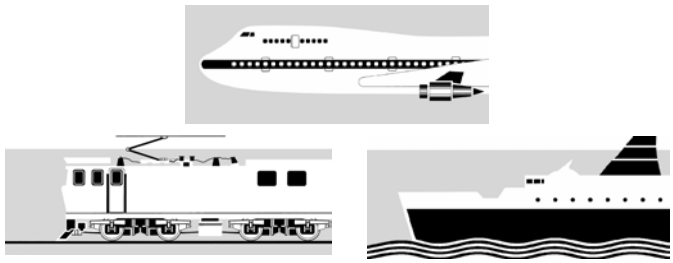


Transport Accident Investigation Commission

Annual Report

2002/2003

Annual Report

of the

Transport Accident Investigation Commission

Te Komihana Tirotiro Aitua Waka

for the period 1 July 2002 to 30 June 2003

Presented to the House of Representatives
as required in paragraph 34 of the schedule to the
Transport Accident Investigation Commission Act 1990

9 October 2003

Minister of Transport
Parliament Buildings
WELLINGTON

Dear Minister

In accordance with paragraph 34 of the schedule to the Transport Accident Investigation Commission Act 1990, the Commission is pleased to submit, through you, its 13th Annual Report to Parliament for the period 1 July 2002 to 30 June 2003.

Yours faithfully

Hon W P Jeffries
Chief Commissioner

Contents

Aim

The aim of the Transport Accident Investigation Commission is to determine the circumstances and causes of accidents and incidents with a view to avoiding similar occurrences in the future.

Te Whainga

Ko te whakatau i ngā āhuatanga me ngā take i puta ai ngā aitua, i tata puta ai rānei ngā aitua te tino kaupapa E WHĀIA ANA e te Komihana Tiritiro Aitua Waka, kia kore ai e pērā anō te puta i ngā rā tū mai.


Hon. Bill Jeffries
Pauline Winter
Norman Macfarlane

The Commission

The Transport Accident Investigation Commission (TAIC) is a body corporate established by the Transport Accident Investigation Commission Act 1990. It consists of not more than 5, nor less than 3, members appointed by the Governor-General on the recommendation of the Minister of Transport. Members hold office for a term not exceeding 5 years, and may be reappointed. There are no statutory qualifications for membership except that one of the members of the Commission must be a barrister or solicitor of the High Court who has held a practising certificate for not less than 7 years, or a District Court Judge. The Commission meets at approximately 8 week intervals, with additional meetings as the workload requires.

Members of the Commission

There are 3 members. They are:

Hon. Bill Jeffries
Chief Commissioner
Mr Jeffries is a Wellington barrister practising in civil and commercial litigation. He is a former Minister of Transport, Civil Aviation and Meteorological Services, and is also a former Minister of Justice.

Pauline A Winter
Deputy Chief Commissioner
Ms Winter has her own consultancy business INTERPACIFIC Ltd providing specialist support services. She is the former Chief Executive of Workbridge Inc. Pauline is a Trustee of the Auckland Energy Consumer Trust, a board member of Legal Services Agency, member of the UNITEC and NACEW (National Advisory Council on the Employment of Women) Councils. She chairs the Pacific Business Trust and is on the Board of Trustees for Otahuhu College. Pauline is of Maori (Te Ati Awa/Taranaki) Samoan, European descent.

Norman Macfarlane
Commissioner
Mr Macfarlane is Managing Director of Auckland-based Caledon Aviation Management Consultancy. His career spans more than 40 years in transport-related industries in the aviation, tourism, international oil and shipping sectors.

Assessors

Assessors are appointed by the Commission for independent technical advice from an operational perspective. The assessors include:

Richard Rayward *Aviation Assessor*
Mr Rayward is the Managing Director of Air Safaris and Services (NZ) Ltd in South Canterbury. He holds an Airline Transport Pilots License (Aeroplane), check and training qualifications and a flight examiner rating. With 35 years experience in aviation in New Zealand, Mr Rayward has been involved in areas of aviation ranging from bush flying and ski-plane operations to scenic, charter and commuter operations.

Pat Scotter *Aviation Assessor*
Mr Scotter recently retired from employment as a Boeing 747-400 captain. He has qualified as a flight instructor, a flight examiner, and a licensed aircraft maintenance engineer with an inspection authority. He also runs an engineering facility at Rangiora Airfield. Mr Scotter holds a Bachelor of Aviation degree and has studied air safety investigation. He is also a Fellow of the Royal Aeronautical Society.

Bill Jones *Rail Assessor*
Mr Jones worked for New Zealand Rail (NZR) as a civil engineer for 32 years and was NZR's Chief Civil Engineer for 5 years and Chief Engineer for 2. Since leaving NZR's full-time employment, he completed a number of consulting assignments in New Zealand and overseas. Mr Jones has a Bachelor of Engineering degree and Diploma of Public Administration. He is a Fellow of the Institution of Professional Engineers New Zealand, and is a Registered Engineer.

Alan McMaster *Rail Assessor*
Mr McMaster has had 30 years experience with railways in New Zealand and during this time held senior management positions in engineering and train operations. Since leaving New Zealand Railways, he has carried out assignments for railway operations overseas and is a mechanical engineering consultant for heavy road transport vehicles in New Zealand. He holds a Bachelor of Engineering degree (Mechanical), is a member of the Institution of Professional Engineers of New Zealand, and is a Chartered Professional Engineer.

David McPherson *Marine Assessor*
Mr McPherson spent 37 years working for Union Shipping New Zealand Limited, starting as a junior engineer. He retired after holding various senior management positions in the company's maritime operations. He holds a Class I Steam and Motor Certificate, and is a member of the Chartered Institute of Transport.

Keith Ingram *Marine Assessor*
Mr Ingram is the Managing Director of VIP Publications Limited in Auckland. He is the editor and publisher of Professional Skipper and New Zealand Work Boats magazines and has more than 35 years marine experience in our coastal waters. As a professional mariner, he holds both trade qualifications and a valid seagoing certificate and is a restricted limits shipping industry advisor and consultant.

Other assessors are appointed from time to time as appropriate, to assist with specific inquiries.

Staff

These were the staff on 30 June 2003:

(back row from left)	
Doug Monks	*Marine Accident Investigator*
John Goddard	*Air Accident Investigator*
Iain Hill	*Marine Accident Investigator*
Peter Miskell	*Rail Accident Investigator*
Rob Griffiths	*Medical Consultant*
John Mockett	*Chief Investigator of Accidents*
Ian McClelland	*Air Accident Investigator*
(middle row from left)	
Dennis Bevin	*Rail Accident Investigator*
Ken Mathews	*Air Accident Investigator*
Denise Steele	*Office Manager*
Ailsa Wong-She	*Receptionist/Administration Assistant*
Nikki Brown	*Administration Assistant*
(seated from left)	
Lisa West	*Report Secretary*
John Britton	*Chief Executive*

Chief Commissioner's Overview

The sobering background fact of the work of the Commission is the daily potential of a single transport accident which could destroy hundreds of lives. The Commission must always have sufficient resources to meet its expected responsibilities within the New Zealand broad system of transport safety. Therefore, with satisfaction, we record the fact that the Government provided a significant boost to the Transport Accident Investigation Commission better enabling the Commission to meet its responsibilities to transport safety in New Zealand. The Government provided sufficient resources to address deferred expenditure items, to allow the appointment of 2 investigators (one aviation and one rail), and to obtain professional media and victim communications support for the Commission.

We were very fortunate to have the media relations service on hand because it was almost immediately pressed into service when the Air Adventures Ltd, Piper Chieftain accident happened near Christchurch on 6 June 2003. Eight people were fatally injured and 2 received serious injuries. The communications assistance helped the Commission maximise the investigators' time on site and at the same time meet the understandable need for the next of kin and the news media to be advised that the Commission had launched an investigation and inform them of the processes that the Commission's investigation would follow.

New Zealand has no special immunity from accidents involving even larger numbers than the Christchurch tragedy, of people in aircraft, trains or ferries. The Commission looks forward to the completion of the review of accident investigation, announced by the former Minister of Transport in July 2000 and begun later that year which is examining major accident investigative capability. The review is also examining the Commission's independence, whether the Commission should investigate a wider range of accidents and incidents, accident and incident reporting systems (including confidential reporting) and duplication of roles in safety investigation between the Transport Accident Investigation Commission and the regulators.

The changing environment of transport, both within New Zealand and overseas, means that TAIC must be alert to strategic issues affecting accident investigation and prevention. The rail transport system is facing major changes. There are three issues which the Commission identifies for their potential to impact on the Commission's ability to investigate effectively rail accidents and incidents:

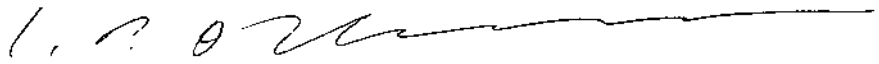
First, the Commission continues the quest identified in its previous annual report to improve the statutory definitions of rail accidents and incidents and to obtain more comprehensive reporting of these occurrences. The new rail legislation provides an opportunity to fix these long standing problems.

Secondly, the Commission advocates that locomotive event recorders be installed as a mandatory requirement on all main line locomotives including commuter trains. Most freight locomotives have relatively sophisticated event recorders, but currently about 90% of the 170 rail passenger units do not. Locomotive event recorders are as necessary to rail safety as flight data recorders are to air safety.

Finally, and not least, is the issue of recording of train control communications. This important recording function is currently not mandatory. Train control records are similar to Air Traffic Control recordings in aviation and are equally important for finding out what train control instructions were issued leading up to, during and after an accident or incident sequence. The Commission looks forward to Rules under the new rail legislation requiring event recorders and train control recordings, and, if possible, mandating these by other means sooner.

The Commission promotes the constructive reform in these three safety areas at a time when rail transport is in such a state of flux. Lack of reporting, lack of event recorders, or lack of train control records do not contribute to a sound accident avoidance system.

The Commission acknowledges the effective contribution of the Minister of Transport and Associate Minister to securing further resources and their willingness to listen to and respond to the Commission's concerns. I am honoured that the Minister has recommended my reappointment to the Governor General, and I am pleased that he has also done so for Commissioner Norman Macfarlane. Ms Pauline A Winter continues as Deputy Chief Commissioner.



Hon W P Jeffries
Chief Commissioner

Chief Executive's Report

The Commission's investigators initiated 47 investigations and completed reports into 41 accidents and incidents during the year. All reports and accompanying safety recommendations are available in hard copy by subscription, or can be downloaded free of charge from the Commission's web site, www.taic.org.nz. A further 7 accident and incident investigations were ceased over the year without proceeding to final report stage. These investigations were discontinued because it was determined that the occurrences causing the investigations did not meet the test of section 13 of the TAIC Act; they were not occurrences likely to be of significance to transport safety. The Commission's investigation and report output statistics are provided on page 56. Variances in numbers of investigations launched compared with target and with previous years are due to the uncertainty inherent in predicting the number and complexity of accidents and incidents to be investigated.

Of the investigations finalised during the year, 68% were completed within 9 months. We were not able to meet the timeliness target of completing 90% of marine and aviation investigations within 9 months because of 2 complex investigations, and having to devote resources to training new investigative staff as previewed in last year's report.

Particularly complex or difficult investigations included the grounding of the bulk log carrier *Jody F Millennium* at Gisborne in February 2002, the grounding of the bulk carrier *Tai Ping* in Bluff Harbour in October 2002, the fatal derailment of a freight train at Te Wera in July 2002 (investigation still under way), 3 derailments due to heat buckles between December 2001 and January 2002, and the collision of 2 passenger units in Wellington in August 2002. It is a credit to the team of investigators and administration staff that we have managed to complete as many investigations as we did. The 6 June 2003 accident involving the Piper Chieftain near Christchurch demanded significant resources and was handled within the Commission's capabilities.

The other tangible result of TAIC's work over the year was production of 47 safety recommendations (SRs). We were also able to confirm that 60 SRs (many from previous years) had been implemented. The statistics are summarised on page 41. A description of the process, and comment on some SRs which have been open (that is have not yet been implemented) occurs on page 27. The Commission's tracking of the implementation of SRs, as advocated by a number of parties and supported by the Minister, is a logical, business-like feedback process that can only improve SR quality and implementation, and thus TAIC's effectiveness at preventing similar accidents in future.

In the aviation industry, key SRs (including marking overhead wires and requiring mountainous terrain flying training) will probably be implemented through changes to aviation Rules. TAIC cannot be more specific about whether the Rules will satisfy the Commission's SRs until the detail of each of the Rules is known. SRs dealing with shortcomings in the Rules affecting flying in mountains have arisen from 3 air accidents – the first in 1993 – investigated by the Commission which together have claimed 21 lives. We hope that appropriate Rules will be implemented in time to prevent more accidents.

The top maritime safety issues, from the Commission's perspective, revolve around seafarer fatigue, increasingly large ships fitting into ports, and certification of watchkeepers and skippers of pleasure craft. These are covered in more detail in subsequent sections of this report.

The Commission applauds the Maritime Safety Authority for its work to identify and reduce substance-induced performance impairment amongst mariners, a problem that is probably under-represented in the Commission's reports only due to the lack of testing of crews promptly after an accident or incident. It is also important that there should be wider public understanding that performance can, and is, impaired by a wider range of substances than just recreational drugs (including alcohol). Over-the-counter medicines, prescribed medicines, fumes and other apparently innocuous substances can impair performance sufficiently to cause an accident. This is why the Commission prefers to use the term "substance induced performance impairment policy" (SIPIP) or "hazardous substances policy" (HSP) rather than, for example, the simplistic and emotive term "drugs and alcohol policy".

The Chief Commissioner has, in his overview, referred to the definitions of rail accident and incident, event recorders on passenger units and train control recordings. The Commission's other SRs include the need for fatigue prevention measures for train controllers and improved compliance with train control procedures.

Producing the above reports and SRs, for the immediate imperative of preventing future accidents and saving lives resulted in expenditure for 2002/03 of $1.776 million[1], closely matching a budget of $1.770 million. The original Crown revenue of $1.550 million was increased by supplementary Crown revenue of $0.032 million to enable the Commission to obtain readiness capability in victim and media communications, primarily for high profile accidents. Total revenue including other income was $1.784 million. The net result was a surplus of $0.004 million.
As identified in last year's report, the Commission is in a very exposed position due to its small size, which makes succession planning very

[1] All figures exclude GST.

difficult. Another difficulty posed by its small size is that associated with investigating larger than typical accidents. The Minister has responded to these problems by increasing TAIC's funding next year to $2.172 million, and a $0.94 million capital injection. This will enable the Commission to hire an additional 2 investigators (one aviation, one rail) and undertake work deferred to save costs in previous years. This is a most important and very welcome addition to our capacity.

The 2002/03 year continued many of the challenges of the previous year, however, the additional resources provided for the Commission has reduced the exposure to major staff losses and will improve our capability to deal with rail and aviation accidents.

John Britton
Chief Executive

Functions and Powers

Functions of the Commission

The functions of the Commission are stated in the Transport Accident Investigation Commission Act 1990 as follows:

1. The principal function of the Commission shall be the investigation of accidents and incidents.

2. Without limiting the principal function under subsection (1) of this section, the Commission shall also have the following functions:

   (a) To make such inquiries as it considers appropriate in order to ascertain the cause or causes of accidents and incidents.

   (b) To co-ordinate and direct all such investigations and to determine which other parties (if any) should be involved in such investigations.

   (c) To prepare and publish findings and recommendations (if any) in respect of any such investigation.

   (d) If requested by the Minister, to deliver a written report on each investigation to the Minister, including any recommendations for changes and improvements that it considers will ensure the avoidance of accidents and incidents in the future.

   (e) To co-operate and co-ordinate with other accident investigation organisations overseas, including taking evidence on their behalf.

   (f) Where (i) a notification under Section 27 of the Civil Aviation Act 1990, or (ii) a notification under Section 39c of the Transport Services Licensing Act 1989, or (iii) a notification under Section 60 of the Maritime Transport Act 1994 has not been received, to request from the Civil Aviation Authority, the Land Transport Safety Authority, or the Maritime Safety Authority, as the case may be, such further information as it considers appropriate regarding any accident that the Commission believes is required to be investigated under Section 13(1) or Section 13(2) of the Transport Accident Investigation Commission Act.

(g) To perform any other function or duty conferred on it by the Transport Accident Investigation Commission Act or by any other Act.

Powers of the Commission

The Commission's powers include the same powers that are conferred on a Commission of Inquiry by the Commissions of Inquiry Act 1908, and are subject to the provisions of the Transport Accident Investigation Commission Act, all the provisions of that Act except Sections 11 and 12 and all other powers reasonably necessary or expedient to enable it to carry out its functions.

The Commission's investigators, under warrants issued by the Chief Commissioner, have the power to:

- enter and inspect any transport-related thing
- inspect, copy, or retain any documents or records
- prevent tampering with evidence, prohibit access to an accident site or related things
- direct a transport-related thing to be taken to a nominated place
- seize, detain, remove, preserve, protect or test any place or thing.

Public hearings

The Commission may hold a public hearing if it is likely to provide any significant advantages for determining the causes and circumstances of an accident or incident, over the Commission's normal procedure of gathering information in confidence. The Commission will conduct the hearing according to such rules of procedure appropriate to its purpose, under the TAIC Act 1990 and the powers conferred on it by the Commissions of Inquiry Act 1908.

Promoting the Free Flow of Information

Consistent with the Commission's responsibility to ensure that it has the best possible access to vital information, the TAIC Act requires the Commission and other parties to keep certain types of information confidential. These same obligations give informants certainty that information they provide to the TAIC for an investigation into an air, rail, or marine accident or incident will not be revealed, except in a de-identified form in the TAIC final report, and if the information is pertinent to the analysis of the occurrence.

Certain records cannot be released by the TAIC other than for accident investigation. These records include witness statements, submissions (for example, on preliminary reports), transcripts of interviews, and notes or opinions taken down by the TAIC investigators in the course of any investigation that occurred after September 1999. The records cannot be obtained from the TAIC by execution of a search warrant, by order of the Court, nor through an inquiry by the Ombudsman or Privacy Commissioner.

The TAIC Act gives similar protection to cockpit voice and video recordings, transcripts of such recordings, and records (other than those included in the preceding paragraph) held by the Commission containing information about an identifiable natural person. However, the Court may order their disclosure for civil proceedings if the Court determines that the interest of justice outweighs the adverse impact disclosure may have on the investigation to which the record relates, or any future investigation.

The protection provided by the Act still allows people who have provided information to the TAIC to make the same (or different) statements to others. If a person does not wish to make the same statement to others, their reason may be precisely that which would have inhibited that person from making the statement to the TAIC, had the TAIC not been able to protect their information.

The TAIC Act still allows other agencies and individuals to carry out their own investigations and to make their own inquiries.

The Commission seeks to ensure that its investigation processes are well understood and is happy to explain these. It has a policy of responding to public and news media inquiries as promptly as practicable and as helpfully as possible.

Commission Consultative Procedures

The principal purpose of the Transport Accident Investigation Commission is to determine the circumstances and causes of accidents and incidents with a view to avoiding similar occurrences in the future, rather than to ascribe blame to any person.

The Commission aims to ensure that its procedures are fair and open and comply with the principles of natural justice. It must also produce its reports and recommendations in a timely and efficient manner, having regard to its contractual obligations to the Minister of Transport and the public interest to publish an accurate, comprehensive report promptly after a transport accident or incident. The following consultative procedures contribute to these objectives.

Consultation on reports

Before publishing a final report on an accident or incident, the Commission produces a preliminary report. If the preliminary report states or may be taken to infer that a person's conduct has contributed to the cause of the accident or incident then such a person becomes an **interested party**, and the Commission gives that person an opportunity to comment on or refute that statement. Because the preliminary report may contain inaccuracies, it is sent to interested parties in confidence to enable those parties to comment on it to the Commission. The Commission may also invite comment from other parties it considers may materially contribute to the accuracy of the report.

No party is permitted to make public comment on, or add to public speculation about, the content of the preliminary report, since this would breach natural justice and could impede the free flow of information to, and thus the effectiveness of the Commission, in future. It would also breach section 14B of the Transport Accident Investigation Commission (TAIC) Act 1990. Every person who discloses information so provided in confidence, without the Commission's written consent, commits an offence under section 14L of the TAIC Act, and is liable for a fine up to $10,000. An organisation is liable for a fine of up to $25,000.

The Commission evaluates the written comments from interested parties if received by the Commission within 21 days, and may modify the preliminary report on the basis of these submissions. No further opportunity to comment on the report is provided, unless the Commission makes changes that imply a greater contribution by an interested party to the reported cause of the accident or incident.

The modified report is submitted to the Commission for final consideration and approval as its **final report** prior to publication. The Commission forwards a copy of the final report in confidence to interested parties a few days before public release. The same requirements for confidentiality that applied to the preliminary report also apply to the advance copy of the final report, until it is released to the public by the Commission. Once the final report is made public, interested parties are free to make public comment on the final report and its contents. However they may not make public comment on the other information provided to them in confidence by the Commission, including the contents of the preliminary report and preliminary safety recommendations, if different from the final report. Neither the preliminary report nor the final report are admissible as evidence in a civil or criminal court.

Consultation on safety recommendations

The ultimate goal of the Transport Accident Investigation Commission is to improve transport safety. To this end, the Commission prepares and publishes **safety recommendations** where it identifies substantive opportunities for improvement. Safety recommendations may be made at any time during an investigation and are made in general or specific terms, whether they have been directly derived from causal factors or have been prompted by other factors in the investigation. Each safety recommendation is made to the **recipient** (any organisation, entity, or person) in the best position to implement it. The Commission has no power to enforce its safety recommendations.

Following initial discussion between the Investigator-in-Charge and the recipient, the Commission forwards a **preliminary safety recommendation** to the recipient and the regulator and invites comment within 10 or 21 days, depending on the urgency of the recommendation. Like a preliminary report, the preliminary safety recommendation and accompanying material is supplied in confidence and must not be disclosed as this could result in inappropriate speculation or a breach of natural justice. This would amount to an offence. The Commission considers the recipient's and the regulator's comments before formulating the **final safety recommendation** that the Commission forwards again, in confidence, to the recipient. The Commission asks the recipient to reply within 10 or 21 days, stating whether or not the recipient will implement the safety recommendation.

If the recommendation is urgent the Commission issues a final safety recommendation without first issuing a preliminary safety recommendation.

Accidents and Incidents to be Investigated

The Commission is required to investigate an accident or incident in the following circumstances:

a) The Commission believes that the circumstances of the accident or incident have, or are likely to have, significant implications for transport safety, or may allow the Commission to establish findings or make recommendations which may increase transport safety; or

b) In the case of an accident or incident that the Commission has decided not to investigate under paragraph (b) of this subsection, the Minister directs the Commission to undertake an investigation in respect of that accident or incident.

The Commission is not required to investigate marine accidents or incidents relating to maintenance while a vessel is not at sea, loading or unloading, unless directed to by the Minister.

The Commission may investigate aviation accidents in neighbouring states that do not have adequate accident investigation capabilities, when requested to do so by the state concerned. The Commission recovers its costs for these engagements.

Summary of Occurrences Investigated

Within the period 1 July 2002 and 30 June 2003 the Transport Accident Investigation Commission initiated 47 investigations, 11 aviation occurrences, 24 rail occurrences and 12 marine occurrences. Over the same period, work continued on completing investigations launched the previous year.

Aviation investigations

reference	date	locality	aircraft	operator	injuries
02-009	7-Jul-02	Fox Glacier	Bell 206 ZK-HPB	Great Southern Lakes Helicopters	Nil
rolled over when landing on snow					
02-010	30-Aug-03	Auckland	Boeing 747-419 ZK-NBS	Air New Zealand	Nil
fore flap separation during departure					
02-012	9-Nov-02	Waitangi	Cessna 172, ZK-JMB	Salt Air	Nil
lost power during flight					
02-013	12-Nov-02	Christchurch	Piper PA34 Seneca ZK-FMW	Christian Aviation	Nil
undercarriage collapsed after landing					
02-014	8-Dec-02	Brisbane, Australia	Boeing 767-219 ZK-NBC	Air New Zealand	Nil
assisting investigation by ATSB					
02-015	17-Dec-02	Fielding	Piper Chieftain ZK-TZC	Private	3 f
collision with terrain during landing approach					
03-001	14-Jan-03	Rimutaka Range	Kawasaki BK-117 ZK-III	Airwork (NZ)	1 m
collision with terrain and emergency landing					
03-002	2-Feb-03	Christchurch	Cessna 206 ZK-EJG	Waiheke Airservices	Nil
engine failure after take-off					
03-003	12-Mar-03	Auckland	Boeing 747-412 9V-SMT	Singapore Airlines	Nil
tail scrape during take-off					
03-004	6-Jun-03	near Christchurch	Piper Chieftain PA31-350 ZK-NCA	Air Adventures	8 f 2 s
collision with terrain on approach to land					

Key to abbreviations:

c	=	crew
p	=	passenger
m	=	minor
s	=	serious
f	=	fatal
nrp	=	no report published

Cessna 207 ZK-SEV, collision with terrain, Gertrude Saddle area 11 km southeast of Milford Sound, 19 January 2002 (investigation 02-001)

Schweizer 269C helicopter ZK-HIC, loss of tail rotor authority and emergency landing, Karaka Downs, South Auckland, 15 May 2002 (investigation 02-003)

Partenavia P68B ZK-ZSP, engine power loss and off-field landing, 5 km southwest of Wairoa, 15 May 2002 (investigation 02-006)

Piper PA34-200T Seneca ZK-SFC, undercarriage failure and subsequent wheels-up landing, Gisborne and Hastings Aerodromes, 25 January 2002 (investigation 02-002)

Rail investigations

reference	date	locality	vehicle	operator	injuries
02-116	26-Jul-02	Near Te Wera	Express freight Train 533	Tranz Rail	1 f 1 s
derailment					
02-117	31-Jul-02	Te Rapa	Express freight Train 328	Tranz Rail	Nil
signal passed at stop					
02-118	7-Aug-02	Tauranga	Express freight Train 484	Tranz Rail	Nil
near collision					
02-119	29-Aug-02	Maimai	Shunt 84	Tranz Rail	Nil
Shunt 84 authorised to enter section of track occupied by welding gang					
02-120	31-Aug-02	Wellington	2x EMU, Trains 9351 and 3647	Tranz Rail	Nil
collision					
02-121	29-Sep-02	between Nuhaka and Kopuawhara	freight Train F8829	Tranz Rail	Nil
derailment					
02-122	18-Oct-02	Hamilton & Te	freight Train 215	Tranz Rail	Nil
derailment caused by dragging brake rigging					
02-123	5-Nov-02	Redwood	Train 7281	Tranz Rail	Nil
train stopped short of platform					
02-124	12-Nov-02	Wallaceville	Train 2679	Tranz Rail	Nil
train stopped short of platform					
02-125	19-Nov-02	Redwood	Train 7218	Tranz Rail	Nil
train stopped short of platform					
02-126	18-Nov-02	Westmere	HRV 64892	Tranz Rail	Nil
occupied track without authority					
02-127	17-Nov-02	Waitotara	Train 528	Tranz Rail	Nil
track warrant irregularity					
02-128	21-Nov-02	Ashburton	Train 935 and HRV 467	Tranz Rail	Nil
train authorised to enter track occupied by HRV					
02-129	4-Dec-02	Taranaki	Train 575 and HRV	Tranz Rail	Nil
near collision					
02-130	19-Dec-02	Rukuhia near Hamilton	Train 220	Tranz Rail	Nil
derailment					
03-101	7-Jan-03	Paekakariki	Express freight Train 226	Tranz Rail	1 s
injury to member of public					
03-102	10-Feb-03	Marton-New Plymouth	HRV 67425	Tranz Rail	1 s
derailment					
03-103	10-Feb-03	Amokura	HRV 64891 and Express freight Train 14210	Tranz Rail	Nil
train authorised to enter track occupied by HRV					
03-104	16-Feb-03	between Taumarunui and Okahukura	Express freight Train 380	Tranz Rail	Nil
derailment					

Rail investigations continued

reference	date	locality	vehicle	operator	injuries
03-105	25-Mar-03	between Dunedin and Port Chalmers	Express freight Train 934D25	Tranz Rail	Nil
derailment					
03-106	8-May-03	Otahuhu	passenger service DMU 3215	Tranz Rail	Nil
fire under DMU when arriving					
03-107	15-May-03	Glen Innes	passenger service DMU 3247	Tranz Metro	1 s
passenger caught in door					
03-108	24-Jun-03	Huntly	Train 136 and truck	Tranz Rail	Nil
collision at level crossing					
03-109	27-Jun-03	Meadowbank	DMU Train 3347	Tranz Rail	Nil
fracture of drive shaft					

Key to abbreviations:

c	=	crew
p	=	passenger
m	=	minor
s	=	serious
f	=	fatal
nrp	=	no report published

Train 929 derailment, Rangitata, 4 January 2002
(investigation 02-101 derailments due to washouts and slips)

Express freight Train 533, derailment, near Te Wera, 26 July 2002
(investigation 02-116)
The derailment site looking east (courtesy Taranaki Daily News)

Marine investigations

reference	date	locality	vehicle	operator	injuries
02-204	14.Aug.02	Wellington Harbour	freight ferry *Kent*	Strait Shipping	Nil
collision and flooding					
02-205	4.Oct.02	off Great Barrier Island	charter vessel *Pisces*	Pisces Charters	2 m
flooding and near sinking					
02-206	8.Oct.02	Bluff	bulk carrier *Tai Ping*	South Port Limited	Nil
grounding					
02-207	16.Nov.02	Hauraki Gulf	charter vessel *Enterprise II*	Hinetai Charters	Nil
flooding					
02-208	21.Nov.02	Manukau Harbour	bulk carrier *Westport*	Holcim NZ	Nil
collision with bridge					
03-201	16.Jan.03	Auckland Harbour	passenger ferry *Harbour Cat*	Fullers Group	Nil
engine room fire					
03-202	18.Feb.03	Auckland	charter vessel *Triptych* and private vessel *Barossa*	Triptych Cruises and private	Nil
collision					
03-203	22.Feb.03	Glenorchy	commercial jetboat and private jetboat	Dart Wilderness Adventures	Nil
collision					
03-204	18.Mar.03	Cape Brett	commercial passenger launch *Tiger III*	Fullers Bay of Islands	4 s
passenger injuries					
03-205	5.Apr.03	New Plymouth	container ship *P&O Nedlloyd*	P&O Nedlloyd	Nil
touched bottom while entering port					
03-206	16.Apr.03	Wangarei	tanker *Capella Voyager*	Chevrontexaco Shipping	Nil
touched bottom while entering port					
03-207	5.May.03	200 miles east of Vanuatu	commercial fishing vessel *Solander Kariqa*	Solander Pacific	Nil
fire in accommodation					

Key to abbreviations:

c	=	crew
p	=	passenger
m	=	minor
s	=	serious
f	=	fatal
nrp	=	no report published

Bulk carrier *Jodi F Millennium*, grounding, Gisborne, 6 February 2002
(investigation 02-201)

Bulk carrier *Tai Ping*, grounding, Bluff Harbour, 8 October 2002
(investigation 02-206)

Safety Recommendations: Levers for Change

"The ultimate goal of a truly effective investigation is to improve safety. To this end, recommendations are made in general or specific terms in regard to matters arising from the investigation, whether they have been directly affected by causal factors or have been prompted by other factors in the investigation."[2]

Safety recommendations (SRs) are arguably the Commission's most important product for avoiding similar occurrences in the future. Consultation on preliminary SRs will not always reveal the difficulties or cost of putting the final SR into practice, so it is not reasonable to expect all SRs to be implemented. It would also be inappropriate for TAIC to enforce any SRs, as this would erode the Commission's independence. If a recipient does not implement a SR, the option always exists for the State to intervene and enforce implementation after assessing importance, cost and benefit.

The Commission publishes SRs and the pertinent portion of the recipients' replies in the final occurrence report if practicable. All SRs, and the pertinent portions of recipients' replies are also published on the internet at the Commission's website www.taic.org.nz.

Implementing safety recommendations

To help maintain public confidence in the SR process, the Commission also encourages recipients to advise it when the recipient has implemented a SR, or has determined that it cannot or should not implement the SR. The Commission considers the information or evidence and updates each SR's status.

The Commission reports the status of each SR as one of the following:

Closed – acceptable
The recipient or other relevant party has shown that it has completed action satisfying the objective of the SR.

Closed – cancelled
The SR has been superseded, or become no longer applicable for a variety of reasons. For example, the recipient or other relevant party has shown that the SR probably is not practicable or does not meet the test of safety at reasonable cost.

[2] From International Civil Aviation Organisation's Manual of Accident Investigation.

Open
The Commission has received insufficient evidence to assign a status of Closed – acceptable, or Closed – cancelled, to the recommendation.

The status of all SRs developed before the status system was launched is recorded as "unconfirmed", unless information received (for example, during a subsequent investigation) enables TAIC to assign another status.

At least 2 benefits to the public occur as a result of the Commission providing an independent objective assessment on whether any SR has been implemented.

The first benefit is demonstrated by the fact that criticism of the Commission for not tracking SR implementation has evaporated. That criticism was driven by public (and news media) concern that the Commission should know whether its SRs had been implemented. People wanted to know that that SRs identified during an investigation were not then abandoned by the SR recipient once public interest in an accident or incident has receded.

The second benefit is that the quality of the SRs issued by the Commission and the prospect of the SRs actually being implemented have probably improved. This is because recipients of SRs are now aware from the outset that not only are their promises to implement recommendations a matter of public record (as they used to be under the old system) but that the Commission is now providing an independent assessment on whether actions have matched the words. The Commission is of the view this has improved the quality of discussion about the wording and focus of SRs with the intended recipients, and improved the quality of SRs and prospects of implementation.

The following sections:

- summarise SRs issued over 2002/03
- give examples of notable SRs
- comment on the implementation of SRs.

Summary of Safety Recommendations Issued

The number of SRs issued over the year varies widely between modes of transport. This is indicative of the different nature of safety issues raised by individual investigations, rather than a reflection of relative levels of safety between modes of transport.

Aviation

Eight safety recommendations were issued to improve aviation safety:

- 2 to improve mountain flying safety
- 1 to prevent wheels-up landings
- 1 to prevent mid-air collisions
- 1 to improve helicopter drive train inspection
- 1 to prevent undercarriage collapse
- 1 to improve pilot response to an abnormal instrument indication
- 1 to improve pilot quality through improved examination procedures.

Rail

Seven safety recommendations were issued to improve rail safety:

- 2 to reduce train derailments in adverse weather conditions
- 1 to improve rail transport safety in remote areas
- 4 to reduce passenger injuries when boarding or overall safety on board.

Marine

Thirty-two safety recommendations were issued to improve marine safety:

- 3 to improve propulsion reliability or water tightness of vessels
- 7 to improve operator safety policies, procedures and risk management
- 4 to improve mainline safety-related training and training standards
- 2 to ensure that minimum crewing and qualification levels are sufficient for safe ship operations
- 4 to improve the safety of port facilities including aids to navigation and mooring systems

9	to improve safety of ships' navigation in congested or confined waters by improving crew resource management, passage planning and traffic management
1	to monitor the impact of education initiatives in the pleasure boat sector compared to compulsory education initiatives in place in other jurisdictions
2	to investigate and carry out a cost benefit analysis for the carriage of Automatic Identification Systems with a view to avoiding collisions in confined waters.

The full text of all SRs and replies is published on the Commission's website www.taic.org.nz. The following sections give examples of notable SRs issued over the year, and comment on implementation of SRs.

Notable Safety Recommendations
Finalised in the year ended 30 June 2003

Aviation

Cessna 207 ZK-SEV, collision with terrain, Gertrude Saddle area 11 kms southeast of Milford Sound, 19 January 2002 (investigation 02-001)

This investigation and the resulting safety recommendations are important because of the need to ensure safety of flight in mountainous terrain.

On Saturday, 19 January 2002, at 0931, ZK-SEV, a Cessna 207, took off from Te Anau Aerodrome for Milford Sound Aerodrome. At about 1000 the aircraft collided with the side of a mountainous valley, approximately 4400 feet above sea level and 500 metres southeast of Gertrude Saddle, some 11 kms from Milford Sound. The pilot and 5 passengers on board died in the collision.

The aircraft probably had not reached a suitable altitude to safely cross over Gertrude Saddle, and the pilot probably left his decision too late to turn back in the valley in order to gain more height.

Safety issues identified were the lack of mandatory mountain-flying training aeroplane pilots must undergo, and the potential safety benefits that could be gained from such training. Safety recommendations addressing these issues were made to the Director of Civil Aviation to:

- Implement previous safety recommendations 078/93 and 033/97, which stated:

    - The training syllabus for the New Zealand Commercial Pilot Licence (Aeroplane) be amended to include "Mountainous-terrain flight training" and the extent of training required be similar to that already specified in the case of Commercial Pilot Licence (Helicopter), and the requirement be applicable prior to the validation or conversion of foreign Pilot Licences to equivalent New Zealand Pilot Licence(s);

    - Include mountain-flying in the training syllabus for Private Pilot and Commercial Pilot Licences (Aeroplane), as is the case for helicopter licences. (023/02)

The Director of Civil Aviation replied in part:

> I will not accept the recommendation as worded, however I have initiated a Rule change in the current view of Part 61 to include mountain-flying training as a requirement for pilot licensing. This matter has already been considered by an Industry and CAA Technical Study Group and a Notice of Proposed Rule Making is currently being drafted for public consultation in accordance with the requirements of the Civil Aviation Act. The implementation of a final rule is therefore not expected before 2003.

A second safety recommendation was made for the Director of Civil Aviation to:

- Include in Advisory Circulars detailed mountain-flying training guidance information, to assist operators who conduct routine commercial operations into mountainous areas, such as Fiordland or similar regions, to meet the Civil Aviation Rules requirement to establish a training programme that ensures each of their pilots is trained and competent to fly in such areas. (024/02)

The Director of Civil Aviation replied in part:

> I accept this recommendation and will include in Advisory Circulars detailed mountain-flying training guidance information to assist operators who conduct routine commercial operations into mountainous areas, such as Fiordland, or similar regions, to meet the Civil Aviation Rules. This will be completed by the end of February 2003.

Piper PA34-200T Seneca ZK-SFC, undercarriage failure and subsequent wheels-up landing, Gisborne and Hastings Aerodromes, 25 January 2002 (investigation 02-002)

This investigation and the resulting safety recommendations are important because they have relevance for a fleet of aging aircraft.

On Friday, 25 January 2002, at about 1430, Piper PA34-200T Seneca ZK-SFC was on approach to land at Gisborne Aerodrome when the nose undercarriage failed to extend. After several unsuccessful attempts to extend the nose undercarriage, the pilot diverted to Hastings Aerodrome where a full wheels-up landing was completed. The 2 crew members and one passenger on board were uninjured and the aircraft sustained minor damage.

The reason for the undercarriage malfunction was not fully determined. However, the nose undercarriage retraction system had become misaligned over time, possibly because of a combination of the nose leg exceeding its limitations during aircraft towing and the aircraft being turned too tightly while manoeuvring over rough ground. The misalignment of the nose undercarriage probably contributed to it jamming after retraction.

The safety issues identified were the need for operators and maintainers to be aware of aircraft taxiing and towing limitations, and the requirement for regular, thorough inspections of the nose undercarriage assembly.

A safety recommendation addressing this issue was made to the Director of Civil Aviation to:

- remind operators and maintainers of Piper PA34-200T Seneca aircraft of the requirement to adhere to aircraft towing limitations, and to regularly and thoroughly inspect the nose undercarriage assembly for correct alignment. (029/02)

The Director of Civil Aviation replied in part:

> I accept this recommendation and have sent a letter to all operators of PA 34-200T Seneca aircraft. This was commenced in August and is now complete.

Schweizer 269C helicopter ZK-HIC, loss of tail rotor authority and emergency landing, Karaka Downs, South Auckland, 15 May 2002 (investigation 02-003)

This investigation and the resulting safety recommendations are important because maintenance shortcomings concerning critical flight controls were uncovered.

On Friday, 15 March 2002, at about 0945, ZK-HIC, a Schweizer 269C helicopter, lost tail rotor authority during a low-level spraying run. Normal helicopter control was lost and the pilot, unable to arrest the ensuing spin, carried out an emergency landing. The pilot, the only occupant, was uninjured.

A defective tail rotor driveshaft aft bumper plug permitted the driveshaft to disengage its drive coupling to the tail rotor gearbox.
A safety issue identified was the need for duplicate inspections of helicopter tail rotor drive trains, and a safety recommendation was made to the Director of Civil Aviation addressing this issue to:

- Critically examine the requirements for duplicate inspections of aircraft control systems, with a view to including helicopter tail rotor drive trains as part of the duplicate inspection regime. (037/02)

The Director of Civil Aviation replied in part:

> I accept this recommendation; I will initiate a review of Rule Part 43.113, duplicate inspection of controls. This review will examine the need for duplicate inspection of vital points in an aircraft, that if they were to fail would have a catastrophic effect on the flight. Helicopter tail rotor drive trains will be considered as part of this review.
>
> The review will be completed by 31 March 2003 however no final date for any action arising from the review can be stated.

Partenavia P68B ZK-ZSP, engine power loss and off-field landing, 5km southwest of Wairoa, 15 May 2002 (investigation 02-006)

This investigation and the resulting safety recommendations are important because shortcomings concerning pilot performance, fuel systems and pilot licensing were detected.

On Wednesday, 15 May 2002, at about 0918, ZK-ZSP, a Partenavia P68B, was on a scheduled flight from Gisborne to Napier, when its right engine lost power because of fuel starvation. The aeroplane was 5 km from Wairoa, at 5000 feet and in cloud, at the time. On board were 4 passengers and the pilot.

Although sufficient fuel was on board the aeroplane, the fuel was not made available to the engine. The propeller was not feathered and the aeroplane, unable to maintain its height, descended until it broke clear of the cloud, near the coastline. The pilot landed the aeroplane safely on a metalled road. There were no injuries, and the aeroplane was undamaged.

Safety issues identified were:

- inadvertent tank-to-tank fuel transfer
- stiff fuel selector knobs
- the adequacy of the aircrew licensing written examination system.

One of the safety recommendations was for the Director of Civil Aviation to:

- Enhance the policy and procedures for aircrew licensing written examinations, their purpose and construction, and the criteria that is applied to examination re-sits, so the "practice effect" does not undermine the examination process. (051/02)

The Director of Civil Aviation replied in part:

> The Director will accept the recommendation as worded in that the current review of Rule Part 61 addresses these matters and a Notice of Proposed Rule Making is currently being drafted for public consultation in accordance with the requirement of the Civil Aviation Act.

Rail

Express freight Train 841, Buller Gorge, 3 January 2002
Express freight Train 929, Rangitata, 4 January 2002
Express freight train 720, Mina, 19 January 2002
Derailments due to washouts and slips (investigation 02-101)

This investigation and the resulting safety recommendations are important because it highlighted the inadequacy of relief arrangements to cover the absence of length gangers over holiday periods to undertake special track inspections under adverse weather conditions. The safety recommendations focused on ensuring adequate qualified staff remain on duty or on call during holiday periods to meet operating contingencies and improved call out lists and procedures for such events.

This report examines 3 derailments due to washouts and slips (occurrences 02-101, 02-102 and 02-103) caused by inclement weather in the South Island during January 2002. No serious injuries were sustained but the opportunity existed in each case for more serious and potentially life threatening injuries to have occurred.

Safety issues identified by these incidents included:

- the lack of a formalised early warning river flow level notification process for the Rangitata River
- the lack of staff available to respond to operating contingencies during the holiday period
- the lack of adequate relief arrangements to cover track staff annual leave programmes
- the lack of a defined process for implementing special track inspections during inclement weather
- the length of time between special track inspections and the arrival of the first train.

Three safety recommendations were made to the operator to address these safety issues.

One of the safety recommendations made to the Managing Director Tranz Rail was to:

- Introduce procedures into the leave programmes for track staff, including length gangers and track maintainers to ensure adequate qualified staff remain on duty or on call to meet operating contingencies during holiday periods and that the names of such staff are advised to train control. (054/02)

F.7

The Managing Director of Tranz Rail replied in part:

> Tranz Rail accepts this recommendation. A specific holiday period contingency plan and Call Out list process has been developed and used by Transfield Services over the most recent summer holiday period. Call out lists are located with the 155 Call Centre and are updated weekly.
>
> The 155 call out system covers the need (see preliminary report clause 2.9.3) for the Call Out list of appropriate staff to be distributed and up to date at all times.

Express freight Train 533, derailment, near Te Wera, 26 July 2002 (investigation 02-116)

This investigation and the resulting safety recommendations are important because of the ongoing issues of fatigue and microsleeps in locomotive crews. The effects of consuming alcohol prior to commencing duty and the failure of train control audit procedures to detect the frequent departures from specified track warrant procedures on the Stratford – Okahukura line. The safety recommendations are focused on improving the safety of train operations and route management on the Stratford – Okahukura line, including improved alertness management programs and the consumption of performance impairment substances within the rail industry in New Zealand.

On Friday, 26 July 2002, at about 0150, Train 533, a westbound express freight, derailed as it negotiated a 45 km/h speed restricted curve after descending a 1 in 51 gradient between Whangamomona and Te Wera. The train plunged about 12 m down the side of the track formation killing the locomotive engineer. A second crew member sustained serious injuries.

The 2 locomotives and several wagons on the train were extensively damaged, but the track sustained minor damage only.

Causal factors included:

- the locomotive crew's loss of attention and situational awareness consistent with their having fallen asleep
- consuming alcohol prior to commencing duty
- the accepted non-compliance with track warrant instructions
- the inability of the locomotive vigilance system to overcome such short – term attention deficits in time to prevent this type of accident.

Safety recommendations have been made to address these issues.

One of the safety recommendations made to the Director of Land Transport Safety is to:

- Investigate train operations and route management on the Stratford to Okahukura Line, and other routes through remote areas; such investigations to include:

  - the performance of the train control radio system
  - the suitability of and compliance with procedures for tracking the progress of trains en-route
  - the procedures when en-route track warrant clause 10 radio check calls are not acknowledged by train control
  - the effectiveness of any existing emergency response plan
  - crew arrangements and rostering.

  And initiate the action necessary to address any deficiencies found. (046/02)

The Director of Land Transport Safety replied in part:

> The Land Transport Safety Authority (LTSA) accepts your final recommendation to perform an investigation on Tranz Rail's train operations and route management through remote areas.
>
> The LTSA is currently preparing a request for proposal (RFP) inviting suitably qualified consultants to conduct the investigation along with and on behalf of the LTSA. A copy of the RFP will be sent to you for your information.
>
> The LTSA intends to commence implementation of your final safety recommendation prior to 31 October 2002.

Marine

Yacht *Toolka-T,* tug *Wainui* and barge *Sea-Tow 11*, collision, Takatu Point, north of Auckland, 16 November 2001 (investigation 01-216)

This investigation and the resulting safety recommendations are important because the circumstances of this accident highlight the lack of a thorough knowledge of good watchkeeping practices and, in particular, the rules for the prevention of collision, that exists on some commercial and pleasure vessels, and indicates the need to critically review the legislative requirements for navigational watchkeepers in both marine fields.

On Friday, 16 November 2001, at about 0445, the yacht *Toolka-T* fouled the towline between the tug *Wainui* and barge *Sea-Tow 11* and was carried along the towline until it collided with the bow of the barge. The *Toolka-T* passed under the barge and sank as a result of the collision.

The collision occurred off Takatu Point while the *Toolka-T* was southbound towards Gulf Harbour and the *Wainui* was northbound from Auckland to a sand excavation site north of Cape Rodney.

There were 4 people on board the *Toolka-T*. The owner of the yacht was unable to get clear of the yacht and did not survive. The other 3 crew were rescued and suffered minor injuries only. There were 5 crew on the *Wainui*, none of whom were injured. The *Sea-Tow 11* was not manned.

Safety issues identified included:

- the standard of training of watchkeepers on both vessels
- the legislative requirements for crewing and qualifications of both commercial and pleasure vessels.

Two safety recommendations were made to the Director of Maritime Safety to address the issues.

- In line with the recommendations made by the Pleasure Boat Safety Advisory Group in 1999, continue to monitor for the five year period to December 2004 the impact of education initiatives introduced in New Zealand against set safety targets. Further, that the systems of compulsory boating safety education in the Canadian and other jurisdictions, continue to be monitored for success through the same period, with a view to implementation of such a system in New Zealand. (057/02)

  and

- Critically review the need to ensure that all bridge watchkeepers on New Zealand registered commercial vessels are appropriately qualified. (059/02)

The Director of Maritime Safety replied in part:

> The Maritime Safety Authority accepts both recommendations. Recommendation 057/02 is a continuous action in support of other initiatives now in place to address accidents in the recreational sector.
>
> Recommendation 059/02 is an item of scheduled work planned for commencement in mid 2003.

Bulk carrier *Tai Ping*, grounding, Bluff Harbour, 8 October 2002 (investigation 02-206)

This investigation and the resulting safety recommendations are important because they draw attention, once again, to inadequate pilot training and resource management both on the ship's bridge and generally among the port service personnel. These deficiencies when combined with adverse weather (in this case thick fog) resulted in the people functioning beyond the limits of their normal operating environment.

On Tuesday, 8 October 2002 at 0356, the bulk carrier *Tai Ping* with a pilot, master and 22 crew on board, became engulfed by thick fog, left the Bluff approach channel and grounded. The ship remained aground until 17 October 2002 and suffered extensive damage to the bottom plating.

Safety issues identified included:

- adequacy of pilot training, including simulation
- adequacy and interpretation of weather forecasts for port areas
- adequacy of bridge resource management
- adequacy of resource management within the port service personnel
- adequacy of the operational procedures in the port.

Safety recommendations were made to the General Manager of South Port New Zealand Limited to address these issues. They included:

- Evaluate South Port's pilot/tug master training programme including the use of the simulator to determine the most efficient

method of ensuring that all staff are suitably equipped to respond to any operational eventuality. Emphasis should be given to instituting a training programme in instrument only navigation techniques for all South Port pilots, in line with that prescribed in the pilot/tug master training manual. (001/03)

- Promote the bridge resource management concepts by requiring pilots to use them at every opportunity. (003/03)

- Promote resource management concepts throughout the operational staff of the port. (004/03)

The General Manager of South Port replied in part:

> South Port continues to attach high importance to maintaining a safe and effective maritime operation, and to changing its procedures when that appears appropriate. The Company has commissioned a comprehensive risk assessment for its marine operation, which is scheduled to be completed in late June 2003. When the report on that assessment is received, South Port will review all current information which has a bearing on the safety of its marine operation, including the Commission's findings, with a view to making any appropriate changes.

Safety recommendation implementation

This section reports on the implementation of all safety recommendations (SRs) developed after 4 October 2000, and any SRs made before that date for which the need has been reaffirmed by more recent investigations.

Because SRs can take some time to implement, the Commission's comments below address only the SRs that have been open for more than one year since the SR was issued by the Commission.

	Number of Safety Recommen lations (SRs)			
mode of transport	issued over year	closed over year	open at end of year	open longer than 1 year (See notes below)
Aviation	8	6	21	14
Rail	7	5	37	32
Marine	32	50	76	48
Total SRs	**47**	**61**	**134**	**94**

Notes on SRs open longer than 1 year

Aviation SRs open longer than 1 year:

SRs to the regulator, CAA: 11 of the SRs are addressed to the CAA. One of these (SR 023/02[3]) repeats 2 earlier SRs[4]. All 3 SRs are included in the 11. Of the 11 SRs to CAA, 9 are likely to be implemented as part of aviation Rules changes. A further SR relating to bird strike, may be implemented some other way. The remaining SR was implemented during the year and received Commission approval to report the implementation status as "Closed" after the year finished.

SRs to other organisations: Of the 3 SRs to other organisations, one is understood to have been implemented and the Commission is awaiting evidence of this. The other 2 SRs are unlikely to be implemented.
The 2 SRs unlikely to be implemented (SR 050/01, 051/01) arose from an investigation of a helicopter engine flameout resulting in the helicopter

[3] Details of the reports and SRs referred to can be obtained from TAIC, or from the Commission's web site www.taic.org.nz, by searching for the reference numbers.
[4] SRs 023/02 and 024/02 arose after a 6 fatality accident in which an aircraft collided with mountainous terrain in 2002, near Milford Sound (report 02-001). SR 023/02 was first made as 078/93, after a 9 fatality air accident in 1993 at Franz Josef Glacier (report 93-013). SR 024/02 was first made as 033/97 after a 6 fatality air accident in 1997 at Queenstown (report 97-002). CAA is understood to be implementing all 4 SRs with a Rule change.

landing in trees on a mountain slope (report 01-003). The pilot and the crew member on board were uninjured. The 2 SRs were addressed to Flightline Aviation Limited, who had carried out maintenance on the helicopter engine. The SRs advocated improvements in Flightline's fault diagnosis process and service bulletin monitoring and control process. Flightline disagreed with the SRs, saying that its fault diagnosis process and service bulletin monitoring and control process did not need improvement. The Commission will probably not comment further on those 2 SRs unless Flightline implements them.

Rail SRs open longer than 1 year:

SRs to the regulator, LTSA: Two of the SRs are addressed to the LTSA. These SRs were prompted by collisions or near collisions between trains and heavy vehicles on level crossings. The first SR (064/96 was made in 1996 in report 96-106 - passenger train collided with the trailer of an articulated truck, no injuries), the second SR (036/02 in report 02-113 near collision of empty petrol tanker with passenger train) was made in 2002. The SRs advocate a review of stacking distance at level crossings. The LTSA advises that the reviews are under way with possible completion in 2004.

SRs to other organisations: The remaining 30 SRs are all to Tranz Rail Limited. Of those 30 SRs, Tranz Rail's responses indicate that 2 are major ongoing research or implementation projects, that 25 have either been implemented or will probably be implemented in the foreseeable future, and 3 are unlikely to be implemented.

Of the 3 SRs unlikely to be implemented:

- Two SRs (043/01 and 044/01) were made in report 00-123 (head-on collision of 2 diesel multiple units, in which 2 crew members and seven passengers suffered minor injuries). The SRs advocate specific improvements to the training of train controllers. TAIC is considering cancelling these 2 SRs in favour of a more recent one which has similar effect but better prospects of implementation. Deficiencies in train control have the potential to result in much more serious collisions.

- The third SR 124/00 arose from an investigation into a train colliding with a rail-mounted excavator (report 00-107). The excavator was operating outside its authorised work area and beyond the agreed "check call" time with the train controller when the collision occurred. The SR advocates certification of local knowledge of the work area before being permitted to work unaccompanied. Conflict between track gangs and trains have

significant potential for injuries to track crews and derailment of trains with consequent injuries to the crew and any passengers on trains. Tranz Rail believes that it has already implemented the SR.

Marine SRs open longer than 1 year:

SRs to the regulator, MSA: 17 of the SRs are addressed to the MSA. Of these 17 SRs, 10 are the subject of significant ongoing research or part of the Rule making process, 2 might be implemented in the foreseeable future, 2 were implemented after the end of the period reported on, and 3 are unlikely to be implemented because MSA does not support the SRs.

The 3 SRs unlikely to be implemented are:

- SR 033/01 for MSA to require installation of twin motors in commercial jet boats. This SR arose in an investigation (report 01-202) into why a jet boat collided with rocks and overhanging trees on the riverbank after its engine stopped and the boat lost steerage. One passenger suffered moderate injuries and the driver and other passengers suffered minor bruising. Although the SR is not supported by the MSA, it will monitor emerging technology. Some operators are now fitting twin motors to commercial jet boats.

- SR 106/99 for MSA to require commercial jet boat operators to use only authentic or approved replacement parts or reconditioned items, and SR 107/99 for MSA to require commercial jet boat operators to have a system for tracking in-use and spare critical components used in their jet boats. These SRs arose from an investigation into 2 separate commercial jet boat accidents (report 99-212/213).

SRs to other organisations: The remaining 31 SRs are to a mix of port companies, territorial authorities, and operators. Of these 31 SRs, one is the subject of significant ongoing research, 9 might be implemented in the foreseeable future, one was implemented after the end of the period reported on, and 7 are unlikely to be implemented because the recipient does not support the SR.

The 7 SRs unlikely to be implemented are:

- SR 079/01 to Ports of Auckland regarding experience of pilots (report 01-210 coastal container ship "Spirit of Enterprise", outbound from Onehunga in Manukau Harbour, grounded in soft mud on the starboard side of Wairopa Channel).

- SR 060/01 to Shotover Jet regarding making use of existing seat belts mandatory. A commercial jet boat on Lake Aratiatia on the Waikato River struck a rock on the riverbank. The boat climbed the riverbank and came to rest among trees. Four of the passengers were severely injured and 4 others received minor injuries (report 01-201).

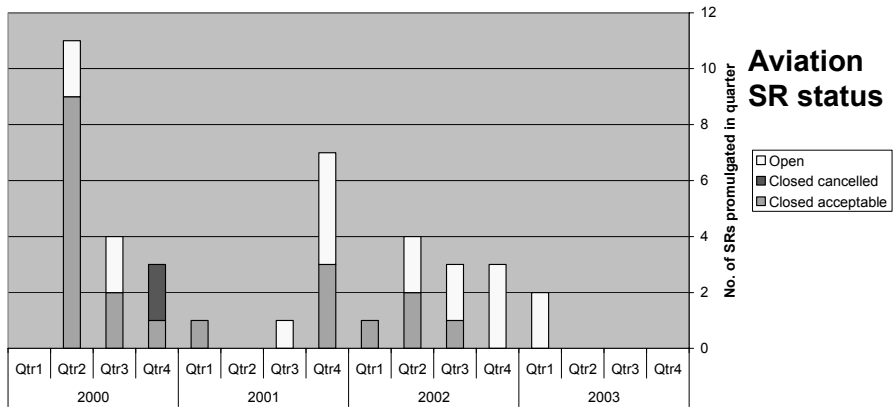
- SRs 129/00 and 130/00 to Queenstown Lakes District Council relating to speed restrictions on parts of the Shotover river and a plan for introducing a common radio frequency during rescue operations. A commercial jet boat on the Shotover River had collided with a rock face after the driver's boot momentarily caught on the accelerator pedal surround. The driver and 13 passengers suffered minor injuries and 2 passengers suffered moderate injuries (report 00-207).

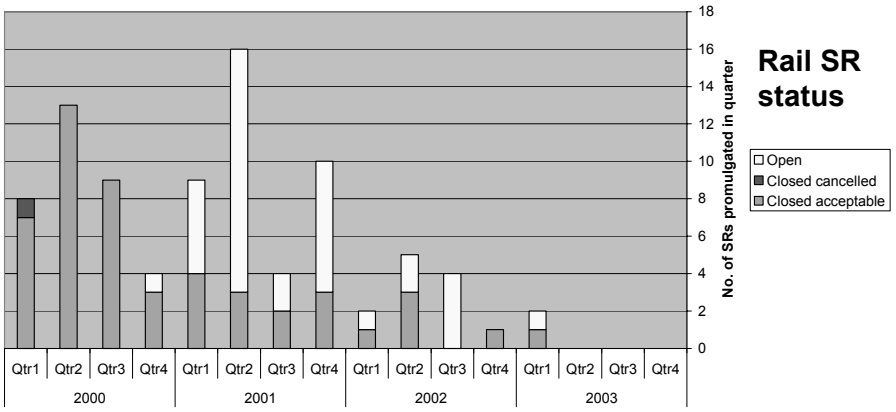
- SR 116/00 to Otago Regional Council, SR 117/00 to Environment Southland and SR 119/00 to Nelson City Council. A SR for a bylaw to cover agreed passage plans, sufficiency of crew to carry out the passage plans, and the composition of the crew and use of navigation aids was made to the chief executives and harbourmasters of all Regional Councils. A refrigerated cargo carrier, "Caribic", departing Tauranga had grounded due to excessive rate of turn (report 00-204). Environment Southland and Otago Regional Council both disagreed with the SR, saying that the recommendation is given best effect by changes to Maritime Rules. Nelson City Council indicated that it would try to use training to effect the SR.

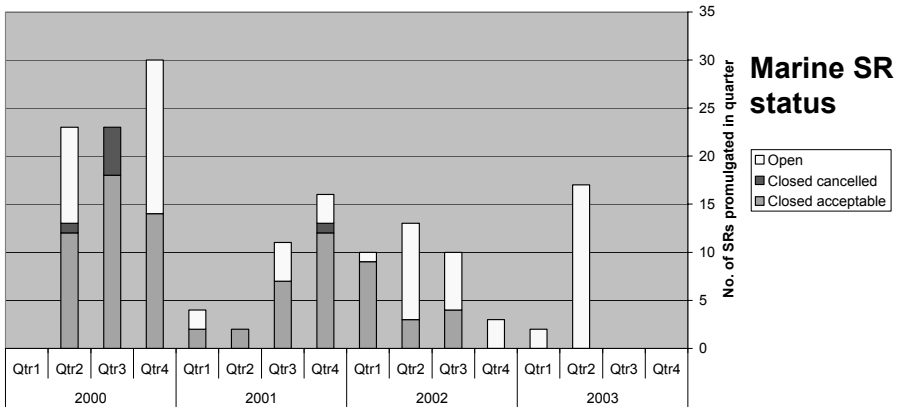
The implementation status of the remaining 11 marine SRs, many of which are to overseas organisations, is unknown due to lack of response from the recipients. The Commission does not have, nor does it seek, any power to require a response since it would be difficult for legislation to define a response that was useful for the Commission's purposes. Further, the Commission's powers could not apply to overseas recipients.

The following page shows charts indicating the implementation progress of SRs. The quarters are numbered according to the calendar year, rather than the financial year.

Safety Recommendation implementation







Transport Accident Investigation Commission

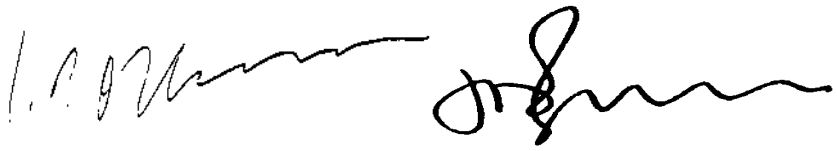
Statement of Responsibility
For the Year Ended 30 June 2003

In the financial year ended 30 June 2003, the Commissioners and management of the Transport Accident Investigation Commission were responsible for:

(a) the preparation of financial statements and the judgements therein

(b) establishing and maintaining a system of internal control designed to provide reasonable assurance as to the integrity and reliability of financial reporting.

In the opinion of the Commissioners and management of the Transport Accident Investigation Commission, the financial statements for the financial year reflect fairly the financial position and operations of the Transport Accident Investigation Commission.



Hon W P Jeffries
Chief Commissioner

John Britton
Chief Executive

Dated 9 October 2003

Transport Accident Investigation Commission
Financial Statements
Statement of Accounting Policies
For the year ended 30 June 2003

1. Reporting entity

The Transport Accident Investigation Commission is an independent Crown entity established under the Transport Accident Investigation Commission Act 1990.

The Commission investigates aviation, marine and rail accidents and incidents, the circumstances of which have, or are likely to have, significant implications for transport safety. The Commission publishes safety recommendations and reports on accidents and incidents to avoid similar occurrences in future.

The Commission also represents New Zealand at accident investigations in which New Zealand has a specific interest, conducted by overseas authorities, and exchanges accident and incident information with overseas government accident investigation authorities.

The Commission's air accident investigation capability is occasionally extended, on a cost recovery basis, to Pacific Island states with no similar agency.

2. Measurement system

The financial statements have been prepared on a historical cost basis.

3. Particular accounting policies

The following particular accounting policies which materially affect the measurement of financial performance and financial position have been applied:

(a) Budget figures

The budget figures are those approved by the Commission at the beginning of the financial year.

The budget figures have been prepared in accordance with generally accepted accounting practice and are consistent with the accounting policies adopted by the Commission for the preparation of the financial statements.

(b) Revenue

The Commission derives revenue through the provision of outputs to the Crown, for services to third parties and income from its investments. Such revenue is recognised when earned and is reported in the financial period to which it relates.

(c) Fixed assets are shown at cost less accumulated depreciation and have been depreciated on a straight line (SL) basis at Inland Revenue published rates which are anticipated to write them off over their estimated useful lives.

Fixed asset type	Useful life (years)
buildings (store)	33
motor vehicles	5.6
furniture and fittings	10 - 18
office equipment	2.5 - 8.0
EDP equipment	3.3 - 4.2

(d) Receivables
Receivables have been valued at expected net realisable value.

(e) GST
These financial statements have been prepared exclusive of GST.

(f) Statement of Cash Flows
Cash comprises monies held in the Commission's bank accounts and short term deposits

Investing activities relate to the sale and purchase of fixed assets.

Operating activities include all transactions and other events that are not investing or financing activities. Interest received is included in operating activities.

Financing activities comprise the change in equity and debt capital structure of the Commission.

(g) Employee entitlements
Provision of employee entitlements is recognised when employees become eligible to receive the benefits.

(h) Taxation
The Commission is a public authority in terms of the Income Tax Act 1994 and consequently is exempt from income tax.

(i) Operating leases
Operating lease payments, where the lessor effectively retains substantially all the risks and benefits of ownership of the leased items, are charged as expenses in the periods in which they are incurred.

(j) Financial instruments
The Commission is party to financial instruments as part of its normal operations. These financial instruments include bank accounts, short-term deposits, debtors and creditors. All financial instruments are recognised in the statement of financial position and all revenues and expenses in relation to financial instruments are recognised in the statement of financial performance.

4. Changes in accounting policies

There have been no changes in accounting policies during the period under review.

All policies have been applied on the basis consistent with the previous years.

Transport Accident Investigation Commission

Statement of Financial Position

As at 30 June 2003

	Note	Actuals 30/06/03 ($)	Budget 30/06/03 ($)	Actuals 30/06/02 ($)	Change
Assets					
Fixed assets	1	120,045	106,000	105,345	14,700
Current assets					
Cash at bank		141,986	126,000	220,860	-78,874
Short-term deposits		300,000	150,000	150,000	150,000
Receivables	2	2,673	5,000	1,414	1,259
Accrued interest		2,455	-	1,905	550
Prepayments and advances		18,834	5,000	19,105	-271
Total Current assets		465,948	286,000	393,284	72,664
Total Assets		585,993	392,000	498,629	87,364
Represented by:					
Liabilities and Taxpayers' funds					
Current liabilities					
Payables and Accruals	3	227,954	100,000	157,753	70,201
Provision for employee leave entitlements	4	97,354	60,000	88,221	9,133
Total Current liabilities		325,308	160,000	245,974	79,334
Taxpayers' Equity		260,685	232,000	252,655	
Total Liabilities and Taxpayers' funds		585,993	392,000	498,629	87,364

Hon W P Jeffries
Chief Commissioner

John Britton
Chief Executive

The accompanying notes and statement of accounting policies should be read in conjunction with these financial statements.

Transport Accident Investigation Commission
Statement of Financial Performance
For the year ended 30 June 2003

	Note	Actuals 30/06/03 ($)	Budget 30/06/03 ($)	Actuals 30/06/02 ($)
Revenue				
Crown revenue		1,758,222	1,728,000	1,682,667
Other income		6,514	4,000	8,045
Profit on sale of fixed assets		-	-	15,554
Interest earned		19,464	18,000	12,626
Total Revenue		1,784,200	1,750,000	1,718,892
Expenditure				
Audit fees		8,450	8,000	8,000
Commissioners' fees		60,566	55,000	50,991
Depreciation			34,000	
Buildings		894		894
EDP equipment		23,654		18,362
Office furniture, fittings and equipment		9,386		9,100
Motor vehicles		6,073		11,574
Lease, rentals and outgoings		105,196	100,000	103,211
Capital charge		21,635	21,000	19,470
Personnel costs	5	1,063,858	1,038,000	1,027,836
Loss on sale of fixed assets		-	-	
Other operating costs		476,458	514,000	443,162
Total Expenditure		1,776,170	1,770,000	1,692,600
Net Surplus/(Deficit)		8,030	(20,000)	26,292

Transport Accident Investigation Commission
Statement of Movements in Equity
For the year ended 30 June 2003

	Note	Actuals 30/06/03 ($)	Budget 30/06/03 ($)	Actuals 30/06/02 ($)
Opening Taxpayers' equity at 1 July 2002		252,655	252,655	226,363
Plus:				
Net Surplus/(Deficit)		8,030	(20,000)	26,292
Total recognised revenues and expenses for the year		8,030	(20,000)	26,292
Closing Taxpayers' equity at 30 June 2003		260,685	232,655	252,655

The accompanying notes and statement of accounting policies should be read in conjunction with these financial statements.

Transport Accident Investigation Commission
Statement of Cash Flows
For the year ended 30 June 2003

	Actuals **30/06/03**	Budget **30/06/03**	Actuals **30/06/02**
Cash flows from operating activities	($)	($)	($)
Cash was received from:			
Crown revenue	1,758,222	1,728,000	1,682,667
Other income	6,514	0	8,651
Interest received	19,464	20,000	12,033
	1,784,200	1,748,000	1,703,351
Cash was disbursed to:			
Payments to suppliers and employees	1,636,733	1,787,000	1,566,437
Capital charge	21,635	21,000	19,470
Net cash flows from operating activities	125,832	(60,000)	117,444
Cash flows from investing activities			
Cash was received from:			
Sale of fixed assets	280	0	39,018
Cash was applied to:			
Purchase of fixed assets	54,986	35,000	42,643
Net cash flows from investing activities	(54,706)	(35,000)	(3,625)
Net movement in cash for the period	71,126	(95,000)	113,819
Opening bank balance	370,860	371,000	257,041
Closing bank balance	441,986	276,000	370,860

The accompanying notes and statement of accounting policies should be read in conjunction with these financial statements.

Transport Accident Investigation Commission

Reconciliation of Cash Flow with Statement of Financial Performance

For the year ended 30 June 2003

	30/06/03 ($)	30/06/02 ($)
(Deficit)/Surplus from Statement of Financial Performance	**8,030**	26,292
Add: Non-Cash Items		
Depreciation	**40,006**	39,930
(Profit)/loss on sale of fixed assets		(15,554)
	40,006	24,376
Add/(Less) movements in Working Capital Items		
Decrease (increase) in Receivables	**(1,259)**	606
Decrease (increase) in Accrued interest	**(550)**	(593)
Decrease (increase) in Advances and Prepayments	**271**	(10,770)
Increase (decrease) in Creditors and Accruals	**70,201**	54,245
Increase (decrease) in Provisions	**9,133**	23,288
Total working capital items	**77,796**	66,776
Net cash flows from operating activities	**125,832**	117,444

The accompanying notes and statement of accounting policies should be read in conjunction with these financial statements.

Transport Accident Investigation Commission
Notes to the Financial Statements
For the year ended 30 June 2003

1. Fixed assets

2003	Cost ($)	Accumulated Depreciation ($)	Book Value ($)
Buildings	29,798	12,383	17,415
EDP equipment	159,883	120,975	38,908
Office furniture, fittings and equipment	202,701	160,570	42,131
Motor vehicles	33,737	12,146	21,591
	426,119	306,074	120,045

2002	($)	($)	($)
Buildings	29,798	11,489	18,309
EDP equipment	142,528	105,830	36,698
Office furniture, fittings and equipment	173,860	151,186	22,674
Motor vehicles	33,737	6,073	27,664
	379,923	274,578	105,345

2. Receivables

	30/06/03 ($)	**30/06/02** ($)
Gross Receivables	2,673	1,414
Less: Provision for doubtful debts	-	-
Net Receivables	2,673	1,414

3. Payables and Accruals

	30/06/03 ($)	**30/06/02** ($)
Trade creditors	43,776	51,064
Accrued expenses	184,178	106,689
Total Payables and Accruals	227,954	157,753

4. Employee leave entitlements

	30/06/03 ($)	**30/06/02** ($)
Annual leave	68,079	58,946
Retirement leave	29,275	29,275
	97,354	88,221

5. Capital charge

Levied at 8.5% on the taxpayers' funds for 2003. For the 2002 year the rate was 9%.

6. Financial instruments

The Commission has various financial instruments comprising both financial assets and liabilities which are stated at their estimated fair value in the Statement of Financial Position.

Financial instruments which potentially subject the Commission to credit risk consist of cash at bank and accounts receivable. All financial instruments are unsecured and do not require collateral or other security. There are no significant concentrations of credit risk.

Term deposits are currently placed with WestpacTrust - Wellington and funds are invested pursuant to investment powers granted under Section 25 of the Public Finance Act 1989.

The Commission incurs minimal foreign currency risk through payables and accruals in the normal course of its business.

7. Employee remuneration

Total remuneration and benefits	Number of Employees	
$000	2003	2002
$100-$110	1	
$110-$120		1
$120-$130	1	
$170-$180	1	1

The Chief Executive's total remuneration and benefits is in the $170,000 -$180,000 band.

8. Commission members

Commission members earned the following fees during the year:

Member	Fees	
	2003	2002
Hon WP Jeffries (Chief Commissioner)	$24,000	$23,500
Ms PA Winter	$12,298	$10,295
Mr NA Macfarlane	$22,268	$17,196

9. Statement of commitments

The Transport Accident Investigation Commission has ongoing leases of the following amounts:

	30/06/03	**30/06/02**
	($)	($)
Less than 1 year	82,139	85,315
1 - 2 years	43,969	116,692
2 - 5 years	1,741	-
5+ years	-	-
	127,849	202,007

Note: Seaview warehouse lease is due to expire in September 2003. TAIC has not finalised any new lease terms and conditions as yet.

Christchurch office lease is currently on a month to month basis at a rate of $717.67 per month.

A Sub-lease for two offices on Level 9, 114 The Terrace, Wellington was signed to take effect from July 2003 until March 2004 with a right of renewal every three months from that date. Rental is $1,300 per month plus GST.

Wellington rental includes payment for two carparks only. A third carpark was permanently leased to Polytechnics International (PINZ) in June 2003, replacing the previous sub-tenant, Flight Centre Limited. PINZ is a tenant in St John House. The expenditure is balanced by the monthly payment received from PINZ.

10. Statement of contingent liabilities

There were no contingent liabilities existing at balance date.
(2003: Nil.)

Transport Accident Investigation Commission

Statement of Objectives and Service Performance
For outputs in the Year Ended 30 June 2003

Output

This output class covers the investigation and reporting on certain aviation, rail, and marine accidents and incidents in New Zealand and the waters over which it has jurisdiction. Investigations for safety are conducted in order to identify the causes of accidents and incidents and make recommendations to minimise the risk of such events occurring again. This output also covers international co-operation and exchange of accident information with similar safety investigation bodies overseas.

Outcome

This output contributes to safe and sustainable transport at a reasonable cost.

Financial objectives

l esources mployed	Actual 12 months to 30/06/03	Actual 12 months to 30/06/02	Statement of Intent with the Minister 12 months to 30/06/03
	$000	$000	$000
Revenue			
Crown	1,758	1,683	1,728
Other	26	36	22
Total revenue	1,784	1,719	1,750
Expenditure	1,776	1,693	1,770
Surplus/(Deficit)	8	26	(20)

F.7

Service performance

Service measured	Note	Actual 12 months to 30/06/03	Actual 12 months to 30/06/02	Statement of Intent 12 months to 30/06/03
Aviation Accidents/Incidents				
New investigations begun		11	15	15
Reports finalised		14	10	n/a
Investigations ceased without publishing a final report	1	3	2	n/a
Rail Accidents/Incidents				
New investigations begun		24	21	20
Reports finalised		17	21	n/a
Investigations ceased without publishing a final report	1	1	4	n/a
Marine Accidents/Incidents				
New investigations begun		12	11	20
Reports finalised		10	14	n/a
Investigations ceased without publishing a final report	1	3	3	n/a

Service measured	Note	Actual 12 months to 30/06/03	Actual 12 months to 30/06/02	Statement of Intent 12 months to 30/06/03
Timeliness				
% of aviation, rail and marine investigations finalised in the year completed within 9 months		68	76	90
Availability of Accident Investigators (hrs/day per year)		24/365	24/365	24/365
Quality				
Investigation reports (and supporting file) will meet specified criteria such that external review will be possible.	2	Achieved	n/a	As specified
TAIC's CE will attest that all investigations fully comply with the criteria.	2	Procedures are in place to ensure investigations comply with the criteria	n/a	As specified
The Commission will provide an opinion on the implementation status of each safety recommendation	2	Refer to section "Safety recommendation implementation" (pages 41-44)	n/a	As specified

F.7

Note

1. Investigations are ceased without publishing a report when the circumstances of the accident or incident do not have, or are unlikely to have, significant implications for transport safety.

2. Not a measure adopted in 2001/02

Audit New Zealand

REPORT OF THE AUDITOR-GENERAL

TO THE READERS OF THE FINANCIAL STATEMENTS OF THE TRANSPORT ACCIDENT INVESTIGATION COMMISSION FOR THE YEAR ENDED 30 JUNE 2003

We have audited the financial statements on pages 47 to 57. The financial statements provide information about the past financial and service performance of the Transport Accident Investigation Commission and its financial position as at 30 June 2003. This information is stated in accordance with the accounting policies set out on pages 47 to 48.

Responsibilities of the Commission

The Public Finance Act 1989 requires the Commission to prepare financial statements in accordance with generally accepted accounting practice in New Zealand that fairly reflect the financial position of the Transport Accident Investigation Commission as at 30 June 2003, the results of its operations and cash flows and service performance achievements for the year ended on that date.

Auditor's responsibilities

Section 15 of the Public Audit Act 2001 and Section 43(1) of the Public Finance Act 1989 require the Auditor-General to audit the financial statements presented by the Commission. It is the responsibility of the Auditor-General to express an independent opinion on the financial statements and report that opinion to you.

The Auditor-General has appointed Stephen Lucy, of Audit New Zealand, to undertake the audit.

Basis of opinion

An audit includes examining, on a test basis, evidence relevant to the amounts and disclosures in the financial statements. It also includes assessing:

- the significant estimates and judgements made by the Commission in the preparation of the financial statements; and
- whether the accounting policies are appropriate to the Transport Accident Investigation Commission's circumstances, consistently applied and adequately disclosed.

We conducted our audit in accordance with the Auditing Standards published by the Auditor-General, which incorporate the Auditing Standards issued by the Institute of Chartered Accountants of New Zealand. We planned and performed our audit so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the financial statements are free from

material misstatements, whether caused by fraud or error. In forming our opinion, we also evaluated the overall adequacy of the presentation of information in the financial statements.

Other than in our capacity as auditor acting on behalf of the Auditor-General, we have no relationship with or interests in the Transport Accident Investigation Commission.

Unqualified opinion

We have obtained all the information and explanations we have required.

In our opinion the financial statements of the Transport Accident Investigation Commission on pages 47 to 57:

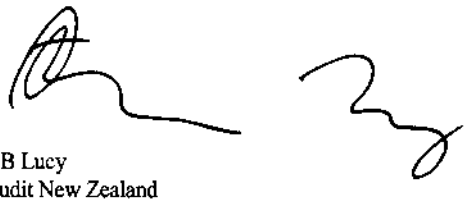
- comply with generally accepted accounting practice in New Zealand; and
- fairly reflect:

  the Transport Accident Investigation Commission's financial position as at 30 June 2003;

  the results of its operations and cash flows for the year ended on that date; and

  its service performance achievements in relation to the performance targets and other measures adopted for the year ended on that date.

Our audit was completed on 9 October 2003 and our unqualified opinion is expressed as at that date.



S B Lucy
Audit New Zealand
On behalf of the Auditor-General
Wellington, New Zealand

Matters relating to the electronic presentation of the audited financial statements

This audit report relates to the financial statements of the Transport Accident Investigation Commission for the year ended 30 June 2003 included on the Transport Accident Investigation Commission's website. The Commission is responsible for the maintenance and integrity of the Transport Accident Investigation Commission's website. We have not been engaged to report on the integrity of the Transport Accident Investigation Commission's web site. We accept no responsibility for any changes that may have occurred to the financial statements since they were initially presented on the web site.

We have not been engaged to report on any other electronic versions of the Transport Accident Investigation Commission's financial statements, and accept no responsibility for any changes that may have occurred to electronic versions of the financial statements published on other websites and/or published by other electronic means.

The audit report refers only to the financial statements named above. It does not provide an opinion on any other information which may have been hyperlinked to/from these financial statements. If readers of this report are concerned with the inherent risks arising from electronic data communication they should refer to the published hard copy of the audited financial statements and related audit report dated 9 October 2003 to confirm the information included in the audited financial statements presented on this web site.

Legislation in New Zealand governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

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