	

### **3.2.1 Public Confidence in the Safety of the Transportation System**

Canada has one of the safest and most secure transportation systems in the world. A threat to the safety and security of the transportation system could affect Canada's economic prosperity and its ability as a nation to trade effectively, as well as affecting Canadians' ability to travel.

Reported accidents and incidents provide indicators of the transportation system's safety performance and also help focus efforts on those initiatives and activities that have high safety benefits. As demonstrated in the tables of Appendix A, Canada continued to maintain a good safety record in 2003. The 2003 accident rates, per activity level for all modes, reflect a downward trend from the five-year average. Another indicator of the safety performance of the transportation system is the number of fatalities. In 2003, the air, marine and rail modes showed a decrease in fatalities from the five-year average. A reduction in accidents and fatalities will positively influence the public's confidence in the safety of the transportation system.

The TSB cannot claim that the reduction in transportation occurrences is solely related to its work. The safety and security of the transportation system are a shared responsibility. The TSB works with governments, transportation industries, agencies, associations and international organizations to further improve the system. It also collaborates with other government departments and agencies whose programs and services may be affected by transportation activities.

Last year's stakeholder needs analysis indicated that stakeholders expect the TSB to take on a more formal and active role in the transportation safety system, including engaging in continuous communications. In 2003-2004, the TSB initiated a public awareness program designed to foster dialogue and share information more broadly with the industry, operators and regulators. TSB Board Members and senior managers have consequently participated in an increased number of meetings, presentations and dialogues with various stakeholders. This program is intended to forge more meaningful relations and result in wider understanding of the TSB's contribution to the advancement of transportation safety. This, in turn, will lead to improved public confidence in the safety of the transportation system, as members of the public observe the enhanced visibility of the TSB and how it works with its key stakeholders.

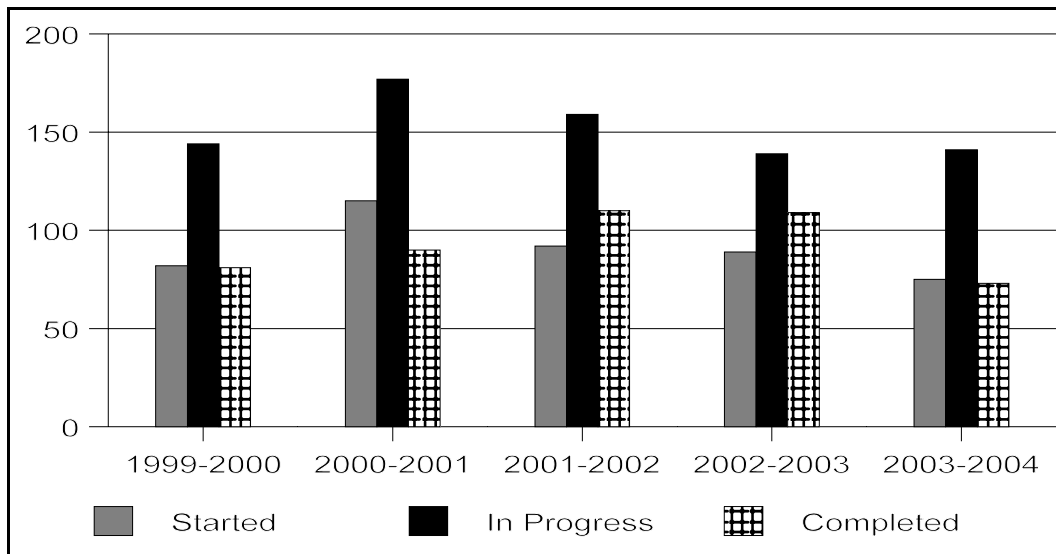
### **3.2.2 Implementation of Appropriate Safety Actions**

Since its inception, the TSB has been acutely aware of the obligation to provide key safety information in a timely fashion to those who are in a position to implement changes. It is not uncommon for the TSB to provide, on an informal

basis, critical safety-related information throughout the investigative process when it becomes apparent that important information should be shared with others. From time to time, when enough information is available, the TSB also produces recommendations before the conclusion of an investigation or the publication of the report. Nevertheless, a final investigation report, particularly one that contains safety recommendations, is one of the most anticipated of the TSB's products.

Again this year, a conscious decision was made in departmental plans to reduce the number of new investigations so that resources could be focussed on in-progress investigations and the renewal agenda. Only 75 new investigations were started in 2003-2004, compared with 89 last year (see Figure 2). This year 73 investigations were completed, compared with 109 last year. The number of investigations in process increased to 141 at the end of the fiscal year, from 139 at the start.

**Figure 2: Investigations Started / In Progress / Completed**



For those investigations completed in 2003-2004, the average time to complete an investigation increased to 684 days, from 580 days the previous year (see Table 3). These results are directly attributable to the decision to focus on the completion of complex investigations that were more than two years old and on the allocation of investigation resources to a number of other initiatives aimed at improving performance over the longer term. Significant progress was made on reducing the backlog of very old cases, thereby temporarily increasing the average completion time. Good progress was also made on the various

improvement initiatives. These efforts should translate into measurable productivity gains in future years. More details on the improvement results achieved to March 31, 2004 are available in section 3.3.1 of this report.

**Table 3: TSB Productivity**

	Marine		Rail / Pipeline		Air		Total	
	2002-2003	2003-2004	2002-2003	2003-2004	2002-2003	2003-2004	2002-2003	2003-2004
Investigations started	13	14	20	14	56	47	89	75
Investigations completed	15	18	24	15	70	40	109	73
Average duration of completed investigations (number of days)	703	953	757	894	494	485	580	684
Note: Results can fluctuate significantly from year to year due to a number of factors such as staff turnover, the complexity of investigations and the investigation of major occurrences.								

In 2003-2004, in addition to investigation reports, the TSB issued a total of 63 safety outputs: 11 safety recommendations, 22 safety advisories and 30 safety information letters (see Table 4 for a breakdown by mode).

**Table 4: Safety Outputs by the TSB**

	Recommendations	Safety Advisories	Safety Information Letters
Marine	7	6	11
Pipeline	0	0	0
Rail	4	7	11
Air	0	9	8
Total	11	22	30

These outputs led to concrete actions by other organizations that directly improved safety and/or reduced risks. For example, Transport Canada has targeted safety inspections, issued bulletins to inform industry about specific safety concerns, and introduced changes to safety regulations and procedures.

Similarly, industry has reacted to the TSB's work by undertaking numerous safety actions, such as changes in operating practices and procedures, preventive modifications to equipment, replacement of parts, and the modification of training programs. Table 5 provides a few specific examples of such safety actions that were taken during 2003-2004.

**Table 5: Safety Actions – Part I**

<b>Occurrences Investigated</b>	<b>Safety Actions</b>
<p>While the <i>Alex B.1</i> was dragging for scallops off Havre St. Pierre, Quebec, water was discovered in the engine room. Subsequently all compartments from the stern to the accommodation flooded.</p> <p><i>The investigation revealed that the vessel was holed below the waterline on the port side as a result of inadequate hull protection while engaged in dragging operations. Watertight bulkheads were compromised after major alterations, and the owner was not aware of stability principles or applicable regulations.</i></p>	<p>A recommendation addressed to Transport Canada (TC) required that TC, Fisheries and Oceans Canada, fisher associations and training institutions develop a strategy for establishing and maintaining a safety culture within the fishing industry. Consultations are ongoing and initiatives are underway to enable more in-depth study for further analysis and recommendation development.</p>
<p>A VIA Rail passenger train travelling at 97 mph passed a signal indicating stop.</p> <p><i>The investigation revealed that there is a need for a recording facility to confirm the effectiveness of in-cab voice communications. Had the controlling locomotive cabs been equipped with voice recording capability, it might have been possible to determine more definitively the effectiveness of the crew's communications as they approached the occurrence location.</i></p>	<p>Transport Canada committed to working with Canadian industry and U.S. government agencies to discuss options available for the establishment of specifications for performance of event recorders, including audio capabilities.</p>
<p>Beechcraft 99A loss of control.</p> <p><i>The investigation determined that the horizontal stabilizer trim actuator upper mounting bolts that attached the upper actuator lugs to the airframe had been improperly installed. Adjacent airframe structure, the body of the actuator, and the mounting lugs positioned ahead of the bolts make it difficult to identify the incorrect bolt installation during dual inspection.</i></p>	<p>Transport Canada communicated their concern to the U.S. Federal Aviation Administration (FAA) regarding this accident and a previous similar accident. Transport Canada informed the FAA that it was issuing a Service Difficulty Alert recommending that operators and maintainers of Beechcraft (Raytheon) King Air Model A100 and Airliner Model 99A aircraft exercise caution during the installation of horizontal stabilizer trim actuators, and ensure that a secondary review be carried out.</p>

Safety information is also provided to key stakeholders throughout the investigation process, permitting them to take immediate safety actions where appropriate. It is common practice for industry and government to take safety actions during the course of TSB investigations. Such safety actions range widely in scope and importance. Operators will often take immediate remedial action after discussion with TSB investigators (e.g. to clear the line of sight at a railway crossing by trimming bushes and vegetation). Regulators, such as Transport Canada and the Federal Aviation Administration in the United States, regularly issue mandatory directives requiring inspections and/or component replacement based on the TSB's preliminary findings. In such situations, rather than issuing recommendations, the TSB can then report on the corrective actions already taken by industry and government agencies. The following table highlights a few specific examples of safety actions taken before the TSB investigations were completed.

**Table 6: Safety Actions – Part II**

Occurrences Investigated	Safety Actions
<p>Sinking of the amphibious passenger vehicle <i>Lady Duck</i>.</p> <p><i>The investigation revealed that there was continuous water entry into the hull through various openings, pumps did not function as required, there was no effective safety management system in place, and the regulatory framework did not adequately address the risks involved. An overhead awning prevented the vertical escape of victims wearing personal flotation devices.</i></p>	<p>Transport Canada required that the operators of amphibious vehicles conduct passenger safety briefings. Information and inspection advice was forwarded to TC marine inspectors. The Small Passenger Vessel Inspection Course has been amended. General public announcements were made and posters distributed in tourist areas. All amphibious vehicles were inspected, including bilge pumping arrangements and alarms, and operators were advised of necessary precautionary measures. A lifebuoy manufacturer was contacted and its quality assurance and inspection procedures were reviewed.</p>
<p>Gazoduc TQM Inc. compressor station natural gas explosion.</p> <p><i>The investigation revealed that there were no Canadian Standards Association (CSA) standards requiring quality management and quality assurance programs for any pipeline facilities being built, to ensure overall soundness of the installation and of ongoing operations.</i></p>	<p>CSA publication CSA Z662 has been amended to include ISO 9000 requirements for quality management and quality assurance for pipeline projects in Canada.</p>

Occurrences Investigated	Safety Actions
<p>A319 approach to wrong airport.</p> <p><i>The crew of an Air Canada Airbus A319, on a regularly scheduled flight to Kelowna, B.C., inadvertently conducted a visual approach to the Vernon airport before proceeding to their intended destination. Although the aircraft's navigation system was set up to provide bearing and distance information from the Kelowna airport, the crew misidentified Vernon as Kelowna airport and commenced an approach.</i></p>	<p>Transport Canada's Principal Operations Inspector for Air Canada will review the operator's Aircraft Operating Manual with the intent to incorporate the safety information contained in the Advisory. Transport Canada also intends to issue a Commercial and Business Aviation Advisory Circular on the hazards associated with this phenomenon.</p> <p>The operator, Air Canada, initiated an awareness campaign within the company by publicizing this incident to crews. Air Canada also modified its Flight Operations Manual to enhance the guidance regarding visual approaches, and is developing new risk management models for visual approaches.</p>

### 3.2.3 Awareness of Safety Issues and a Strengthened Safety Culture on the Part of Government, Industry and the Public

The TSB continues to promote awareness of safety issues and of a safety culture among transportation stakeholders. TSB investigators have observed a greater awareness of safety issues and signs of development of a safety culture among people with whom they interact in the course of their work. For instance, the TSB notes that governments and members of the transportation industry are cooperating to promote and implement solutions through legislation, regulation, programs and education. Focus is increasingly being placed on the adoption of the safety management system concept (a formalized framework for integrating safety into the daily operations of a company). A safety management system includes safety goals and performance targets, risk assessments, clear responsibilities and authorities, rules and procedures, and monitoring and evaluation processes. Furthermore, significant events such as the crash of Swissair Flight 111 and the sinking of the *Lady Duck* have raised public awareness about transportation safety. Although it is difficult to measure the results of TSB activity in this area, the use of TSB safety messages by stakeholders demonstrates a degree of effectiveness in achieving the desired outcome.

“Canada is among the world leaders in safety management.”

*Straight Ahead – A Vision for Transportation in Canada, Transport Canada, September 2003*

The TSB takes every opportunity to reiterate its key messages and create awareness of safety issues. In 2003-2004, the TSB published 73 investigation reports, as well as monthly and annual statistical reports. Three issues of the *Reflexions* safety digest were published during fiscal year 2003-2004. These

digests contribute to the advancement of transportation safety by reflecting on the safety lessons learned from accident and incident investigations. They also provide an effective tool to disseminate the results of safety investigations to a broad audience.

“We were surprised to receive so much information so quickly and were thankful for the TSB update.”

*Next-of-kin, Georgian Express  
Flight 126, Pelee Island,  
January 2004*

The TSB has taken a proactive approach to dissemination of information. Information is made readily available to industry, next-of-kin, the media and the public throughout the investigation process. Investigative staff are encouraged to maintain a dialogue with key stakeholders, including the early communication of safety issues that arise during the investigation. In an effort to satisfy both the public and the media’s thirst for up-to-

date, factual information, the TSB responded to 1,357 information requests received through its web site and 424 media calls during the year, not including those inquiries handled at the scene of an accident or at a report release news conference. The TSB held one news conference and issued eight news releases. The TSB’s Macro Analysis Division also responded to 632 requests for complex transportation occurrence database information.

The TSB uses its web site to increase awareness of safety issues and other transportation safety information. The site ([www.tsb.gc.ca](http://www.tsb.gc.ca)) receives an average of more than 49,000 daily hits and 1,860 daily visits, an increase of approximately 35% over last year. The visitors are Canadians and people from all around the world. The increased traffic on the site can be attributed to the ease of access and the expanded volume of information made available. The site has proven to be a cost-effective and timely way of disseminating information.

The TSB contributes to the dissemination of safety information at the international level. Many TSB information products are distributed not only in Canada but also in the United States, Europe, and various other countries around the world. The TSB also assists in the distribution of information originating from foreign countries. Such cooperation between the TSB and foreign organizations contributes to greater public access to safety information worldwide.

The TSB’s expertise and investigation methods are recognized internationally. For instance, the organization has been invited to teach investigative methodologies to air investigators in Singapore. The TSB was invited to attend national and international conferences and workshops to present the TSB methodology for investigating for human factors in transportation occurrences. Staff have also been asked to lecture annually at the International Maritime

Academy in Trieste, Italy, where students are taught methodologies and legislation used by marine investigation organizations worldwide. By participating in such events and sharing methodologies, the TSB not only provides companies with its best practices for their own internal use, but also paves the way for a better understanding by industry of the rigour that the TSB applies to investigations.

The Integrated Safety Investigation Methodology training program developed by the TSB continues to draw significant interest from the transportation industry, including air carriers and railway companies, as well as from other safety organizations within and outside Canada, including the United States, the Netherlands, New Zealand and the United Kingdom. Although the TSB is not in the business of providing training to others, vacant seats in the investigator training sessions have been offered to other persons involved in transportation safety in either public or private organizations. The provision of such training has proven beneficial, as participants gain a better understanding of how the TSB works and acquire methodology and safety approaches they can apply toward achieving similar objectives of advancing transportation safety.

Given the high number of fishing accidents reported to the TSB (approximately half of the shipping accidents reported involve fishing vessels), the TSB is also involved in an initiative to promote a safety culture in the west coast marine community, particularly among operators of small vessels and fishing vessels. The Inter-Agency Marine Action Group brings together agencies from both the federal and provincial governments and provides an opportunity to collaborate to promote safety awareness, provide safety education and foster safe operating practices. The objective is to effect behavioural change within the marine community and thereby reduce the incidence of marine-related accidents and fatalities.

#### **3.2.4 Increased Level of Safety Through the Reduction of Risk**

In general, the TSB has been successful in identifying safety failures and in reducing risks in the transportation systems. TSB investigations result in reports identifying safety failures and, where appropriate, containing recommendations to reduce risks. Over this past year, in all cases where the TSB undertook an investigation, safety failures or factors contributing to the occurrence were identified and communicated. These results reflect a careful application of the TSB's Occurrence Classification Policy in deciding whether to investigate, and a thorough implementation of the investigation methodology. This systematic approach ensures that TSB investigation resources are invested in areas with the greatest potential safety payoffs.

A total of 4,026 occurrences were reported to the TSB in fiscal year 2003-2004, of which the TSB decided to investigate 75. All reported occurrences were examined in accordance with the Occurrence Classification Policy to identify those with the greatest potential for advancing transportation safety. Information on all reported occurrences was entered in the TSB database for historical record, trend analysis and safety deficiency validation purposes.

“Transport Canada has made considerable changes to its regulations, inspection and certification of small passenger vessels following the sinking of the *True North II*. The department has addressed the TSB’s concerns and recommendations, and has nearly completed related regulatory changes and initiatives.”

*David Collette, Minister of Transport, March 2003*

One way to measure the quality of TSB findings and recommendations is by assessing its effectiveness in convincing others of the need for change to improve safety. The TSB therefore assesses the responses to its recommendations to establish the extent to which the underlying safety deficiency has been or is being redressed. Logically, the extent of the planned implementation of safety actions will be predicated upon the degree to which the addressee has accepted the existence of a particular unsafe condition and the magnitude of the associated risks. In 2003-2004, the TSB

received responses to 19 safety recommendations. The TSB assessed two responses as “fully satisfactory,” eight as having a “satisfactory intent” to address safety deficiencies identified in the recommendations, and four as “satisfactory in part.” Five responses were assessed as “unsatisfactory.” The results of this assessment are shown in Table 7.

**Table 7: Assessment of Responses to TSB Recommendations – Current Year**

2003-2004 (Year response received)	Fully satisfactory attention to safety deficiency	Satisfactory intent to address safety deficiency	Attention to safety deficiency satisfactory in part	Unsatisfactory attention to safety deficiency	To be assessed	Total
Marine	2	0	2	1	5	10
Pipeline	0	0	0	0	0	0
Rail	0	0	2	1	2	5
Air	0	8	0	3	0	11
Total	2	8	4	5	7	26

In 2004-2005, the TSB will undertake a comprehensive reassessment of responses to all recommendations issued since its creation in 1990. This review will provide a longer-term view of the outcomes achieved by the TSB's recommendations. The results of this reassessment will be included in the 2004-2005 departmental *Performance Report*.

### **3.2.5 Effective Organizational Performance**

Fiscal year 2003-2004 saw the completion and implementation of a new integrated planning and resource management framework fully synchronized with the government-wide planning and reporting cycle. This new framework permitted the identification of priorities and plans directly aligned with the strategic plan, and led to the allocation of resources based on these plans and priorities. This has permitted a more strategic and focussed use of resources in order to optimize results for Canadians. Furthermore, clear linkages were established between corporate plans and priorities and the individual key commitments of senior managers, thereby ensuring accountability for results.

Progress was also made on performance measurement and reporting. A more robust process was implemented to monitor results and the use of resources through periodic reports and senior management reviews. Work on the development of the balanced score card continued, and appropriate linkages were made to the Treasury Board's Management Accountability Framework. Full implementation of the balanced score card as the principal tool for performance measurement is planned for the 2004-2005 fiscal year.

In 2003-2004, the TSB also implemented a formal internal audit program for the first time. A departmental audit committee was created. Using the corporate risk profile, the audit committee identified internal audit priorities and approved the execution of two audits. The first audit was initiated in March 2004 and completed in early 2004-2005. This audit report, along with the management action plan, will soon be published on the TSB web site.

A particular focus of the Business Plan was employee learning. In 2003-2004, the TSB completed the development of competency profiles and learning standards for all its occupational groups. The organization invested approximately \$1.3 million, or 3.7% of its total operating costs, in employee training and education. A new automated tool was acquired and implemented to facilitate the task of developing individual learning plans for all employees. In future years, the TSB expects to maintain its high level of investment in employee learning but will ensure that these investments are better targeted through the use of the new tool now available to employees and managers.

The principal formal mechanism for defining workplace issues was the Public Service Employee Survey conducted in 2002. Participation in this survey by TSB employees was encouragingly high, identifying a variety of issues to be addressed. In 2002-2003, the TSB created an employee-management committee mandated to develop an action plan for management approval and to assist management with the implementation of the approved plan. During 2003-2004, the committee met on a periodic basis to assess progress against the action plan and reported to the senior management committee. Overall, good progress has been made on most issues identified for action over the past year, and work is ongoing on residual action items. Employee and management response to this approach has been extremely positive. Given this success, the committee's terms of reference were reviewed and modified to make the committee permanent and to add an element of collaboration in internal communications to its mandate.

In 2003-2004, the TSB senior management team undertook a series of discussions to review the internal governance structure. These facilitated discussions led to the adoption of a new decision-making structure to be implemented in 2004-2005. The new structure will focus the efforts of key managers on the areas of greatest importance to them and enable more management time to be spent on the broader strategic issues. Decision-making processes will also be streamlined, incorporate the elements of modern comptrollership and provide for greater transparency.

Overall, the TSB has made significant progress toward improving its internal management frameworks and optimizing the use of its resources. During the year, the TSB was cited by Treasury Board Secretariat officials as a model of effective organizational performance for others to follow. TSB senior managers have also been invited on a number of occasions to share their experience with their colleagues in other organizations.

### **3.2.5.1 Implementing Modern Comptrollership**

The multi-year modern comptrollership initiative is aimed at modernizing management activities within the Public Service, thereby providing for better performance information, sound risk management and appropriate control systems, as well as reinforcing values and ethics and improving the government's accountability to Parliament and to Canadians.

In late 2001, the TSB conducted an assessment of its management practices against 33 criteria of sound organizational management. The resulting Capacity Assessment report (available at [www.tsb.gc.ca/en/publications/Mod\\_Comp/2002/Mod\\_Comp\\_2002.asp](http://www.tsb.gc.ca/en/publications/Mod_Comp/2002/Mod_Comp_2002.asp)),

issued in March 2002, identified a number of areas of the management framework where important changes were needed in order to achieve a state of modern comptrollership.

Understanding the value of modernizing management practices, as well as the risks to the organization if strong comptrollership capabilities were not entrenched in daily operations, the TSB identified modern comptrollership as a management priority and integrated modern comptrollership activities and projects into its annual Business Plans (available at [www.tsb.gc.ca/en/publications/index.asp#business\\_plan](http://www.tsb.gc.ca/en/publications/index.asp#business_plan)).

During the 2002-2003 fiscal year, much of the work done in the context of modern comptrollership was developmental. The TSB developed a business planning framework that integrates all TSB planning activities in a coherent manner and that coincides with the government-wide planning cycle. This framework, now fully implemented, improved and facilitated resource allocation decisions for the 2003-2004 fiscal year and ensured that resources were linked to corporate plans and priorities.

In 2003-2004, work was done on the development of two new management tools: a performance measurement tool and a risk-based internal audit plan. The TSB has also defined the specific knowledge and skills required by managers and functional specialists in the context of modern management. Competency profiles and learning standards have been developed. These will be used to assess current management competencies and to design learning plans to support the implementation of modern management and human resources modernization. Core training for managers was also initiated through a combination of formal in-house and external courses.

As the modern comptrollership initiative came to a close as a project, the TSB ensured the sustainability of its efforts over the longer term by creating a permanent corporate planning and reporting officer position. The role of this new position is to assist the senior management team in ensuring that the planning and performance management frameworks continue to be used to support decision making. This person will also ensure that the frameworks and supporting tools are kept current and relevant to meet the needs of the organization.

In line with its modern comptrollership priorities and with corporate preoccupations, the TSB was also actively involved in working with other departments and agencies on modern comptrollership projects, sharing best practices and finding solutions to minimize costs and efforts. For example, the TSB has led three interdepartmental innovation projects touching upon cultural change within organizations, the integration and streamlining of performance

information, and values and ethics as they apply to partnerships between organizations. TSB staff have been recognized by the Treasury Board Secretariat and the small-agencies community for their leadership in this regard.

The TSB has also undertaken the use of the Treasury Board's Management Accountability Framework (MAF). The MAF was introduced to all managers and their administrative assistants as a management tool. Work was also initiated on the mapping of Business Plan activities and balanced score card performance indicators against the MAF elements.

### **3.2.5.2 Modernization of Human Resources Management**

The approval by Parliament of the *Public Service Modernization Act* will have an impact on all federal institutions, including the TSB. This new legislation, aimed at modernizing the management of human resources in the Public Service, will be implemented over the next two years. In 2003-2004, the TSB reviewed the potential implications of the legislation and ensured that resources were set aside in its 2004-2005 and 2005-2006 budgets to facilitate the implementation of the required changes. Work was undertaken in a proactive manner to create a labour-management consultation framework and to initiate the training of managers on values-based staffing. TSB representatives have also participated in a number of interdepartmental working groups led by the Public Service Human Resources Management Agency of Canada to develop policies, guidelines and tools for departments and agencies.

### **3.3 Responding to Resource Pressures**

In 2002-2003, the TSB received approval for short-term funding to respond to specific resource pressures. This funding was intended to reduce the backlog of investigations in process, renew information management and replace rusted-out capital assets. It was provided over a period of approximately 27 months, starting in late 2002-2003. In seeking approval for these funds, the TSB committed to achieving specific results (see Table 8). The next three sections provide an overview of results achieved to date against each commitment.

**Table 8: Resource Pressure Commitments**

Commitments		Results Achieved	
<b>Improving the quality and timeliness of TSB products</b>			
Approved Resources 2003-2004	\$1.6 million and 13 FTEs	Actual Resources Utilized 2003-2004	\$1.2 million and 6 FTEs
Reduce the number of investigations in progress to fewer than 100		☐	
Improve the mean time in process by 10% (or approximately 60 days)		☐	
Significantly reduce the backlog of unpublished class 3 reports		✔	
Free up experienced staff to work on initiatives to improve future performance and balance activities with available resources		✔	
<b>Renewing the management of information</b>			
Approved Resources 2003-2004	\$0.4 million and 1 FTE	Actual Resources Utilized 2003-2004	\$0.36 million and 2 FTEs <sup>1</sup>
Develop new architecture and an integrated suite of systems to support business needs		✔	
Upgrade the records management system and improve the filing system		✔	
Develop and implement employee training and awareness tools		✔	
<b>Replacing capital assets</b>			
Approved Resources 2003-2004	\$0.86 million	Actual Resources Utilized 2003-2004	\$0.81 million
Replace a specific list of assets		★	
Develop and implement a multi-year capital asset replacement plan		☐	
<p>Legend:            ★ = exceeded expectations    ✔ = successfully met expectations    ☐ = not yet fully met expectations</p> <p><sup>1</sup> The TSB has invested an additional \$0.63 million from its own base budget into this initiative, for a total investment of approximately \$1 million in 2003-2004.</p>			

### **3.3.1 Improving the Quality and Timeliness of TSB Products**

During the 2002-2003 fiscal year, the TSB initiated a consultative process designed to seek the input of a wide range of TSB stakeholders. These consultations have provided a broad assessment of stakeholders' needs and expectations and an appreciation of how successfully the TSB is achieving its mandate and how it is viewed from the outside. In 2003-2004, the results of the consultations, along with other information, were used for the review of departmental operational processes and outputs to ensure that they continue to meet the needs of stakeholders and that optimal results can be achieved with the resources provided by Parliament.

A reshaping of products and services project was initiated to address issues raised in the stakeholder needs analysis. The project examined the TSB's current mix of products and services and proposed modifications to increase the effectiveness and timeliness of occurrence-related communications with stakeholders. Accordingly, the project team made several recommendations to the senior management committee. These recommendations will be examined in detail in 2004-2005, prioritized and implemented.

A TSB work group reviewed the Occurrence Classification Policy to determine whether it adequately addressed stakeholders' needs concerning decisions on investigations. The group's overall conclusion was that the Policy was effective in ensuring occurrences would be investigated if there were opportunities for advancing safety. TSB Board Members also confirmed that they believed this Policy was being implemented consistently.

A work group was established to develop a definition of a Safety Issue Investigation and to make a recommendation on whether the TSB should conduct Safety Issue Investigations. A "Safety Issue Investigation" is typically based on a number of similar investigations, rather than a single occurrence. The group recommended that the TSB undertake Safety Issue Investigations as an additional means of identifying safety deficiencies. To facilitate this process, a process map and a draft governance structure for the conduct of these investigations were developed. The recommendations of the work group were approved by the senior management committee, and the governance structure is in the process of being finalized.

The TSB obtained approval of temporary incremental resources to reduce the number of investigations in progress to fewer than 100 and to improve the mean time in process by 10% (or approximately 60 days) by the end of fiscal year 2004-2005. As part of a broader human resources strategy, staff hired with these incremental resources are viewed as potential replacements for staff expected to depart over the next few years. These incremental resources also permit current, more experienced staff to contribute to a full range of longer-term initiatives to

improve performance in the future, including training, quality assurance and development of modern tools and procedures to aid investigative staff. These incremental resources were allocated to appropriate managers at the beginning of the fiscal year, and a management-level steering committee was established to provide governance for this activity. Mechanisms were put in place to track new investigations and measure results of improvements in processes. This will enable management to ensure that process improvements are having the desired effects on results. In 2004-2005, management will also reassess targets to determine the optimal sustainable levels to be maintained in future.

The number of new investigations started during 2003-2004 was reduced as planned in the *Report on Plans and Priorities*. Balance was also achieved between the number of new investigations started and the number of investigations completed during the year. Efforts are now being made in operational planning to maintain this balanced level of activity. The number of other safety outputs dropped in 2003-2004 as a result of the reduction in the number of new investigations started. This is a natural effect, as safety outputs are derived directly from investigations.

The number of investigations in progress at year-end and the average time to complete investigations both increased in 2003-2004 (see section 3.2.2 for actual numbers). This represents little measurable progress against the TSB's specific commitments. There are a number of reasons for this. First, the TSB has faced a long ramp-up time for the recruitment and training of new staff due to the specialized nature of the positions. New personnel were therefore not in place and productive until the second half of the fiscal year. Second, a conscious decision was made to focus on investigations that were more than two years old. Significant progress was achieved in this regard, and the backlog of older cases was reduced from 16 to 11. However, this success also meant that the mean completion time temporarily increased. Finally, the TSB also placed an early focus on other initiatives to improve processes, which will impact primarily the new investigations to be started in the future. Overall, TSB senior management is satisfied that the organization is on track to meet its commitments by the end of 2004-2005.

For the past few years, the TSB has limited the distribution of its investigation reports to a small targeted audience of key stakeholders directly affected by the investigation findings. Most reports were therefore not published for broad public access, seriously limiting the communication of safety messages. At the beginning of 2003-2004, the TSB had a backlog of 192 unpublished reports for the period of 2000 to 2003. During 2003-2004, the TSB completed 73 new investigation reports. A total of 179 reports were translated, edited, formatted and published on the TSB web site during the year, leaving 86 unpublished reports yet to be processed as of year-end. Plans are in place to complete the

publication of these reports during 2004-2005. Work is also underway to identify solutions to ensure that all future investigation reports are published on the web site shortly after their completion.

While addressing the workload backlog, the TSB has also allocated investigation and management resources to lay the foundation for performance improvements over the longer term. TSB management believes that, in order to sustain longer-term performance improvements, it must make investments, in terms of freeing up experienced staff and managers to train staff and to strengthen internal work processes. The following are examples of investment activities aimed at sustained future performance improvement:

- Training programs have been developed and delivered in three areas: “Investigation Report Writing,” “Responding to Comments by Designated Reviewers,” and “Safety Communications.”
- Rail and marine investigation branches have conducted investigators workshops to improve work practices and processes.
- Marine and air investigation branches have conducted managers workshops with the objective of strengthening investigation management processes.
- Experienced investigators and managers have been working on the information management improvement project team (see section 3.3.2 for details).

Significant progress has been made in this area and more work is planned for 2004-2005.

### **3.3.2 Renewing the Management of Information**

During 2003-2004, the records management system upgrade, necessary to replace the current unsupported software version, was successfully completed. This will allow the TSB to maintain its capacity to manage its physical records. In addition, a situation analysis was done to determine necessary improvements to the file classification structure for records related to corporate services functions. This will ensure that corporate memory is managed effectively and that the organization is well positioned for transition to an electronic records management environment. This project will continue in fiscal year 2004-2005 and be expanded to include records related to other functions.

The TSB undertook several information management (IM) improvement activities aimed at initiating cultural change and awareness that “good IM makes good business sense.” In addition to developing new policy and guidelines, the TSB designed and provided a half-day IM training session to all staff across the country. These sessions were aimed at raising awareness of both government-

wide requirements and TSB-specific practices associated with records management and Access to Information and Privacy requirements. Similar sessions will now be offered to new TSB employees on an ongoing basis.

The multi-year Transportation Investigation Information Management System (TIIMS) project aims to modernize and improve information management products, services and productivity tools available to TSB staff and managers. Over the past year, the TIIMS project, using the Government of Canada Strategic Reference Model, has advanced these objectives via an organization-wide focus group. The focus group completed various business models and developed an enterprise architectural blueprint and a prototype of a team-oriented investigation management environment. Additional achievements included the development of a risk management strategy, cost-benefit analysis, return on investment study and detailed project plan, as well as the creation of a detailed project charter document. In the longer term, the TSB will leverage this new automated business environment to facilitate productivity gains and improve the timeliness of delivery of TSB products and services.

### **3.3.3 Replacing Capital Assets**

The TSB was facing a significant capital asset “rust-out” as investments in this area were significantly reduced over the past 10 years to cope with budget cuts and other resource pressures. A list of specific assets requiring urgent replacement was compiled and submitted to the Treasury Board Secretariat. Funding was approved to replace these assets. All assets identified have been replaced at an overall lower cost than originally estimated. The remaining funds were therefore used to replace additional assets also due for replacement.

The TSB has developed a multi-year asset replacement plan in line with normal asset life cycles. However, further work is required to rationalize the asset base and reduce the need to invest in capital assets through the use of alternative solutions such as equipment rental, contracting out some work or sharing facilities with other government organizations. Further work is also required to identify financial resources that can be reallocated internally to permit the implementation of the multi-year replacement plan.

## **3.4 Financial Performance**

The TSB started the year with authorities of \$25.7 million. Supplementary Estimates in the amount of \$5.0 million were then approved for the carry-forward of the previous year’s lapse and resource pressure adjustments. Transfers in the amount of \$2.4 million were also made from Treasury Board votes for collective bargaining adjustments as well as for the implementation of Modern Comptrollership and internal audit, thereby increasing total authorities to \$33.1 million.

In 2003-2004, the TSB spent \$32.1 million of its \$33.1 million total authorities. The TSB lapsed \$1 million from its operating budget. This lapse is primarily due to lower spending than anticipated on salaries and training for new employees, as well as the deferral of some projects to 2004-2005. The complete audited financial statements are enclosed in Appendix C.

The total expenditures of the TSB represent an approximate cost of \$1.00 per Canadian citizen. For this amount, Canada maintains the capability to investigate major failures in four different modes of the national transportation system.

### Financial Table 1: Summary of Voted Appropriations

This table explains the way Parliament voted resources to the TSB.

Financial Requirements by Authority (\$ millions)					
		2003-2004			
Vote		Total Main Estimates	Total Planned Spending	Total Authorities	Total Actual Spending
	<b>Canadian Transportation Accident Investigation and Safety Board</b>				
15	Operating expenditures	22.3	26.4	29.6	28.6
(S)	Contributions to Employee Benefit Plans	3.4	3.4	3.5	3.5
	<b>Total Department</b>	<b>25.7</b>	<b>29.8</b>	<b>33.1</b>	<b>32.1</b>
Total Authorities are Main Estimates plus Supplementary Estimates plus other authorities (see Table 9 for details).					

**Table 9: Detailed Breakdown of 2003-2004 Total Authorities (\$ millions)**

<b>Authorities</b>	<b>Amount</b>
Main Estimates	25.7
Supplementary Estimates – Carry-Forward of Previous Year Lapse	1.0
Supplementary Estimates – Resource Pressures	3.9
Transfers from Treasury Board – Collective Bargaining	2.1
Transfers from Treasury Board Vote 10 – Modern Comptrollership and Internal Audit	0.2
Spending of Proceeds from Disposal of Surplus Crown Assets	0.1
Year-end Adjustment to Employee Benefit Plans	0.1
<b>Total Authorities</b>	<b>33.1</b>

## Financial Table 2 : Comparison of Total Planned Spending to Actual Spending

This table explains, in a government-wide standardized fashion, the way resources are used by the TSB.

<b>Departmental Planned versus Actual Spending (\$ millions)</b>				
<b>Business Line</b>	<b>2003-2004</b>			
	<b>Total Main Estimates</b>	<b>Total Planned Spending</b>	<b>Total Authorities</b>	<b>Total Actual Spending</b>
Full-Time Equivalents	235	249	249	227
Operating	25.7	29.8	33.1	32.1
<b>Total Gross Expenditures</b>	<b>25.7</b>	<b>29.8</b>	<b>33.1</b>	<b>32.1</b>
Less:				
Re-spendable Revenues	-	-	-	-
<b>Total Net Expenditures</b>	<b>25.7</b>	<b>29.8</b>	<b>33.1</b>	<b>32.1</b>
<b>Other Revenues and Expenditures</b>				
Non Re-spendable Revenues	-	-	-	-
Cost of Services Provided by Other Departments	3.1	3.0	3.1	3.1
<b>Net Cost of the Program</b>	<b>28.8</b>	<b>32.8</b>	<b>36.2</b>	<b>35.2</b>
<p>Note: Total Authorities and Actual expenditures are significantly higher than Planned Spending due to the compensation for new collective agreements, the carry-forward of the previous year's lapse and special funding to address resource pressures.</p>				

Table 10, which follows, shows the breakdown of the net cost of the TSB program by operational activities. All overhead costs have been allocated to the operational activities directly supporting the program delivery. The largest portion of resources (77.4%) was expended on the conduct of investigations (identification of safety failures and investigation support). A significant portion of resources (15.4%) was expended on communicating safety information.

**Table 10: Net Cost of Program by Operating Activities**

<b>Operating Activities</b>	<b>Expenditures (\$ millions)</b>	<b>% of Total Expenditures</b>
Identification of safety failures	22.15	63.0
Investigation support	5.05	14.4
Public access to safety information	5.40	15.4
Satisfaction with quality and timeliness	0.72	2.0
Awareness by Canadians of TSB role	0.50	1.4
International recognition of the TSB	0.04	0.1
Training and education	1.31	3.7
<b>Total</b>	<b>35.17</b>	<b>100.0</b>

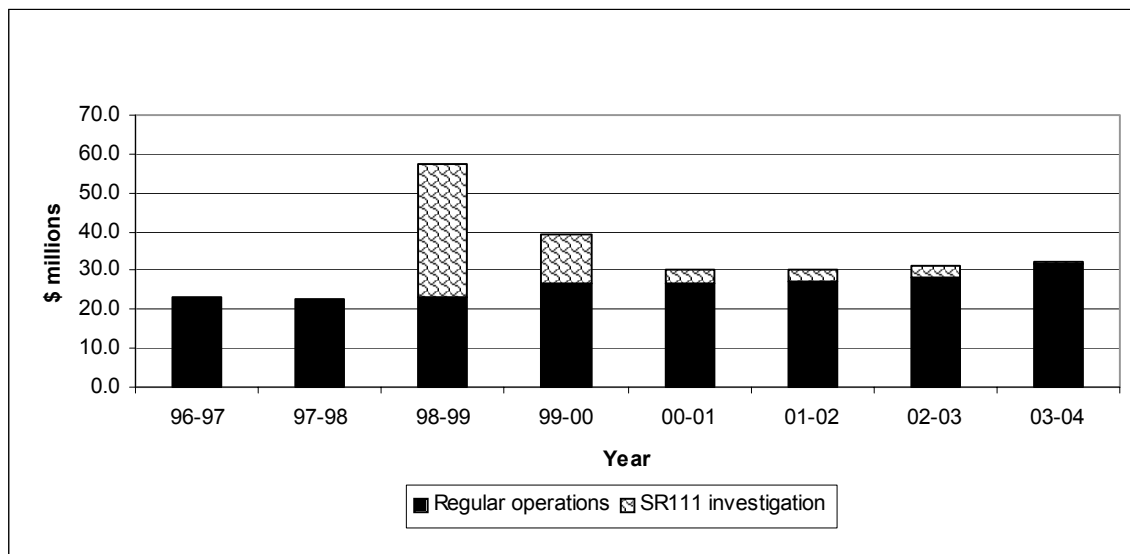
**Financial Table 3: Historical Comparison of Total Planned Spending to Actual Spending**

This table provides a historical perspective on how resources are used by the TSB.

<b>Historical Comparison of Departmental Planned versus Actual Spending (\$ millions)</b>						
<b>Business Line</b>	<b>Actual 2001- 2002</b>	<b>Actual 2002- 2003</b>	<b>2003-2004</b>			
			<b>Total Main Estimates</b>	<b>Planned Spending</b>	<b>Total Authorities</b>	<b>Actual</b>
<b>Canadian Transportation Accident Investigation and Safety Board</b>	30.1	31.3	25.7	29.8	33.1	32.1
<b>Total</b>	<b>30.1</b>	<b>31.3</b>	<b>25.7</b>	<b>29.8</b>	<b>33.1</b>	<b>32.1</b>
Total Authorities are Main Estimates plus Supplementary Estimates plus other authorities.						
Note: Total Authorities and Actual expenditures are significantly higher than Planned Spending due to the compensation for new collective agreements, the carry-forward of the previous year's lapse and special funding to address resource pressures.						

From 1999-2000 onward, TSB spending has increased progressively each year due to increases in employee salaries and general operating costs (see Figure 3). During the period of 1998-1999 to 2003-2004, significant costs were incurred for the Swissair Flight 111 (SR111) investigation, totalling approximately \$56.7 million. In 1998-1999 and 1999-2000, SR111 investigation costs were \$34.0 million and \$13.4 million, respectively. In 2000-2001, 2001-2002 and 2002-2003, SR111 investigation costs averaged approximately \$3.3 million per year. In 2003-2004, SR111 costs amounted to approximately \$0.5 million. Financial results for 2002-2003 and 2003-2004 also include spending related to the short-term funding received to address specific resource pressures. These expenditures total \$0.2 million and \$2.4 million, respectively.

**Figure 3: TSB Historical Spending**



## Section 4: Other Information

The TSB reports publicly on all its investigations. Most investigation reports published since 1995 are available on the TSB web site. The TSB also publishes periodic statistical reports for each of the four transportation modes, which are also available on the site. Finally, the TSB publishes an annual report to Parliament and a periodic safety magazine entitled *Reflexions*, which are available in printed form upon request.

Previous years' Reports on Plans and Priorities and departmental Performance Reports and miscellaneous additional information are also available on the TSB web site at [www.tsb.gc.ca](http://www.tsb.gc.ca).

For further information, please contact us:

Communications Division  
Transportation Safety Board of Canada  
Place du Centre  
200 Promenade du Portage  
4th Floor  
Gatineau, Quebec  
K1A 1K8

E-mail: [communications@tsb.gc.ca](mailto:communications@tsb.gc.ca)

Telephone: (819) 994-3741

Fax: (819) 997-2239

## **Appendices**

A: Transportation Safety Statistics

B: Links to Other Organizations Involved in Transportation Safety

C: Audited Financial Statements

## Appendix A Transportation Safety Statistics

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The following table presents the statistics on transportation occurrences by mode, including comparisons with the five-year average. Taking into account the level of activity in each mode, the accident rates for 2003 continue to exhibit a general downward trend.

Transportation Occurrences by Mode – 2003 versus Previous Five-Year Average (1998-2002)				
	Marine	Pipeline	Rail	Air
<b>Accidents</b>				
2003	546	20	1030	372
2002	485	20	984	323
Five-Year Average	537	20	1062	380
<b>Fatalities</b>				
2003	18	0	79	75
2002	28	0	96	63
Five-Year Average	34	0	98	131
<b>Incidents</b>				
2003	221	38	295	834
2002	174	35	303	865
Five-Year Average	201	35	345	783

The following table presents data on accident rates by mode for the current year, as well as the five-year average. Keeping in mind that each has its own inherent limitations, these aggregate measures of activity provide a general point of reference.

Accident Rates in Transportation – 2003 versus Previous Five-Year Average (1998-2002)

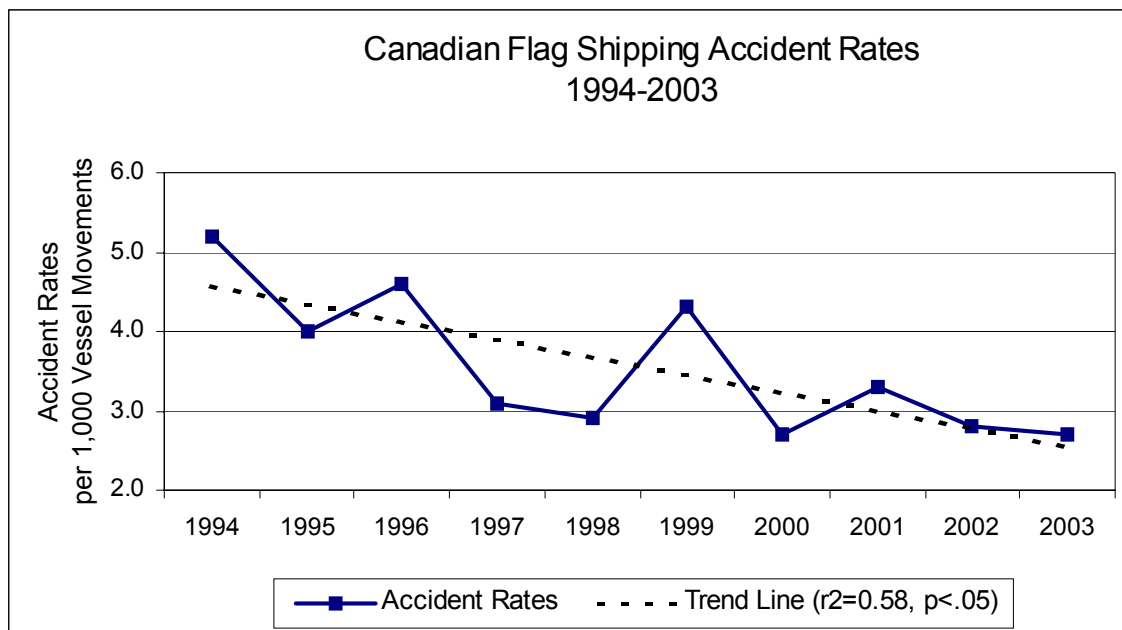
	Marine <sup>1</sup>	Pipeline <sup>2</sup>	Rail <sup>3</sup>	Air <sup>4</sup>
Accidents				
2003	2.7	1.5	11.5	7.8
2002	3	1.6	11	7.4
Five-Year Average	3.2	1.7	11.9	8.3

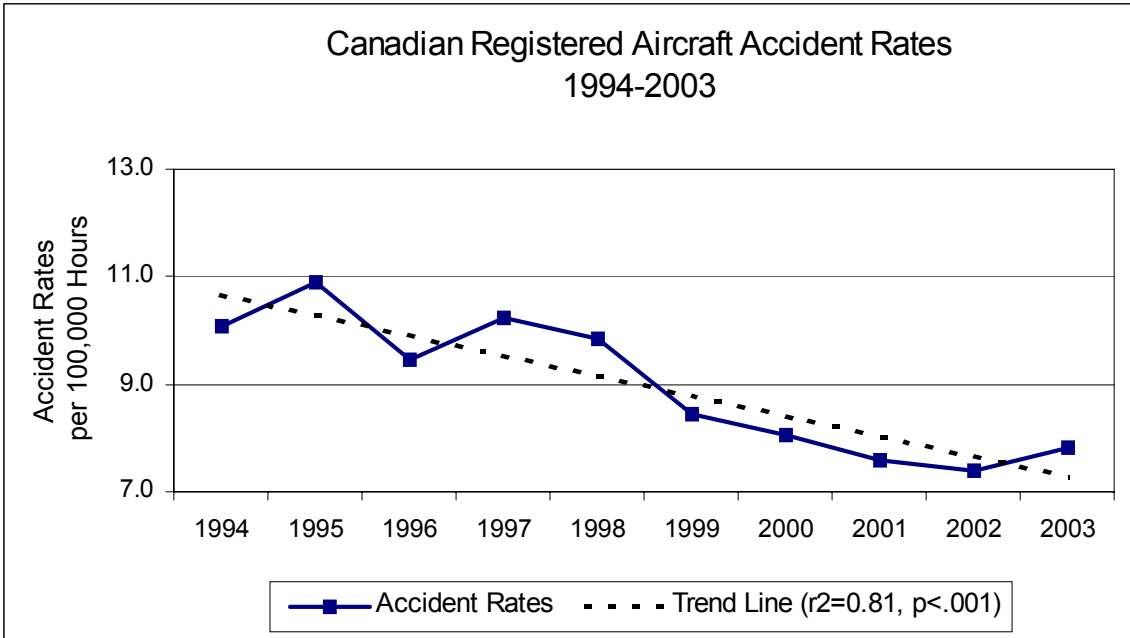
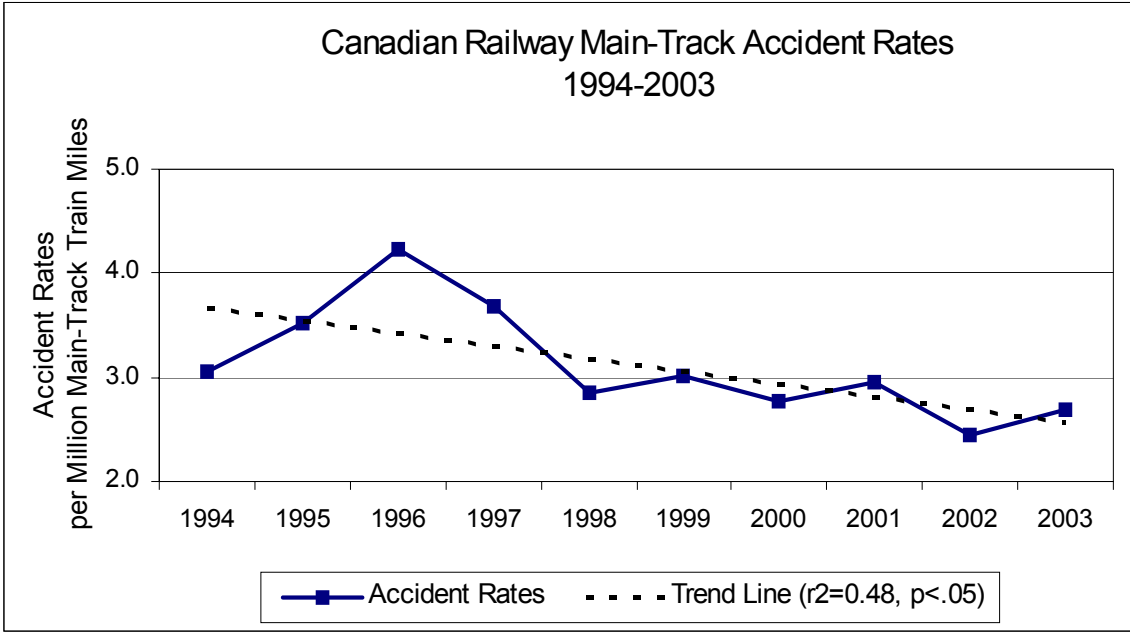
<sup>1</sup> Canadian-flag shipping accidents for vessels of 15 grt or more (excluding passenger vessels, passenger ferries and fishing vessels) per 1000 movements.

<sup>2</sup> Per exajoule.

<sup>3</sup> Accidents other than crossing or trespasser accidents which occur on a main track or spur per million main-track train miles.

<sup>4</sup> Canadian registered aircraft accidents (excluding ultralights, gliders, balloons and gyrocopters) per 100,000 hours.





More comprehensive information is available on the TSB web site at [www.tsb.gc.ca/en/stats/index.asp](http://www.tsb.gc.ca/en/stats/index.asp) or in Chapter 4 of the *Transportation in Canada 2003: Annual Report* published by Transport Canada. That publication is available at [www.tc.gc.ca/pol/en/anre/transportation\\_annual\\_report.htm](http://www.tc.gc.ca/pol/en/anre/transportation_annual_report.htm).

## **Appendix B**

### **Links to Other Organizations Involved in Transportation Safety**

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More information on transportation safety in Canada is available from other federal government agencies who play a role in this area. The Internet addresses for the main organizations are as follows:

Transport Canada . . . . .	<a href="http://www.tc.gc.ca">www.tc.gc.ca</a>
National Energy Board . . . . .	<a href="http://www.neb.gc.ca">www.neb.gc.ca</a>
Canadian Coast Guard . . . . .	<a href="http://www.ccg-gcc.gc.ca">www.ccg-gcc.gc.ca</a>
Canadian Transportation Agency . . . . .	<a href="http://www.cta-otc.gc.ca">www.cta-otc.gc.ca</a>
Royal Canadian Mounted Police . . . . .	<a href="http://www.rcmp-grc.gc.ca">www.rcmp-grc.gc.ca</a>
Human Resources and Skills Development Canada . . . . .	<a href="http://www.hrsdc-rhdcc.gc.ca">www.hrsdc-rhdcc.gc.ca</a>
National Defence . . . . .	<a href="http://www.dnd.ca">www.dnd.ca</a>

More information on transportation safety in selected countries is available on the following Internet sites:

#### United States

National Transportation Safety Board . . . . .	<a href="http://www.nts.gov">www.nts.gov</a>
Federal Aviation Administration . . . . .	<a href="http://www.faa.gov">www.faa.gov</a>

#### Australia

Australian Transport Safety Bureau . . . . .	<a href="http://www.atsb.gov.au">www.atsb.gov.au</a>
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#### France

Bureau d'Enquêtes et d'Analyses pour la sécurité de l'Aviation Civile .	<a href="http://www.bea-fr.org">www.bea-fr.org</a>
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#### United Kingdom

Air Accidents Investigation Branch . . . . .	<a href="http://www.aaib.dft.gov.uk">www.aaib.dft.gov.uk</a>
Marine Accidents Investigation Branch . . . . .	<a href="http://www.maib.dft.gov.uk">www.maib.dft.gov.uk</a>

#### International

International Civil Aviation Organization . . . . .	<a href="http://www.icao.int">www.icao.int</a>
International Maritime Organization . . . . .	<a href="http://www.imo.org">www.imo.org</a>
International Transportation Safety Association . . . . .	<a href="http://www.itsasafety.org">www.itsasafety.org</a>

## Appendix C

# Audited Financial Statements

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### **Canadian Transportation Accident Investigation and Safety Board Management Responsibility for Financial Statements**

Responsibility for the integrity and objectivity of the accompanying financial statements for the year ended March 31, 2004 and all information contained in this report rests with management of the Canadian Transportation Accident Investigation and Safety Board (CTAISB).

We have prepared these financial statements in accordance with the Treasury Board of Canada Accounting Standards based on Canadian generally accepted accounting principles, using management's best estimates and judgements where appropriate. These statements should be read within the context of the significant accounting policies set out in the Notes.

Management has developed and maintains books, records, internal controls and management practices, designed to provide reasonable assurance that the Board's assets are safeguarded and controlled, resources are managed economically and efficiently in the attainment of corporate objectives, and that transactions are in accordance with the *Financial Administration Act* and regulations as well as other applicable government policies and statutory requirements.

The transactions and financial statements of the CTAISB have been audited by the Auditor General of Canada, the appointed independent auditor for the Board.

  
Charles H. Simpson  
Acting Chairman

Gatineau, Canada  
May 26, 2004

  
Jean L. Laporte, CGA  
Senior Financial Officer



Auditor General of Canada  
Vérificatrice générale du Canada

## AUDITOR'S REPORT

To the Chairman of the Canadian Transportation Accident  
Investigation and Safety Board  
and to the President of the Queen's Privy Council for Canada

I have audited the statement of financial position of the Canadian Transportation Accident Investigation and Safety Board as at March 31, 2004 and the statements of operations and net assets and cash flows for the year then ended. These financial statements are the responsibility of the Board's management. My responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In my opinion, these financial statements present fairly, in all material respects, the financial position of the Board as at March 31, 2004 and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

Sylvain Ricard, CA  
Principal  
for the Auditor General of Canada

Ottawa, Canada  
May 26, 2004

**Canadian Transportation Accident Investigation and Safety Board  
Statement of Financial Position**


As at March 31  
(in thousands of dollars)

	2004	2003
<b>ASSETS</b>		
<b>Financial Assets</b>		
Due from the CRF	\$ 2,775	\$ 3,152
Receivables and Advances (Note 4)	96	765
<b>Total Financial Assets</b>	<b>2,871</b>	<b>3,917</b>
<b>Non-Financial Assets</b>		
Prepayments	32	69
Inventories not for Re-Sale	115	130
Property and Equipment (Note 5)	4,312	4,122
<b>Total Non-Financial Assets</b>	<b>4,459</b>	<b>4,321</b>
<b>Total Assets</b>	<b>\$ 7,330</b>	<b>\$ 8,238</b>
<b>LIABILITIES</b>		
Accounts Payable and Accrued Liabilities	\$ 2,786	\$ 3,317
Accrual for Employee Vacation and Overtime	960	910
Employee Severance Benefits	3,402	3,242
<b>Total Liabilities</b>	<b>7,148</b>	<b>7,469</b>
<b>NET ASSETS</b>	<b>182</b>	<b>769</b>
<b>Total Liabilities and Net Assets</b>	<b>\$7,330</b>	<b>\$ 8,238</b>

Contingent Liabilities and Commitments (note 9 and note 10 respectively)

*The accompanying notes form an integral part of these financial statements.*

  
Charles H. Simpson  
Acting Chairman

  
Jean L. Laporte, CGA  
Senior Financial Officer

Gatineau, Canada  
May 26, 2004

**Canadian Transportation Accident Investigation and Safety Board**  
**Statement of Operations and Net Assets**

for the year ended March 31  
(in thousands of dollars)

	2004	2003
<b>Revenues</b>		
Sales of Goods and Services	\$ 15	\$ 27
Other Non-Tax Revenues	11	86
<b>Total Revenues</b>	<b>26</b>	<b>113</b>
<b>Expenses</b>		
Salaries and Wages	19,897	17,924
Employee Benefit Plans	4,982	4,489
Professional and Special Services	3,505	4,384
Transportation and Communications	2,011	1,892
Accommodation	1,745	1,700
Amortization	1,104	1,050
Utilities, Materials and Supplies	622	654
Purchased Repair and Upkeep	600	541
Information	304	1,481
Loss on Disposal of Property and Equipment	197	43
Rentals	75	112
Construction and/or Acquisition of Machinery and Equipment	70	184
Miscellaneous Expenses	18	30
<b>Total Expenses</b>	<b>35,130</b>	<b>34,484</b>
<b>Net Operating Results</b>	<b>(35,104)</b>	<b>(34,371)</b>
Other Income (Note 6)	196	326
Other Expenses (Note 6)	196	326
<b>Net Results</b>	<b>(35,104)</b>	<b>(34,371)</b>
<b>Net Assets, Beginning of Year</b>	<b>769</b>	<b>505</b>
<b>Net Cash Provided by Government (Note 3c)</b>	<b>31,789</b>	<b>31,211</b>
<b>Change in Due from the CRF</b>	<b>(377)</b>	<b>416</b>
<b>Services Provided Without Charge (Note 8)</b>	<b>3,105</b>	<b>3,008</b>
<b>Net Assets, End of Year</b>	<b>\$ 182</b>	<b>\$ 769</b>

*The accompanying notes form an integral part of these financial statements.*

**Canadian Transportation Accident Investigation and Safety Board**  
**Statement of Cash Flows**

for the year ended March 31  
(in thousands of dollars)

	2004	2003
<b>Operating Activities</b>		
<b>Net Results</b>	<b>\$ 35,104</b>	<b>\$ 34,371</b>
<b>Non-Cash Items Included in Net Results</b>		
Services Provided Without Charge (Note 8)	3,105	3,008
Amortization of Property and Equipment	1,104	1,050
Employee Severance Benefits	160	143
Loss on Disposal of Property and Equipment	197	41
Revenues from Other Government Departments	-	38
	<u>4,566</u>	<u>4,280</u>
<b>Statement of Financial Position Adjustments</b>		
Change in Liabilities	(481)	671
Change in Cash, Receivables and Advances, Prepayments, Inventories not for Re-Sale and Prepaid Expenses	807	(656)
	<u>\$ 326</u>	<u>\$ 15</u>
<b>Cash Used in Operating Activities</b>	<b>30,212</b>	<b>30,076</b>
<b>Investing Activities</b>		
Acquisitions of Property and Equipment	1,577	1,135
<b>Cash Used in Investing Activities</b>	<u>1,577</u>	<u>1,135</u>
<b>Net Cash Provided by Government (Note 3c)</b>	<u>\$ 31,789</u>	<u>\$ 31,211</u>

*The accompanying notes form an integral part of these financial statements.*

# Canadian Transportation Accident Investigation and Safety Board

## Notes to the Financial Statements

for the year ended March 31, 2004

### 1. Authority and Objectives

The Canadian Transportation Accident Investigation and Safety Board (CTAISB) was established in 1990 under the *Canadian Transportation Accident Investigation and Safety Board Act* and is a departmental corporation named in Schedule II to the *Financial Administration Act*. In its day-to-day activities the CTAISB is more commonly known by the name Transportation Safety Board of Canada, or simply the TSB. The objective of the CTAISB is to advance transportation safety. It seeks to identify safety deficiencies in transportation occurrences and to make recommendations designed to eliminate or reduce any such safety deficiencies. In addition to investigations, including where necessary public inquiries into selected occurrences, the CTAISB may conduct studies into more general matters pertaining to transportation safety. The CTAISB has the exclusive authority to make findings as to causes and contributing factors when it investigates a transportation occurrence. The CTAISB's operating expenditures are funded by a budgetary lapsing authority, whereas contributions to employee benefit plans are funded by statutory authorities.

### 2. Summary of Significant Accounting Policies

These financial statements have been prepared in accordance with Treasury Board of Canada Accounting Standards based on Canadian generally accepted accounting principles.

(a) Parliamentary appropriations – the CTAISB is primarily financed by the Government of Canada through Parliamentary appropriations. Appropriations provided to the CTAISB do not parallel financial reporting according to Canadian generally accepted accounting principles. They are based in large part on cash flow requirements. Consequently, items recognized in the Statement of Operations and in the Statement of Financial Position are not necessarily the same as those provided through appropriations from Parliament. Note 3a) to these financial statements provides information regarding the source and disposition of these authorities. Note 3b) provides a high-level reconciliation between the two bases of reporting. Note 3c) presents the reconciliation to Net Cash Provided by Government.

(b) Due from the CRF – As a departmental corporation, the CTAISB operates within the Consolidated Revenue Fund (CRF). The CRF is administered by the Receiver General for Canada. All cash receipts are deposited to the CRF and all cash disbursements made by the CTAISB are paid from the CRF. Due from the CRF represents the amount of cash that the CTAISB is entitled to draw from the CRF, without further appropriations, in order to discharge its liabilities.

(c) Revenues – these are accounted for in the period in which the underlying transaction occurs that gives rise to the revenues.

(d) Employee severance benefits – are calculated using information derived from the results of the actuarially determined liability for employee severance benefits for the Government as a whole. Employee severance benefits on cessation of employment represent obligations of the CTAISB that are normally funded in future years as they are paid.

(e) Vacation pay and overtime – are expensed in the year that the entitlement occurs.

(f) Contributions to pension plans – are recognized in the period that the contributions are made. The calculation of contributions is an estimate based on a government-wide average adjusted annually. Actuarial surpluses or deficiencies are not recorded in the CTAISB's books but are recognized in the consolidated financial statements of the Government of Canada.

(g) Services provided without charge by other government departments – are recorded as operating expenses. Note 8 provides estimates of the more significant types of services provided to the CTAISB without charge.

(h) Receivables – these are stated at amounts expected to be ultimately realized. A provision is made for receivables where recovery is considered uncertain.

(i) Inventories not for re-sale – these comprise spare parts and supplies that are held for future program delivery and are not intended for re-sale. They are valued at cost. If they no longer have service potential, they are valued at the lower of cost or net realizable value.

(j) Property and equipment – all assets plus leasehold improvements having an initial cost of \$2,000 or more are recorded at their acquisition cost. Amortization of property and equipment is done on a straight-line basis over the estimated useful life of the capital asset as follows:

Asset Class	Amortization Period
Buildings	30 years
Furniture	10 years
Office equipment	5 years
Laboratory equipment	10 years
Informatics hardware	4 years
Informatics software	3 years
Motor vehicles	7 years
Other vehicles	15 years
Leasehold improvements	lesser of useful life or term of the lease

(k) Foreign currency transactions – transactions involving foreign currencies are translated into Canadian dollar equivalents using rates of exchange in effect at the time of those transactions. Monetary assets and liabilities denominated in foreign currencies are translated using exchange rates in effect at year-end.

(l) Measurement uncertainty – the preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses reported in the financial statements. At the time of preparation of these statements, management believes the estimates and assumptions to be reasonable. The most significant items where estimates are used are the useful lives of property and equipment, employee severance benefits, contributions to pension plans and the assessment of contingent liabilities.

### 3. Parliamentary Appropriations

#### a) Reconciliation of Parliamentary Appropriations Voted to Authorities Used

(in thousands of dollars)	2004	2003
<b>Parliamentary Appropriations Voted:</b>		
Vote 15 – CTAISB Operating expenditures	\$ 22,304	\$ 21,510
Supplementary Vote 15a	-	3,995
Supplementary Vote 15b	4,889	1,353
Transfer from Treasury Board – Vote 10	163	406
Transfer from Treasury Board – Vote 15	2,139	1,415
Contribution to employee benefit plans	3,511	3,098
<b>Total Parliamentary Appropriations Voted</b>	<b>33,006</b>	<b>31,777</b>
<b>Less: Lapsed Appropriations</b>	<b>1,045</b>	<b>562</b>
<b>Total Appropriations Voted Used</b>	<b>31,961</b>	<b>31,215</b>
<b>Statutory Authorities:</b>		
Spending of proceeds from disposal of surplus Crown assets	96	39
Spending of revenues as per FAA section 29.1	-	22
<b>Total Statutory Authorities Used</b>	<b>96</b>	<b>61</b>
<b>Total Authorities Used</b>	<b>\$ 32,057</b>	<b>\$ 31,276</b>

**b) Reconciliation of Net Results to Appropriations Used**

(in thousands of dollars)

	2004	2003
<b>Net Results</b>	<b>\$ 35,104</b>	<b>\$ 34,371</b>
<b>Adjustments for Items Not Affecting Appropriations</b>		
Less		
Services Provided Without Charge	3,105	3,008
Amortization	1,104	1,050
Employee Severance Benefits	160	143
Loss on Disposal of Property and Equipment	197	43
Vacation Pay	50	96
Inventory Used	43	81
Prepayments	37	-
Justice Canada Legal Services	14	-
Spending of Cost Recovery	-	22
	<b>4,710</b>	<b>4,443</b>
Add		
Gain on Sale	-	2
PAYE Adjustment	-	9
Non-tax Revenue	49	85
Refund of Prior Years' Expenditures	9	7
	<b>58</b>	<b>103</b>
<b>Adjustments for Items Affecting Appropriations</b>		
Add		
Capital Acquisitions	1,577	1,121
Prepays	-	43
Inventory Purchased	28	45
Leasehold Improvements	-	14
	<b>1,605</b>	<b>1,223</b>
Less		
Proceeds from the Disposal of Surplus Crown Assets	96	39
	<b>96</b>	<b>39</b>
<b>Total Appropriations Voted Used</b>	<b>\$ 31,961</b>	<b>\$ 31,215</b>

### c) Reconciliation to Net Cash Provided by Government

(in thousands of dollars)	2004	2003
<b>Net cash provided by government</b>	<b>\$ 31,789</b>	<b>\$ 31,211</b>
Revenues	26	113
Net change in non-cash working capital balance charged to the vote	146	(109)
<b>Total Appropriations Used</b>	<b>\$ 31,961</b>	<b>\$ 31,215</b>

### 4. Receivables and Advances

(in thousands of dollars)	2004	2003
GST refundable	\$ 76	\$ 554
Other Government Departments	12	165
Advances to Employees	8	8
External Parties	-	38
<b>Total</b>	<b>\$ 96</b>	<b>\$ 765</b>

The change in GST refundable is due to timing difference.

### 5. Property and Equipment

(in thousands of dollars)

Asset Class	Historical Cost March 31, 2003	Additions	Disposals	Accumulated Amortization March 31, 2004	Net Book Value March 31, 2004	Net Book Value March 31, 2003
Buildings	\$ 2,715	\$ -	\$ -	\$ 1,820	\$ 895	\$ 1,007
Furniture	1,069	84	102	666	385	363
Office equipment	405	6	75	278	58	87
Laboratory equipment	3,701	658	1,940	1,670	749	415
Informatics hardware	5,108	579	1,853	2,520	1,314	1,320
Informatics software	372	89	-	219	242	286
Motor vehicles	873	125	160	285	553	547
Other vehicles	113	36	-	47	102	72
Leasehold improvements	34	-	-	20	14	26
<b>Total</b>	<b>\$ 14,390</b>	<b>\$ 1,577</b>	<b>\$ 4,130</b>	<b>\$ 7,525</b>	<b>\$ 4,312</b>	<b>\$ 4,122</b>

## 6. Other Income / Expenditures

The CTAISB is responsible for coordinating the financial management of funds for the networks of small federal agencies. The revenues consist of contributions from all agencies to the cost sharing. The expenditures are the disbursements made on behalf of the group. Each government department will report its respective portion of expenditures in its financial statements.

## 7. Expenditures Related to the Swissair Flight 111 Accident Investigation

On September 2, 1998, Swissair Flight 111 crashed in the Atlantic Ocean at approximately 5 nautical miles from Peggy's Cove, Nova Scotia. Under Canadian legislation and international conventions, the CTAISB had the responsibility to conduct a thorough investigation of the accident. The investigation is now completed at a total cost of \$58 million. The current year expenditures relating to this investigation total \$516,000 and are included in the Statement of Operations. There are no significant future costs anticipated.

## 8. Related Party Transactions

The CTAISB is related in terms of common ownership to all Government of Canada departments, agencies and Crown corporations. The CTAISB enters into transactions with these entities in the normal course of business and on normal trade terms applicable to all individuals and enterprises except that certain services, as defined in note 2(g), are provided without charge.

<b>Services Provided Without Charge</b> (in thousands of dollars)				
Department	Type of Services	2004	2003	
Public Works and Government Services Canada	Accommodation, accommodation alteration and other services	\$ 1,745	\$ 1,700	
Treasury Board of Canada	Employer's contributions to the health insurance plans	1,295	1,221	
Office of the Auditor General of Canada	External audit	49	60	
Human Resources Development Canada	Administration of workers' compensation	16	27	
<b>Total</b>		<b>\$ 3,105</b>	<b>\$ 3,008</b>	

## 9. Contingent Liabilities

In the normal course of its operations, the CTAISB becomes involved in various legal actions. Some of these potential liabilities may become actual liabilities when one or more future events occur or fail to occur. To the extent that the future event is likely to occur or fail to occur, and a reasonable estimate of the loss can be made, an estimated liability is accrued and an expense recorded on the Board's financial statements.

For the year ended March 31, 2004, there are various outstanding legal actions against the CTAISB. No liability has been recorded in the financial statements since management of the CTAISB consider them unlikely to be successful.

## 10. Commitments

The nature of the CTAISB's activities results in some large multi-year contracts and obligations whereby the CTAISB will be committed to make some future payments when the services/goods are rendered. Presently, such commitments apply only to the next year. Major commitments that can be reasonably estimated are as follows:

(in thousands of dollars)	Commitments	
	2005	Total
<b>Acquisition of Goods and Services</b>	<b>\$ 2,623</b>	<b>\$ 2,623</b>

## 11. Comparative Figures

Certain of the 2003 comparative figures in Note 3 have been reclassified to conform to the current year's presentation.