Senate Foreign Affairs, Defence and Trade References Committee

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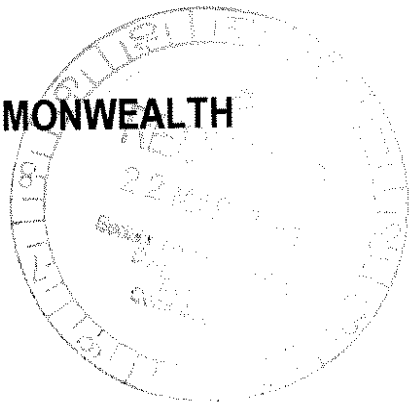
TO THE PARLIAMENT OF THE COMMONWEALTH



THE SENATE

FOREIGN AFFAIRS, DEFENCE AND TRADE REFERENCES COMMITTEE

THE EFFECTIVENESS OF AUSTRALIA'S MILITARY JUSTICE SYSTEM

Review of the Board of Inquiry into the Fire in HMAS Westralia

Prepared by Mr L.F. Mahony

18 March 2004

DEDICATION

I dedicate this paper to those who serve their country in the Armed Forces, the Commonwealth Public Service and in business as contractors so that manufacturing and maintenance for the Defence Force can be done better and that we can learn more from tragedies without compounding them through injustice.

I acknowledge the dead and injured their loved ones and families, the crew and those who did their best to make a safe ship but contributed to tragedy.

I pray that we can learn from the suffering by not making the same mistakes again.

CONTENTS

AIM

1. The aim of the paper is to provide suggestions to the Senate, Foreign Affairs Defence and Trade Committee's Committee on 'Effectiveness of Australia's Military Justice System', arising from The Report of the Board of Inquiry into the Fire in HMAS Westralia on 5 May 1998 subtitled Volume 1 'REPORT AND ANNEXES' and the 'EXECUTIVE SUMMARY' (**BOI Report**).

2. My particular interest is quality assurance and I largely confine myself to Section 12 titled 'Quality Assurance'.

SUMMARY

3. I summarise this paper as follows:

   a. My specific interest in the BOI Report is Section 12 titled 'Quality Assurance'.

   b. **Suggestion**. Procurement and maintenance contracts and their actions ought to be adequately recorded on files which ought be frozen following such incidents as the Fire in HMAS Westralia and be available for scrutiny by investigating and defence counsel.

   c. **Suggestion**. The terms of reference for similar service inquiries ought to:

      (1). Specifically require the review of the engineering and logistics processes,

      (2). Give the participants the same freedoms enjoyed by employees of private companies in being represented, and

      (3). Give the families of any deceased or seriously injured personnel the opportunity to be represented before the Inquiry on behalf of the family member.

   d. **Suggestion**. Independent witnesses ought to be called to give evidence on each part of Inquiries such as: logistics processes, quality assurance, hose manufacture design and testing. That was done for determining the reasons for the failure of the hoses.

   e. Fairness. The Board took steps to be fair. But, I allege the questioning of Mr Old of ENZED was not fair. It could be that Boards need time to examine witness statements before cross-examination by counsel.

      (1). **Suggestion.** I suggest that Boards retire after witness statements have been read to allow adequate time for the Board to formulate their questions.

      (2). **Suggestion**. I suggest that because Captain Callaghan is a Naval Officer and I allege his conduct reflects poorly on the Navy and the Military justice system; so the questioning of Mr Old ought to be raised with him and appropriate disciplinary action taken if competent authority finds that to be appropriate. (See 'Fairness' and the 'Discussion on Fairness')

   f. Partiality. Boards of Inquiry can be partial to the interests of their sponsor on important issues and that includes recommendations for prosecutions.

      (1). Some issues to illustrate the partiality argument are:

         (a) '... In the light of resource limitations ...',

         (b) 'Navy Safety Audit Frequency',

         (c) 'Lloyd's approved standard',

         (d) 'Captain's Responsibilities in ABR 5454' and

         (e) Navy's Maintenance Record.

      (2). **Suggestion**. I suggest to the Parliament that the Department of Defence not be allowed to conduct Boards of Inquiry into matters where the is death, serious injury or potential prosecution and litigation and that such Inquiries be conducted before the Courts in a similar manner to civil society.

(3). **Suggestion**. I suggest that whether Navy ought to be prosecuted under the Occupational Health and Safety (Commonwealth Employment) Act 1991 and that the matter ought to be referred to a competent authority.

(4). **Suggestion**. I suggest that COMCARE take a more aggressive role in future Inquiries.

g. Flawed QA. The BOI Report gives an indication of the understanding of quality assurance by the Navy and the Board at the time of and leading to the incident and at the Inquiry. Unfortunately, it is not more definitive.

(1). I allege that the BOI Report does not positively address the JAS-ANZ method of operation to which Defence made with JAS-ANZ in 1997: I allege the Board was irresponsible.

(2). The BOI Report does not:

(a) show signs of independent advice on quality assurance or to have interviewed JAS-ANZ, the Third Party certifiers or conducted independent audits;

(b) show whether the Navy approved or reviewed the ADI contract quality plan (BOI Report Exhibit 131) for AMP12 and recognise the probable limits of a broad quality plan;

(c) show evidence of any formal complaints being made on the quality assurance performance of Parker Enzed or ADI to either the companies or JAS-ANZ; and

(d) reference the Parker Enzed quality system procedures in making its case. It does not address the system elements of Contract Review and Quality Planning, which I allege would have been appropriate ISO 9000 system requirements to address.

(3). Certified QMS. The BOI Report statement *'The assumption that a certified QMS guarantees quality of product is not appropriate'* is supported by the quality standards and industry leaders and is a matter of public record. However, some in business held the view that *'...a certified QMS guarantees quality of product ...'*. The standards are addressed to a supplier who aims to install an ISO 9000 quality system so a person with errant views might not find their views challenged. The Board of Inquiry Report made no recommendations to correct that view[1].

(4). Failed Policy. I allege that the Commonwealth and Defence higher policy documents at the time of the incident gave comfort to those who thought *'...a certified QMS guarantees quality of product ...'* and could be a defence for any Commonwealth employee accused of wrong doing. I allege that the Commonwealth quality assurance policy still does give comfort to the idea that *'...a certified QMS guarantees quality of product ... '*

Suggestion. I suggest that Commonwealth Procurement Policy contain a statement

[1] A statement has been included in the Version 3.0 2002 at paragraph 525 page 3.5.4. The DPPM is the basic policy document on procurement. The DPPG Version 1:0 February 1997 was operative at the time of the incident and the following Version 2.1 July 1999 and did not carry any warnings on the assumption that *'...The assumption that a certified QMS guarantees quality of product is not appropriate'*.

requiring purchasers to establish confidence that what is offered by contractors conforms to the contract requirements.

(5). QA Policy. Had the Board begun the Inquiry into the application of quality assurance by listing and examining the Commonwealth and Defence authorities and witnesses, it may have come conclusions that could have produced more helpful recommendations to the Commonwealth and Defence.

Suggestion. I suggest that future Inquiries list the applicable policy documents and work from them and examine them in future inquiries.

(6). I think WO Jones appears to be treated unreasonably by the report.

h. Defence Efficiency Review and Staff Levels. The BOI Report Section 11.4 ends with the sentence:

'*...In the light of resource limitations, there may be no choice but to persist with current unsatisfactory arrangements for configuration change.*'

I cannot find any reference to a possible source for the statement[2]. I allege the issue of staff levels ought to have been more openly addressed by the Board and that the government and Navy ought to have made a public statement to the Board.

i. Hose Testing. I allege that the Board found something to criticise and made a point against Enzed, but failed to investigate the technical issue of the meaning of manufacturing tests for hoses and so possibly did an injustice or lost an opportunity to be a catalyst for helpful change in the hose and general industry. I allege that a proper review of the processes used by Enzed may have changed the perspective.

j. **Suggestion**. Boards ought to only draw conclusions from witnesses and evidence officially placed before them.

k. **Suggestion**. I suggest that staff workload be investigated in future Inquiries to determine whether it was a contributing factor.

l. **Suggestion**. Commonwealth Procurement Policy carry a requirement for the purchaser to check that what is offered for acceptance by contractors be appropriately checked against the contract before acceptance.

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[2] The transcript carries a statement by CAPT Callaghan at T5 '...Ultimately the Board will be making a report. That task will require the Board to make findings of fact and those findings must be based on evidence presented to this hearing. That evidence will comprise oral and written evidence from witnesses and various documents and items of material tendered as exhibits to the enquiry.' This suggests that the Board has made a statement on staffing policy without having the issue placed before the Board in the public proceedings.

INTRODUCTION

THE MILITARY OUGHT NOT BE A JUDGE IN ITS OWN CASE

4. I understand that a basic principle of law is that a person ought not be a judge in his or her own case. I allege that the Navy acted as a judge in its own case in the Inquiry into the Fire in HMAS Westralia on 5 March 1998. The Navy contracted ADI to perform maintenance activities for HMAS Westralia and so entered into a commercial activity. If the Navy had been a private company conducting maintenance of an oil tanker then the Navy as a private company would have been subject to different legal conditions. Current government practice is the privatisation of functions so I allege it ought to use the same rules as private industry. The Board of Inquiry referred its contractor to competent authority for consideration for prosecution under the Occupational Health and Safety (Commonwealth Employment) Act 1991, which ignored the possibility of the Navy (the Board's Employer) as being in breach of the Act. I allege that the Navy's Board was partial.

ACKNOWLEDGEMENTS

5. This paper is written after the event and I acknowledge that it is easier to be critical in the circumstances. It is also time consuming.

6. I acknowledge the freedom afforded by Australia's Parliamentary form of government.

7. I thank the following for providing information and help over a number of years that has informed this paper:

   a. The Hon. Mr John Fahey MP at the time Minister for Finance and Administration,

   b. The Hon. Mr John Moore MP at the time Minister for Defence,

   c. The Hon. Mr Peter Costello MP, Member for Higgins,

   d. Mr Max Berry, Editor, Quality Certification News, Information Australia, 75 Flinders lane Melbourne, 3000,

   e. Mr Lyndon Pelly,

   f. The Australian National Audit Office,

   g. The State Library of Victoria, and

   h. The Library of the Standards Australia in Melbourne.

BACKGROUND

PERSONAL DETAILS

8. My professional qualifications are:
   a. Diploma Mechanical Engineering (Caulfield Technical College 1968),
   b. Graduate Diploma in Management (Royal Melbourne Institute of Technology 1978),
   c. Graduate Diploma in Manufacturing Technology (Swinburne Institute of Technology 1983), and
   d. Member Institution of Engineers, Australia.
9. I was employed as a mechanical engineer in the Department of Defence for 32 years. I began work as a cadet mechanical engineer at HMA Naval Dockyard Williamstown. My first engineering appointment was as an Engineer Class 1 in the Directorate of Marine Engineering Design at Navy Office Canberra. I moved to Melbourne in 1971 to work in Defence Standardisation where I had my first experience in quality assurance and moved into armaments quality assurance with the Army Quality Assurance Service in about 1978. I continued in Armaments in the DQAO until the last few years when I supervised the mechanical section in the Victoria /Tasmania Region till leaving on a Voluntary Redundancy Package in September 1998.
10. I hold a copy of the transcript and have used it in places. But, I would prefer to confine myself to the BOI Report because that is the public document giving the findings of the Board.

SOURCES OF INFORMATION

11. The major sources of information for this submission is:
   a. The Report of the Board of Inquiry into the Fire in HMAS Westralia on 5 May 1998 subtitled Volume 1 'REPORT AND ANNEXES' and the 'EXECUTIVE SUMMARY' (**BOI Report**). It was available on http://www.navy.gov.au at 21 January 1999 but was not available at 9 June 2001.
   b. Other major sources have been newspaper reports, Radio National transcripts and libraries.
12. References are added as footnotes.

REFERENCING

13. The BOI Report is paragraphed in the style 12.1, where the '12' represents 'Section' and the decimal '. 1' represents the paragraph. Reference to the BOI Report is either as Section 12.1 or in some cases '12.1'.

LONGFORD ROYAL COMMISSION

14. I have used the Report of the Longford Royal Commission, which is published by the Government Printer for Victoria. I use it as a comparative case.
15. I believe it has parallels to the tragic fire in HMAS Westralia. I quote from the Conclusion at Chapter 15.7:

16. *Real Cause*

'15.6 ... Those who were operating GP1 on 25 September 1998 did not have knowledge of the dangers associated with the loss of lean oil flow and did not take the steps necessary to avert those dangers. Nor did those charged with supervision if the operations have the necessary knowledge and the steps taken by them were inappropriate. The lack of knowledge on the part of both operators and supervisors was directly attributable to a deficiency in their initial or subsequent training. Not only was their training inadequate, but there were no current operating procedures to guide them with the in dealing with the problem which they encountered on 25 September 1998.'

17. Other points in the Report of the Royal Commission from pages 236 and 237 were:

    a. The operators and their supervisions were not adequately trained, provided with adequate information and procedures. *'...The lack of proper operating procedures contributed, therefore, to the occurrence.'*

    b. Failure to conduct adequate risk management was recognised as a contributing cause.

    c. Supervision was inadequate.

    d. The transfer of engineering staff from Longford to Melbourne reduced the amount and quality of supervision *'...the Commission considers that it was probably a contributing factor.'*

18. The discernable parallels with the HMAS Westralia incident were:

    a. A reorganisation of Longford had occurred to reduce costs. The Defence Efficiency Review had been conducted.

    b. The staff lacked adequate knowledge.

    c. Procedures were not followed and OAWA had no quality procedures. There was inadequate supervision of the contract by Navy and ADI.

REASONS FOR WRITING

19. I have three reasons for writing:

    a. I think that WO Jones is shown more unfavourably than he could be on the issue of quality assurance.

    b. I think that had the Board been staffed by an additional engineer; called expert witnesses on hose design and testing, quality assurance and logistics processes and recognised that the issues went beyond the Navy and then Defence and the broader Commonwealth may have gained more benefit.

    c. The Navy is a judge in its own case. Something I realised late in the preparation of this paper.

SECURITY

20. I quote from a document that is classified. The classification is given with the quotation. However, I would be surprised if it posed a threat to anyone.

BOARD OF INQUIRY – TERMS OF REFERENCE, COMPOSITION AND REPRESENTATION

AIM

21. This section makes some general points about the Terms of Reference of the Board of Inquiry Report.

TERMS OF REFERENCE

22. The Terms of Reference are taken to be as at Section 1.3 of the BOI Report.

23. The Terms of Reference properly show concern for actions toward a ship in distress. However, they do not recognise the potential cause of the problem, which is a failed logistics process. The fire and the resultant loss of life were the result of a failed fuel hoses and the heart of the issue is 'engineering' and engineering management. I allege that ought to have been evident from initial statements of the crew. I allege that ought to have been reflected in the Terms of Reference.

24. The drift towards the integration of Service Logistics ought to have indicated wider implications than Navy.

MEMBERSHIP OF THE BOARD

MEMBERSHIP

25. Following from the above the membership appears to have been:

    a. Commodore Lamacraft RAN, naval engineer,

    b. Captain Schedlich RAN, naval medical officer,

    c. Commander Walsh RANR, nuclear, biological and chemical defence and safety,

    d. Captain Filor, civilian marine investigator,

    e. Assistant Chief Officer Cuneo, experienced fire fighter.

DISCUSSION

26. Commodore Lamacraft appears to have been the only person with an engineering background on the Board. I think the chairperson would have to cover a wider perspective of the operation of the inquiry and would be too stretched to give adequate thought to a major issue of the engineering and contract management aspects of the incident.

27. A contemporary of the board of inquiry was the Longford Royal Commission into the Esso Longford Plant Accident. The Honourable Sir Daryl Dawson, AC KBE CB who was a Justice of the High Court of Australia, 1982-97, and an eminent person in the legal profession, chaired the Royal Commission. I

think the advantage of having a person with judicial experience to chair such inquiries is that they would be more personally familiar with legal processes and consequences for individuals and companies.

28. I allege that there ought to have been a separate member to cover engineering.

REPRESENTATION BEFORE THE BOARD OF INQUIRY

29. The Board received applications from three parties to appear with legal representation before the Inquiry. They were:

    a. ADI Limited,

    b. Jetrock Pty Ltd (trading as the Hose Doctor) and

    c. Parker Enzed Technology Pty Ltd.

    Arrangements were made for specific staff to be represented and the crew to have advice as required (Sections 1.5 to 1.7 inclusive). That meant that the Board controlled the capacity of the Navy staff and the families of the deceased to question and respond.

30. The Longford Royal Commission was assisted by many people. There is no reason why a Board of Inquiry can not be assisted by many people they don't all have to be designated as members of the Board.

POSSIBLE CONTAMINATION OF EVIDENCE

BOI REPORT

31. The BOI Report contains an expression of concern that the evidence may have been contaminated as a result of the debriefing process. The report contains a recommendation (Recommendation 6.104) that CISM debriefing should not occur until all personnel have made a written statement and the statements secured. I think it a commendable inclusion in the Report.

32. However, the cause of the fire was reported as a leak fuel hose. The questions at that time ought to have included: 'Why the hose leaked and what was the evidential trail to the leak'. The trail actually went back to the 'engineering 'events that lead to the installation of the flexible hoses. Sections 10.18 to 10.30 of the BOI Report inclusive discuss a form SG2[3] raised in 1996 that was pertinent to the Board of Inquiry.

33. The debriefing of the crew covered events on the ship but apparently not events ashore that lead to the incident.

34. Procurement and maintenance contracts and their actions ought to be adequately recorded on files, which ought be frozen following such incidents. The files ought to be available for scrutiny by investigating and defence counsel, which implies the maintenance of a formal filing system.

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[3] Also see Conclusion 10.50 and 10.53

GENERAL OBSERVATION

35. The ship was the prime piece of evidence and I note from the transcript that the Board and others visited the ship and the ship was available for viewing [T5]. The counsel for ADI requested permission to visit the ship. It appears to me that representatives of the deceased probably did not get to visit the site.

DISCUSSION

36. The HMAS Westralia Board of Inquiry was a Navy inquiry. It was a case of an employer or company investigating itself in a matter concerning its actions and liabilities. I allege that it was a judge in its own cause given that people outside the Navy were called to appear. The community would not generally accept that as the norm for industrial incidents. I acknowledge that two members of the Board were civilians with special skills and that the Inquiry was public. A contemporary of the Board of Inquiry was the Longford Royal Commission into the Esso Longford Plant Accident[4], which was chaired by a distinguished legal practitioner and an engineer as commissioner. The security requirements for the Defence Force make the Navy or any other Service special cases. However, not everything is a security issue and so the general community standard ought to apply and security considered as an exception.

37. The terms of reference represented a seaman's view of events. The seaman's view must be central to any inquiry of incidents like the fire in HMAS Westralia. However, '*...the fire started as a result of the ignition of atomised fuel from a leak in the new flexible return hose on no. 9 cylinder on the starboard main engine (S9R). ...*' (Section 9.23). The hose installed in AMP12 was an engineering and logistic issue. So, the heart of the cause is an engineering and logistic issue.

38. The Terms of Reference of Longford Royal Commission required the Commissioners to examine procedures, practices and the relevance changes that had taken place before the changes. I acknowledge that the terms of reference of HMAS Westralia Board of Inquiry did not limit the Board in the scope of its inquiries and that the Report shows that the Board examined engineering management issues. '*...The fuel leaks problem had existed since at least September 1991 ...*' (Section 10.10), so what Navy procedures could allow such a condition to exist for such a long period? Were the leaks a general problem with the type of engine? I don't believe the BOI Report looks deeply enough into how the situation could develop and how the criticised views on quality assurance recorded at Section 12 came to be held.

39. It is notable to me that the executors and families of the deceased were not represented before the Inquiry. In the case of the Longford Royal Commission the deceased and families[5] were represented as well as a number of other parties with a direct interest in the outcome. The Coroner for Western Australia made the point in his report at page 21 '*An important purpose for holding this inquest hearing*

[4] Esso Longford Gas Plant Accident, Report of the Longford Royal Commission, Parliament of Victoria June 1999 No 61 – Session 1998-99 (Front of Report)

[5] Esso Longford Gas Plant Accident, Report of the Longford Royal Commission, Parliament of Victoria June 1999 No 61 – Session 1998-99 pages 247 and 253.

has been to allow families to ensure that relevant issues of concern ti them have been adequately ventilated.'[6] , which basically suggests that the Inquiry was insufficient.

CONCLUSIONS

40. As a general point, the terms of reference for similar service inquiries ought to:

    a. Require the review of the engineering and logistics processes,

    b. Give the participants the same freedoms as may be enjoyed by employees of private companies in being represented,

    c. Give the families of any deceased or seriously injured personnel the opportunity to be represented before the Inquiry and the opportunity to view the scene of the incident, and

    d. I think there ought to be somebody with an engineering background as a member of the panel to address engineering issues apart from whatever the background of the Chairperson.

[6] The next paragraph is: '*In addition, after the delivery of the Board of Inquiry's Report, concerns have been raised by individuals and by COMCARE, the organisation which has responsibility in relation to occupational health and safety issue for Commonwealth Employees.*'

PROSECUTIONS, FAIRNESS AND PARTIALITY

AIM

41. The aim is to show that unfair practices may occur and Boards could be partial in hearing evidence and making recommendations for prosecution.

INTRODUCTION

Quotes From The Inquiry Documents

42. I quote the President CDRE Richard Lamacraft from the transcript at T3:

'I want to stress at the proceeding that this is not a disciplinary proceeding. This is a Board of Inquiry which has been established to fulfil two important functions: firstly, to determine precisely what happened on HMAS Westralia and why it happened; secondly for the Board to make recommendations which are based on these findings, with a clear aim of eliminating the possibility of this type of event occurring again.'

43. The following is extracted from the BOI Report:

1.10 The usual procedure of the Board was for a written statement by the witness to be tendered and adopted by the witness on oath or affirmation. The witness was then questioned by Counsel assisting the Board, followed by Counsel for the intervening parties, and then by Board members. This process was then repeated if necessary. A running transcript of proceedings was kept. The rules of evidence were not applicable. (My underlining)

1.11 The Board arranged for expert testing of various engine and system components, and their reports are contained in volume 12 of this report. The intervening parties were offered the opportunity to comment on the protocols for, and to observe the conduct of, that testing. The intervening parties took advantage of that opportunity in relation to most testing. The Photographic Unit in the Submarine Training and Systems Centre, HMAS STIRLING assisted the Board in producing video and photographic records of the state of the ship and its systems, and the conduct of expert testing.

1.13 The Board rose to consider its findings on 17 July 1998, having taken evidence from 93 witnesses resulting in 4477 pages of transcript, as well as receiving in excess of 481 items as exhibits. During the Board's deliberations, some documents and reports were added as exhibits, notice of that action having been given to the persons represented before the Board. (My underlining)

1.14 During the hearing it became apparent that the Board might make findings adverse to certain persons. Where possible, the substance of that matter involved was put to that person during questioning or in Counsel Assisting's final address. This allowed the person to respond. Where, during its deliberations, the Board found that they might make an adverse finding which a person may not previously have been given an adequate opportunity to address, that person was given written notice of that possible finding and given the opportunity to make further submissions. The Board has considered these further submissions before arriving at its findings.

1.15 In order to gather and consider the extensive evidence, the Board sought and was granted two extensions to the date for submission of this report. The Board is now confident that it has properly

considered the material before it and is in a position to render a comprehensive report on the matters referred to it for inquiry.

44. I quote the following from the BOI Report as preparation for discussion:

> ***'ADI***
>
> *10.169 Deficiencies in process on the part of ADI might be summarised as follows, and there is included at the end of each summary item a list of relevant conclusions expressed above:-*
>
> *a. ADI failed to give any adequate engineering consideration to the flexible fuel hoses.[R 9.93-4, R10.64, R10.71 and R10.143]*
>
> *b. ADI failed to adequately to specify or otherwise design the flexible fuel hoses.[R9.93-4, R10.64, R10.82, R10.143]*
>
> *c. ADI failed to supply flexible fuel hoses which were Lloyd's approved R10.71, R10.141] and ADI assured WO Bottomley that the hoses were Lloyds approved when they were not.[R10.143]*
>
> *d. ADI failed to take adequate steps to ensure compliance by their subcontractor of compliance with the TM200.[R10.82, R10.115]*
>
> *e. ADI supplied flexible fuel hoses which were not fit for their intended purpose.[R9.94]*
>
> *Occupational Health and Safety Legislation*
>
> *10.170 In addition to those deficiencies, matters pertaining to ADI's obligations pursuant to the Occupational Health and Safety (Commonwealth Employment) Act 1991(the 'Act') have been considered by the Board. Whilst the RPLSS contract does not explicitly refer to obligations under to the Act, that omission does not relieve ADI of its responsibilities under the legislation. Current RAN policy, as outlined in ABR 6303 (RAN Safety Management Manual) is that any contract entered into by the RAN should include responsibilities placed on the RAN and the Contractor under the relevant occupational health and safety legislation.*
>
> *10.171 ADI, as a supplier of goods, had an obligation under the Act to ensure that such goods at the time of supply were safe for use and without risk to the health of those who use the goods; additionally, the Act required ADI to carry out, or cause to be carried out, the research, testing and examination necessary in order to discover, and to eliminate or minimise, any risk associated with the goods being supplied.*
>
> ***Recommendations***
>
> ***10.172 Consideration should be given by an appropriate authority as to whether ADI failed to comply with the Act.***
>
> ***10.173 Care should be taken to ensure that all RAN contracts include explicit reference to occupational health and safety legislation as stipulated in ABR 6303 Chapter 4.'***

General Comments

45. I do not discuss the merits of the argument placed in the BOI Report. Rather, I make some points about some principles I allege are involved with a view to making suggestions to the Parliament.

46. I allege that the President of the Board did not advise the parties that the Board would make recommendations for prosecutions or that prosecutions could result from the evidence placed before the Board. That seems to be unfair to me as a layman.

47. At the time of completing this paper, ADI Limited had been summonsed to appear before the West Australian Court of Petty Sessions on Friday, 27 February 2004, to answer charges brought on the recommendation of the Board of Inquiry and the Commonwealth Director of Public Prosecutions. So, I allege the issue I raise has substance.

FAIRNESS

Introduction

48. Fairness is an important issue in any dealings between people. Fairness is obviously a debatable subject. Fairness is important if we want people to accept the outcomes and see that justice is done. If that is not the case then there will be a lack of trust in those who lead. Governments whose esteem falls in the mind of the electors may be voted out of office. Business leaders can fall foul of their boards, shareholders and possibly employees. However, the Defence Force is a hierarchical bureaucracy in which people absorb a culture and may serve for 20 years or more and that is not so easy to change. The Military members of boards and people affected may retire or go to the next three year posting. So, Parliament has the task of ensuring fairness in the Defence Force and the bureaucracy.

49. I think it important to the Defence Force that it be seen fair in its dealings with its personnel, its contractors and the community. If that is not he case then it runs the risk of not being able to attract recruits or contractors in a free society. An unfair Defence Force may become a threat to a free society.

50. I don't have the time to study and reflect on all of the documents in the BOI Report and transcripts. But I have noted the questioning of Mr Old of Enzed before the Board and use that to make some points. I have no connection with Mr Old or Enzed.

Examination of Hose Selection By ENZED

51. I select two parts from the transcripts T 3041 to 3045 inclusive and T3059 to T3060 inclusive to cover the issue I raise.

52. My interpretation of the transcripts is that CAPT Callaghan endeavoured to lead and bully Mr Old into a proposition that Mr Old was responsible for a substantial part of the selection of the hoses.

53. I think it appropriate for the Board to have inquired into Mr Old and ENZED's role in the selection and provision of hoses. I see nothing wrong in CAPT Callaghan, his colleagues and the members of the Board having suspicions that Mr Old played a greater role than might appear following some initial discussions among themselves. I perceive this no differently than the civil police investigating a complaint. The issue I raise is the alleged style of questioning by the counsel. In this case CAPT P.R. Callaghan SC RANR, counsel assisting the Board. I see the style as hectoring, not robust questioning, and I don't think the introductory statement at 1.10 of the BOI Report '*...The rules of evidence were not applicable.*' ought to excuse unfairness.

54. I think it would have been appropriate for the board to first establish how the ENZED organisation trained its operatives to select hoses for applications and how ENZED saw the boundaries of responsibilities between itself and its customers. Mr Old's ENZED training course notes could have been a guide. Then, I think it would have been appropriate to question Mr Old on how he selected the hoses.

55. At T 3041 CAPT Callaghan is endeavouring to clarify the difference between the hoses allegedly offered to ADI and the hose allegedly supplied. Then he proceeds to ask Mr Old at 3042 which I quote below:

NOTE I have sub paragraphed the quoted text for ease of reference in this paper and the transcript page numbers are placed in the middle of the page to show the division e.g. '3042' below:

a. *But did you apply your mind at any stage to the purpose, or the fitness for purpose, of this hose?---The hose was fit for purpose.*

b. *Well, if you look at your quote, just for example look at KM04 and - - more correctly, more precisely, look at KMO6. You see, that's the data sheet for Parker 221 that you sent off to ADI. Look at the warning box down at the bottom:*

c. *"Failure or improper selection or improper use of the products and or systems described herein or related items can cause death, personal injury and property damage", and so on the document goes.*

d. *It then goes on to say:*

e. *"It is important that you analyse all aspects of your application and review the information concerning the product or system in the current product catalogue."*

f. *It is important, is it not, that the precise purpose for which the hose is being applied be detailed and be considered by parties such as yourself, the hose supplier - - -*

3042

g. *CAPT CALLAGHAN: - - - such as yourself, the hose supplier. Don't you agree?--- Yes, sir, and I did consider those.*

h. *Well, are you a metallurgist? Did you - - are you a metallurgist?--- No, sir.*

i. *Did you consider whether there might have been some difference in the type of metal that was used in the braiding, for example?--- No, sir. The hoses I was - - the hoses I supplied, for all intents and purposes, met exactly the same or near to the specifications in 919.*

j. *When you say "for all intents and purposes" in paragraph 101, you say that you believed it had roughly the same working pressure. Are there any other - - so that's something that you considered?---Yes, sir.*

k. *Is the working pressure?---Yes, sir.*

l. *Are there any other aspects of these hoses that you considered other than the working pressure?---I don't know what you're trying to get at. As in the whole job or at any time?*

m. *As in the technical details of the hose, these - -?---Given the - -*

n. *Just listen to me for a moment, please. For example, the type of internal hose, what that was made of; the type of external braiding; the thickness, quality, the dimensions of the external braiding. Would you consider any of those matters?---I was fully aware of the quality standards that the hose that I supplied met and was fit for the purpose - - for the job that I was going to undertaken.*

o. *Well, you say though, in paragraph 101, and I'm sorry to labour that paragraph, that you assumed it was a hose that Parker had made. If you could only assume that it was a hose that Parker had made, how could you be satisfied that you knew all about this hose?---I - - in assuming that Parker had either made the hose or supplied the hose, and I knew that they did, that Parker did supply the hose, then my workings within the company, I knew that I was going to be supplied with a quality product.*

p. *You didn't look for the data sheet or specifications of this SST12 hose?--- No. I used the 919 spec sheet.*

3043

56. The questioning reaches a halt at 3045 due to inability to read some data sheets. New data sheets are requested. The issue is taken up again at T3058 where the data sheets were evidently supplied. I resume from the bottom of the page.

a. *'....I asked you some questions yesterday about the boxed warning down the bottom of the page. Do you see that?---It's not on - - it's not - - KM06 or KMO5, sir?Yes. Well, that was, you tell us, on 29th April but during the currency of the job, particularly in the early stages there was nothing there to show that one of these hoses had failed during testing?---The test - - the actual hose had actually failed - - had failed within - - was one of the last hoses that was actually tested.*

3058

b. *CAPT CALLAGHAN: KM06 on mine?---Right, sir.*

c. *You see down the bottom left-hand corner?---Yes, sir.*

d. *You see, "Warning"?---Yes, sir.*

e. *"Failure or improper selection or improper use of the products and/or systems described herein or related items can cause death - - -"*

3059

f. *CAPT CALLAGHAN: "- - - cause death, personal injury and property damage". I did ask you some questions about some of the words there yesterday, and I don't want to labour this, but can I just draw your attention particularly to a sentence about the middle of that warning. Just try and follow it as I read it:*

> *"Due to the variety of operating conditions and applications for these products or systems, the user, through his own analysis and testing, is solely responsible for making the final selection of the products and systems and ensuring that all performance, safety and warning requirements of the application are met."*

g. *Now, assume that someone - assume even that an ADI QA person - came into the Enzed premises and asked for these records, which they wouldn't have to do, of course, because they already had them, but assume - - let's go back to the hypothetical situation. Assume a QA person came in and looked at that record. Would you not think that the QA person, on consideration of that material, and on consideration of that sentence which I just read to you, might inquire as to what analysis and testing had been done to achieve the final selection of the appropriate product?---Yes; I'd - -*

h. *Yes?--- - - agree with that.*

i. *Yes. And on that person making that inquiry, that person would see no relevant documentation concerning that, would he - or she?---That documentation would be made available if it was requested for.*

j. *Well, what analysis and testing was done for making the final selection of SST-12?---I knew that it met all the specifications that I was given by ADI. I knew that it was going to - - would carry the medium, as in diesel fuel, because I checked that from my product book and it states in that that TFE (Teflon) - -*

k. *Yes?--- - - is a suitable line for diesel fuels.*

l. *Yes?---And then I made a - - and I made an assumption from that that that hose would be fit for purpose for the job that it was going to carry out.*

m. *And you didn't discuss that with anyone?--- No; I made that decision myself.*

n. *Sure. You didn't discuss it with Mr Todd, even?---I probably would have made - - I would have discussed it with him, but it was my decision in the end.*

3060

57. I think it reasonable for counsel to point to the seriousness of selecting hoses for the main engines of the HMAS Westralia.

58. I allege the hectoring question at hectoring at 55.h'*Well, are you a metallurgist? ...* is inappropriate because a reading of Mr Old's statement and qualifications and an understanding of how ENZED conducted its business (the Board had a copy of Mr Old's contract with ENZED) would have shown that Mr Old was not a metallurgist and the inappropriateness of the question. It appears to me that Mr Old could not answer beyond the level of knowledge than he did.

59. I allege that the statement at 56.g is confusing.

'...Assume a QA person came in and looked at that record. Would you not think that the QA person, on consideration of that material, and on consideration of that sentence which I just read to you, might inquire as to what analysis and testing had been done to achieve the final selection of the appropriate product?'

a. The answer to the first ie is surely that the

'...the user, through his own analysis and testing, is solely responsible for making the final selection of the products and systems and ensuring that all performance, safety and warning requirements of the application are met.'

There is no reason for the ENZED, the seller, to have copies of those papers.

b. The ENZED seller would need to know the selection made by '*...the user...*' or be given the required characteristics so that ENZED could make a suggestion from the data sheets.

I think it would have been reasonable to:

(1). ascertain Mr Old's understanding of the gravity of suggesting hoses for the main engines of HMAS Westralia, and

(2). ask Mr Old how he made his selection of hose and to show the information provided by ADI. Further, 'the record' would only need to be appropriate to the 'assessed' requirement for that particular business; which might not have helped the Inquiry.

60. What would a quality assurance representative (QAR) have done if he or she went on site? The QAR could have done no more than look at the contract, order, work instructions, any records, the work area and test equipment. If Mr Old was actually working on the task then the QAR could have witnessed the performance of the hose tasks. I think the situation was vague.

61. Proper quality assurance would have seen a specification that was understood by both parties and translated into a quality plan approved by Navy before work began. Then any visit by a QAR would have had more substance.

Hose Testing

Transcript

62. The following is extracted from the transcript and is subparagraph numbered for ease of reference.

a. *'Can I then pass on to paragraph 214 of your statement, and ask you to give the Board a little more detail about the failure of this particular hose?---During the pressure test - -*

b. *There's no need to read it?---Well -*

c. *Well, I'm sorry, you weren't reading, you - - ?--- No.*

d. *- - were saying something?---Yeah.*

e. *Please, go ahead. I'm sorry?---During the testing of the last batch of hoses that was actually going to fitted, but not including the spares, when I fitted one of the hoses into the test rig and I tried to increase the pressure to the test pressure, I noticed that the - - it wouldn't hold pressure, so I checked out - - I checked through - - through the top of the cabinet you can view the hose in a test rig, and I noticed that there was a small stream of water coming from between the braid on the hose, which immediately meant it was a failure. I took the hose from the rig, and I - - as normal practice, I took it straight over, cut it and destroyed it; and had to make - - and was - - to make a new hose, and tested that hose, and it passed. I tagged it, test', and supplied it.*

f. *And did you record that test and failure in any way?--- No; only that I - - only in my opening and closing report. That was it.*

g. *You didn't raise a test certificate, or make an entry in the test register, which recorded that failure?--- No, sir; I did not.*

h. *Do you think perhaps you should have done that?--- No, sir; I don't think I should have at all.*

i. *Isn't that a relevant factor to the quality of the hose which you were using to produce this product?---I didn't think so; no, sir.*

3061

j. *CAPT CALLAGHAN: Did it not occur to you, for example, that this might reflect upon the quality of the hose used in the supply which you were taking up to make the product?--- No, sir. The whole purpose of - - -*

3062

k. *WITNESS: - - - the whole purpose of doing the test was to ensure that the product that I was going to supply was fit for the purpose.*

l. *CAPT CALLAGHAN: Did you not think that you perhaps should have informed someone that there had been this failure?--- No, sir. Not at the time.*

m. *You destroyed the hose so that no-one could check on just why the failure had occurred?---I didn't destroy the hose for that purpose. I destroyed the hose because it had failed a test.*

n. *You destroyed the hose with that result - - with the*

o. *result - - you destroyed the hose with the result that no-one else could now, or could even then check - -?---They wouldn't be able to test that particular length of hose.*

p. *MR BARKER: Might I object to the way that question has been suggesting a particular outcome? The witness has already said a few moments earlier that he followed, I think he said, ordinary practice. Surely it's incumbent upon counsel assisting to pursue that, rather than suggest some other surreptitious reason for destruction of the hose.*

q. *CAPT CALLAGHAN: Well, I'm not going to debate the matter. I'm quite happy to follow through.*

r. *(TO WITNESS): You say that this was ordinary practice on your part - -?---Yes, sir.*

s. *- if there had been a failure?---Yes, sir.*

t. *Not to record the failure in any way?---No, sir.*

u. *And not to keep the failed product?---I didn't keep the failed product on this particular occasion because I didn't think that it was of any relevance.*

v. *Yes. Thank you. You detail at some length installation and testing of hoses onboard the ship, and I'm not going to go through all the detail of that with you, but I'm going to just deal with a couple of specific dates. First of all, could I take you to paragraph*

251? Can I correct that; 231. You refer there to a situation on the 17th of April, that is a situation of static testing, but I gather you did not observe that yourself?--- No, sir. I wasn't there.

w. *Just pardon me for a moment? You got some information, though, from Mr Baird-Orr?---Yes, on the Saturday morning.*

x. *I think the 17th of April in fact was a Friday?---Yes, sir. It is.*

3063

Contracts

63. The following is extracted from the HMAS Westralia RPLSS CAPO MACS (WA) 0044 tabled before the BOI as evidence.

'Commercial-in Confidence

6.4 Control of Non-Conforming Supplies

6.4.1 The Contractor shall obtain the agreement of the Tasking Authority for the recording and disposition of work which does not conform to the requirements of the contract (ie Disposition of Non-Conformity) where non-conformance becomes evident in the course of the production of the supplies.

6.4.2 The Contractor shall not make use of non-conforming or repaired materials or work in the supplies unless the Contractor has the approval of the Tasking Authority.

Commercial-in Confidence'

64. The following is extracted from the Contract between ADI Limited and ENZED tabled before the BOI as evidence.

a. *'6 QUALITY ASSURANCE*

b. *6.1 All work performed under the Contract shall be subject to the Quality Assurance standards detailed in AS/NZS IS09002:1994.*

c. *6.2 The Contractor shall maintain effective control of the Work, including subcontracts, provide test facilities and perform all examinations and tests stated in the Contract to demonstrate conformance of the Work to the technical requirements of the Contract and shall offer for acceptance only Work that conforms to these requirements.*

d. *6.3 The Contractor shall, if required by the Project Manager and prior to the commencement of work under the Contract, provide a formal quality plan which shall address all the elements of AS/NZS IS09002:1994 and shall detail all required inspections, tests and verifications to be performed by the Contractor and his subcontractors and nominate proposed witness/hold/release points. The Quality Plan shall be approved by the nominated QAR prior to commencement of work.*

e. *6.4 When inspection and test hold points or witness points require the presence of the QAR as specified in the Inspection and Test Plan, a minimum notice, in writing (letter, telex or facsimile), of 24 hours shall be given by the Contractor. ...'*

f. 7. STANDARDS OF DESIGN, WORKMANSHIP AND MATERIALS

g. 7.1 The design which, and to the extent that, it is the Contractor's responsibility to provide, and the workmanship, quality of materials and finish of the Work shall conform with this Contract.

h. 7.2 The Contractor shall ensure in respect of the Work or any part thereof, that:

i. (a) all assemblies and components which perform identical functions are, as appropriate, physically, dimensionally, electrically and mechanically interchangeable within accepted standards and practices and capable of repair, overhaul and maintenance using the same tools, test equipment documents and drawings;

j. (b) the Work incorporates maximum commonality of assemblies and components and constructional techniques;

k. (c) all components used in the performance of the Work shall be new and unused and not of any age which would impair their operation. Reconditioned or refurbished components shall not be used unless specifically authorised in writing by ADI; ...'

Discussion

65. Mr Old was a subcontractor. The transcript does not show that the contract was reviewed to examine what Mr Old was required to do and whether he did it.

66. If we put aside the meaning of

'2.2 Manufacture 64 new lines to Lloyd's approved standard. ...'

in ADI Work 'Instruction A1161' and that no other instruction was given to Mr Old, then I allege that Mr Old would follow his normal practice. There is no evidence in the transcript that the Board endeavoured to obtain any preparatory advice on what ENZED's normal test practices were and what Mr Old's obligations were to follow those practices. Neither is there evidence in the transcript that the Board endeavoured to obtain any preparatory advice on what ENZED's reasons were for conducting the tests that Mr Old obviously conducted or even whether the equipment was approved by ENZED and in calibration.

67. The RPLSS contract at 6.1 of the quality clauses states:

The Contractor shall obtain the agreement of the Tasking Authority for the recording and disposition of work which does not conform to the requirements of the contract (ie Disposition of Non-Conformity) where non-conformance becomes evident in the course of the production of the supplies.

The statement is not in the contract between ADI and ENZED so I allege there is no contractual obligation on Mr Old to tell ADI or the Navy about the failure. The fact that Navy has placed clause 6.1 in the RPLSS contract implies that the practice is not a normal practise in ship maintenance.

68. The board has not endeavoured to establish the reasoning behind Mr Old's tests by establishing any industry norm. I discuss that at page 90.

69. The destruction of the hose has some validity in the fact that he is to deliver conforming hoses. He is required to only offer conforming hoses for acceptance. In my experience with weapons and ammunition, nonconforming components would be isolated and identified with a 'red card' and often defaced in an obvious way to prevent their use. The defacing could mean bending or damaging with hammer. The components would then be removed to an appropriate industrial disposal process. The meaning of the failure of the test would be obvious to all involved in the context of the process. So, on the face of the matter it seems reasonable to me for Mr Old to cut up the hose and throw it out and not tell anyone. He did not try to hide the fact.

70. I think the accusations against Mr Old shown in the transcript were unreasonable on the basis of the evidence. The protest from Mr Barker was heeded.

71. None the less, the criticism of the 'failed hose' accepted by the Coroner for Western Australia at pages 90 and 91 of his report on the basis of his acceptance of the Board of Inquiry's finding. I think that unfortunate. I allege that it demonstrates the potential for greater injustice in the absence of vigilance.

Expertise

Definition

72. Expert: - *n1. a person who has special skill or knowledge in some particular field; a specialist; authority; a language expert, an expert on mining. –adj. 3. possessing special skill or knowledge; trained by practice; skilful or skilled (oft. Fol. By in or at) an expert driver, to be expert at driving a car. 4. pertaining to, coming from, or characteristic of an expert: expert work expert advice.* (Macquarie Dictionary , Macquarie Library, 1982).

Transcript

73. The following are extracted from the transcripts:

    a. *'MR KIRKHAM: Yes, all right; whilst representing themselves as part of Enzed, Parker Enzed. Is that right?---Yes, sir.*

    b. *Would it be fair to describe "hose doctor" as being an expert in high performing industrial hoses?---It would be fair to say that, yes, sir.*

    c. *All right. Can I ask you what training and experience do you have which fits you to fill that role of being an expert in hoses?---I completed all the relevant training required by Parker Enzed to operate my business.*

    d. *Did your Naval training and experience assist in that regard?---In some - - in some facets it did, yes.*

    e. *All right. You see, you had, what, 21 years in the Navy?---Yes, sir, I did.*

    f. *And I think, what, about a year ago you were a DMEO?---In 1993 to 1995.*

    g. *Yes, all right. In the context of acting as a DMEO were you familiar with configuration change procedures?---Yes, sir, I was.*

    h. *Were you familiar with Lloyds rules?--- No, sir, I was not.*

    i. *Were you familiar with Lloyds standards?--- No, sir, I was not*

    j. *Well, the fact that "Westralia" was Lloyds classified?---I knew - - I knew that "Westralia" had a Lloyds classification.*

k. *Can I ask what you thought that was or what that meant?---I thought it was to do with insurance.*

l. *Yes?---But apart from that, no.*

m. *Whilst you were working in the Navy you had heard of Lloyds?---Yes, sir.*

n. *Were you aware that Lloyds was a body that set particular standards for, amongst other things, Naval equipment?---I was aware that Lloyds was to do with insurance and that was about it.*

o. *Yes. What's the training required?---I completed a 2-week training course in Wodonga at the - - in Wodonga's Parker Enzed training facility. I've done - - I did some previous shop service before I went and done my training course. I've been out - - and I went out on the road with a few of the hose doctors in our franchise in periods prior to taking over my business.*

3071

I have skipped a large part of the transcript because the issue is the use of 'expert'.

p. *MR KIRKHAM: All right. When you left the training course, do you still say that you had no knowledge of Lloyds standard?--Yes, sir. I'd say that I had no knowledge of the standards.*

q. *And that was in fact n instruction, was it not,*

r. *you kept a copy of? Is*

s. *question, sir.*

t. *All right. There was no discussion in the course about some Parker hoses being Lloyds approved hoses?--- No, sir.*

u. *All right. Well, when you made the contract with ADI, I take it you were aware that ADI did not profess any expertise in high performance hoses?---Yes, that'd be correct, sir.*

v. *And that they were in fact giving the job to you or engaging you because you were an expert in high performance hoses?---I was given - -*

w. *Is that your understanding of it?---I was - - would have been given the job because I could provide the service that they were after.*

x. *Yes, as an expert in high performance hoses?---As a supplier of hoses, yes.*

y. *Yes. Well, I'm only - -?---I don't profess to be an expert, sir.*

z. *Well, that's the point, Mr Old, you just have. I earlier asked you whether you were an expert in hoses and you agreed that you were.*

aa. *MR BARKER: The question wasn't put that way, Mr President, with respect.*

bb. *MR KIRKHAM: Well, I disagree with that.*

cc. *MR BARKER: It was an implied statement in the question which - -*

dd. *MR FILOR: It's isn't a jury you're trying to convince. It is a Board here. I think the points are becoming a bit fine at times.*

ee. *MR KIRKHAM: All right.*

ff. *(TO WITNESS): Did you understand that ADI were relying, then, on your experience in the replacement of the steel lines with the flexible hoses?---Yes, I would say that's correct, sir.*

gg. *You received some letters in February, or a letter in February, requesting that you quote for the job?---Yes, sir. ....'*

3075

Discussion

74. I have underlined the word 'expert'. I have underlined the word 'expert' as used by Mr Kirkham in his examination of Mr Old. It seems to me that Mr Kirkham may have been trying to lead Mr Old into making damaging admissions.

75. I think that the initial sense of 'expert' was in the sense of a person having special knowledge of hoses to the extent that he could conduct business as a 'hose doctor'. From the Deed supplied to the Board ENZED's business is '*...the sale assembly and servicing of hydraulic fittings, accessories and related products...*' through the '*Hose Doctor Franchise.*' In the sense of his ENZED training Mr Old agreed that he was an expert.

76. I think of Mr Old as an expert in ENZED hoses compared to me, but probably needing more time to be more proficient. I think that observation ought to have been available to ADI and Navy given that the people knew Mr Old from his naval service.

77. The time on the transcript at 3071 is 9.50 and the time on the transcript at 3075 is 10.00. So, after about 10 minutes of cross-examination Mr Kirkham used the word 'expert' again. I think this time in a sense of meaning 'special knowledge of high pressure hoses' in a far more technical sense and being hired for that reason. I think Mr Barker has picked up the line of questioning and the possible trap for Mr Old. The questioning doesn't continue.

78. I think the questioning shows the need for people to be represented before Boards of Inquiry.

79. The next point is the remarks by Mr Filor.

    a. I allege fairness was being abused on the issue of the word 'expert'. Mr Filor failed to recognise the distinction between the use of the word 'expert' and the potential consequences for Mr Old. The Inquiry ought to have been to determine the truth. I think that shows a possibly intolerant attitude to the legal process on his part. I allege that shows a need for a judicial chairperson.

    b. I have served on a jury and think his remarks about a jury are insulting to the legal process in this country and the ability of jurors.

80. Together, I think the passages demonstrate the potential for people to suffer injustices before Boards of Inquiry.

Discussion on Fairness

81. I take the following from Captain Callaghan's opening address at T 5 and T6:

    a. *'The Board and we, as counsel assisting, must be astute to ensure that this inquiry is conducted with propriety and with consideration and fairness to all concerned. ...'*

b. *'Witnesses, before giving evidence, will be provided with a written explanation of their rights and obligations. Whilst this is a public hearing, it would be inappropriate once the first witness is called after this opening phase has been concluded for any person who may be called as a witness to remain in the hearing room.'*

82. The Board began it's hearing by promising 'fairness'. I have taken parts of the transcript to illustrate a potential.

83. I allege that the questioning of Mr Old by Captain Callaghan and Mr Kirkham shows that people appearing before Boards of Inquiry could be treated unfairly.

84. Captain Callaghan is a Senior Counsel and so a person of status in the legal profession. He was the senior legal advisor to the Board. While Captain Callaghan respected Mr Barker's intervention in the questioning of Mr Old at about the disposal of the hose I allege that the conduct of Captain Callaghan was unacceptable in the first place. I allege that Captain Callaghan failed to be astute about his own attitudes and behaviour. I think that shows a failure in the processes of the Board to be fair. I allege it demonstrates the potential for similarly structure Boards in the future to permit unfair conduct.

85. The questioning of Mr Old on the issue of expertise is another case where an unfair practice was introduced. Again, the counsel accepted the intervening argument by Mr Old's counsel. Since Mr Kirkham was not a member of the Board then there are no grounds to complain about the Board. On the other hand, I allege that Mr Filor's response to Mr Barker showed an ignorance and intolerance for due process. I allege that it would have been appropriate for the President of the Board to intervene on Mr Barker's behalf, which he didn't and for Captain Callaghan as senior counsel to the Board to offer advice, which is also not demonstrated in the transcript. I allege it demonstrates the potential for similarly structure Boards in the future to permit unfair conduct

86. I note that witness statements were read and questions were then asked of the witnesses. There was no pause in proceedings. I see two possibilities:

    a. Examining Counsel had received the statements earlier and researched the supporting evidence to prepare their questions put at the open hearing, or

    b. Simply began asking questions that came to them as they faced the witness at the hearing.

87. I allege that if Captain Callaghan had time to consider Mr Old's statements before his questioning of Mr Old before the open hearing then there are grounds to seriously question the Navy's methods for conducting Inquiries.

88. If Counsel went straight into questioning witnesses after the statements were read then I suggest to the Parliament that future Inquiries adjourn after reading of the statement to consider questions to the witness.

89. I suggest to the Parliament that as Captain Callaghan's is a Naval Officer the examination of Mr Old ought to be raised with him and appropriate disciplinary action taken if that is found to be in appropriate by competent authority. I allege it lowers the professional reputation of the Navy in my sight and probably other people. That might help improve the Navy's application of justice.

PARTIALITY

General

90. I think partiality is any conscious or unconscious favourable bias or prejudice to one party or other in a hearing and the Board's decisions. I allege that could occur in the Board members and their assistants or those writing the terms of reference.

Prosecution of the Navy

91. The BOI Report brings forward the Occupational Health and Safety (Commonwealth Employment) Act 1991 in relation to the actions of ADI. I presume that is in response to the clauses in Division 1 relating to manufacturers, suppliers, erectors and installers and reliance on information supplied or the results of research. Consideration of whether ADI complied with the Act was appropriate and the matter is before the Courts.

92. However, Division 1 of the Act first relates first to the duties of employers and later to the actions of employees. Penalties apply to a range of persons for breaches of the Act. The BOI Report doesn't bring forward a question of whether Navy personnel, either uniformed or civilian, or the Navy as a corporation complied with the Act.

93. The Coroner for Western Australia states at page 123 of his Report:

    '*This case has highlighted the need for the navy to ensure the safety of its personnel by exercising adequate supervision of its outsourced maintenance or refit planning and logistic support service contracts.*'

94. The point I raise for the Senate is:

    On my reading of the BOI Report recommendation 10.172 is partial because the Navy is placing the focus on one party, ADI its contractor. I allege that the Navy appears to have breached the Act, especially in the light of the findings of the WA Coroner that 'ADI and Navy' failed to adequately supervise the contract and Navy failed to employ adequately qualified personnel.

    If the Navy has breached the Act then it ought to be prosecuted.

'... In the light of resource limitations ...'

95. I allege that the Board did not address the issue of whether the implementation of changes to OAWA and the DQA impacted adversely on the operations of OAWA and the conduct of AMP 12.

96. The BOI Report Section 11.4 ends with the sentence: '*...In the light of resource limitations, there may be no choice but to persist with current unsatisfactory arrangements for configuration change.*' I cannot find where any statement or document was placed before the Board to support that position. It raises a question as to whether the Board was constrained, even if by a natural discretion in this case. The Board began hearing evidence on 11May 1998 and rose on 17 July 1998 and delivered the finding on 28 August 1998[7]. The proceedings of the Board were open to the press and reported in the press. I feel certain that had the issue of staffing and management been raised then it would have been reported.

[7] BOI Report Authorisation sheet and Sections 1.9, 1.13.

97. I allege that the partiality here is in the fact that Senior Navy and Defence management have not appeared before the Board to make statements and be cross – examined by interested parties.

Navy Safety Audit Frequency

98. I take the following from the BOI Report at Section 14 titled COMCARE:

'14.9 What steps had the Australian Defence Force (in particular the Royal Australian Navy) and the Department of Defence taken to ensure the health and, safety of employees and absence of risks at work in connection with the use of plant?

14.10 Appropriate instruction, in the form of a defence instruction (Occupational Health and Safety – Management of Risks Associated with Plant: DI(G) PERS 19-11), has been promulgated to the Defence Forces and the Department of Defence. This instruction provides guidance to managers and supervisors on their responsibilities with respect to the 'plant regulations'. In particular, the RAN requires documented operating and maintenance procedures for all items of plant. Other documentation in the form of Australian Books of Reference and Ships Standing Orders provide detailed guidance for operating and maintaining plant safely. Within the RAN these aspects are audited, both ashore and afloat, at approximately 18 month intervals however, the redirection of effort and reduced resources which form part of the Defence Reform Program will, regrettably, detract from the number and quality of such audits in the future. Ironically, in response to its last audit, it was an attempt to improve the safety associated with operating the main machinery onboard WESTRALIA, which led to the fire.[E232] [My underlining]

99. I allege that the partiality here is in the fact that Senior Navy and Defence management have not appeared before the Board to make statements and be cross – examined.

100. In fact, COMCARE, which had an interest in the incident as government insurer, was not represented to ask questions in public and receive answers in public.

Lloyd's approved standard

101. The meaning of 'Lloyd's approved standard' is a central issue in apportioning blame for the tragic fire. I don't intend arguing for any particular case. I think that should be left to the Courts.

102. As I see the issue there are two arguments, which I will summarise.

a. The first 'Lloyd's approved standard' interpretation is that a data sheet is available from Lloyd's giving a list of hoses that may be used on marine main propulsion engines such as those in HMAS Westralia much the same as Mr Old's data sheets and one of those hoses is to be supplied. Eg Lloyd's fax of 2 February 1998.

b. The second 'Lloyd's approved standard' is that Lloyd's had specific requirements for hoses that were contained in Lloyd's publications which had to be met by the selected hose.

103. I think engineering experience and the situation will inform the choice for the individual.

104. In terms of a legal contest before the Courts, the Navy is one of the contestants. I allege the parties are Navy, ADI, Jetrock/ENZED and the families of the deceased and the injured. In essence I allege that the corporate body known as the 'Royal Australian Navy' is a judge in its own cause. I allege it has made the choice of outcome that suits Navy's interpretation. Future court case could change the outcome. I allege Navy is still a judge in its own cause even if it is the court of public opinion.

Captain's Responsibilities in ABR 5454

105. ABR 5454 is referenced in the BOI Report at Sections 10 and 13 and ABR 5454 contains the following on quality assurance:

> *3027. All repair's to hull, equipment and machinery which may be required in order that HMAS WESTRALIA may retain class and current capability; and approved alterations to scantlings and arrangements of hull, equipment or machinery are to be carried out under the inspect ion of and to, the satisfaction of the Classification Society's Surveyors.*
>
> *3028. The Ordering Authority, MSRR, will be responsible for nominating the Quality Management requirements appropriate to the repair/replacement of the specific material equipment not falling within the Classification Society's requirements for retention of class, or their obligation under the Uniform Shipping Laws Code. Where the above repair/replacement is carried out by contractors. satisfaction of Quality Assurance requirements is the responsibility of the DGDQA whose area representative will generally be the Regional Director Quality Assurance located in each State.*
>
> *3029. Satisfaction of Quality Assurance requirements for material/equipment repaired/replaced by Naval units is the responsibility of the Officer-in-Charge of that unit.*
>
> (My underlining)

106. Navy had a policy of having the DQA perform quality assurance. My reading of ABR 5454 clause 3029 is that the Officer in Charge of HMAS Westralia had a specific direction on the matter of quality assurance at paragraph 3029.

107. There is no indication that the Captain of HMAS Westralia was asked anything about his responsibilities for quality assurance at the Inquiry.

108. A decision was made not to use DQA. So, what alternatives were put in place by the '*Officer-in-Charge'* of HMAS Westralia?. If that was impossible then what steps did the captain take to raise the matter with the authority responsible for preparing ABR 5454?

109. The issue of a captain's responsibility for the safety of his ship in the future and how he is briefed before taking command is not addressed. I note that the captain did discuss the coming AMP12 with the Engineer (T3163) although what was discussed is not clear and made reference to driving an old car. It comes to mind that the captain could ask the ship's engineer: 'What steps have you taken to fulfil my obligations for quality assurance.' Engineer 'We are using ADI'. Captain: 'What about my obligation to use DQA?' 'I am supposed to use DQA.' Perhaps, that may have been sufficient to introduce someone who might have looked freshly into the 'Lloyd's issue' and possibly helped to prevent the incident.

110. The matters that come to mind are:

a. Navy didn't fulfil a specific obligation placed on the Officer in Charge of HMAS Westralia and didn't report that in the Inquiry,

b. Navy doesn't consider the possibility that a captain's questioning of simply matters might have lead to actions that probably have lead to closer examination of the engineering process and saved lives, and

c. The implication for the future management of Navy assets is not addressed.

111. There may be a good rational explanation for not addressing the issue at the Board of Inquiry.

112. I allege the Navy's failure to address the issue strengthens the proposition that Navy was negligent in the management of HMAS Westralia.

Navy's Maintenance Record

113. Exhibit 224 of the Board of Inquiry was a report by Mr P.E. Burge a Marine Engineering Consultant. Section 9 was 'History of Fires in Ships with Similar Pielstick Main Engines'. He listed four ships that had fires: one in February 1998, one fire in December 1997 and one fire in November 1997, and one circa 1974. I think it reasonable to choose two of the fires. There were no losses of life.

114. The M.V. Allunga '*...It had a history of fires during the 1970's which were attributed to leaking isolating cocks on the low pressure fuel lines. ...*'. The Pielstick Engine Service Bulletin 78 issue 2 was issued in 1991 which is presumably that referred to at Section 10.13 of the BOI Report as used by ADI and Westralia staff. Section 10.10 states: '*...The fuel leak problem had existed since at least September 1991...*'. Section 8.4 of the BOI Report states: '*The concern was sufficient for COMFLOT, ..., to interview the engineer ... in about September 1997 to explore the wisdom fo proceeding to sea at the time. ...*'. The R.F.A Bayleaf had a fire in November 1997 '*...This ship, Westralia's younger sister vessel, suffered a serious engine room fire was identified as originating from a fuel leak from an isolating cock in the low pressure fuel system. ...*'

115. There was a recognised problem with fuel leaks on the Westralia and the Pielstick Engine Service Bulletin indicated two things: the manufacturer's recognised the problem and offered a fix, and there were about six years between the issue of the bulletin and the fire on HMAS Westralia. COMFLOT was aware of the oil leaks. Why didn't the Navy at least make formal enquiries?

116. It depends when Navy heard about the fire in the RFA Bayleaf, but that ought to have sounded warnings to the engineering managers of the ship.

117. There may be some good explanations as to why the potential danger was not picked up and acted upon. What might have lulled the managers into a false sense of security?

118. This line of questioning doesn't appear to have occurred at the Inquiry. It might not have been comfortable for the Navy but might have produced some positive results.

COMCARE

119. I note at paragraph 1.4 of the BOI Report states that COMCARE sent a list of questions to the Navy, which were answered in the report at Section 14. However, the Navy did not make a public statement and was not cross examined in public. I think the line of questioning that I presented on Navy's maintenance Record is one on reflection I would expect from an insurer.

Discussion

120. I use the Longford Royal Commission as my basis for criticism. Initially there was a Coroner's Investigation whose staff and investigation work was taken into the Royal Commission. The Coroner's task force included the Arson Squad of the Victoria Police, the Country Fire Authority and the Victorian Work Cover Authority. Further expert advice was obtained locally and from overseas.

121. I allege that the position of privilege given to the Defence Force, particularly the Navy in this case, is similar to the head of ESSO Australia being given the task of investigating the tragic fire at Longford. I don't think that would be acceptable to the general public even under the idea of industry self-regulation. I recall that the government of the day strongly held that public servants ought to be accountable for their actions. So, why should the Defence Force be any different?

122. I note that the first person called before the Longford Royal Commission was the Chairman and Managing Director of ESSO Australia Ltd. The first person called before the HMAS Westralia Board of Inquiry was the Deputy Marine Engineering Officer (DMEO) of HMAS Westralia, a Warrant Officer, a non – commissioned officer. It may have been an appropriate place to begin given the DMEO participation in the events surrounding the fire. But juxta-posed the Longford Royal Commission, a contemporary societal standard, I allege it would have been appropriate for the Chief of the Defence Force or the Chief of the Naval Staff to appear before the Board of Inquiry at some time. The most senior persons called before the Inquiry was the Captain of HMAS Westralia, a Commander and the Officer in Charge of Ordering Authority Western Australia also a Commander.

123. The members of a Service Board's of Inquiry are usually senior Service personnel. I allege that they are either consciously or unconsciously bound by the culture of the service in the way they act.

124. I think that the staffing and resource issues had potential to embarrass the heads of the Defence Forces and the government due to the Defence Efficiency Review, if the issues were handled poorly. The Federal Election was held on 3 October 1998[8] and the report was released after the election. I allege there is a motive to be partial.

125. The Board did not address the responsibilities of the Officer in Charge of HMAS Westralia in the Board of Inquiry.

126. I allege that COMCARE did not play a sufficiently aggressive role in examining Navy.

127. I think there is ground to question the partiality of the Board and point to improvements for future inquiries.

General Discussion on Fairness and Partiality

128. I allege that Boards of Inquiry ought to be fair and impartial. Nobody has levelled complaints against the Board to my knowledge.

129. I allege that the questioning of Mr Old of Enzed showed an unacceptable method of proceeding and demonstrates the capacity of such Boards to be unfair. I think that Boards ought to retire after witness statements have been read to allow adequate time for the Boards to formulate their questions. I think that because Captain Callaghan is a Naval Officer and the issue reflects poorly on the Navy and the Military justice system the questioning of Mr Old ought to be raised with him and appropriate disciplinary action taken if competent authority finds that to be appropriate. That might help improve the Navy's application of justice.

130. I allege that the Board did not address some issues that may have shown Navy in a less favourably than had the issues been addressed. Those issues were: '... In the light of resource limitations ...', Navy Safety Audit Frequency, Lloyd's approved standard, Captain's Responsibilities in ABR 5454 and Navy's Maintenance Record.

131. COMCARE was present at the hearings. I note that the Victorian Workcover Authority was an active member of the staff of the Longford Royal Commission[9]. I allege that COMCARE did

[8] Australian Electoral Commission, Higgins.

[9] Report of the Longford Royal Commission page 246, A17 to A19 inclusive.

enough to say it asked some questions but accepted the answer's it was given! I find it difficult to imagine a private insurance company acting in that manner. So, I allege that COMCARE ought to be more concerned and diligent in its financial responsibility to the Commonwealth, if nothing else.

132. The Board did not make any recommendation that Navy's lack of adequate management be referred to an appropriate authority to determine whether Navy ought to be prosecuted.

133. Service Boards of Inquiry can influence the materiel presented and recorded at subsequent hearings and the Commonwealth make ambit claims for the acceptance of their reports. The Coroner for Western Australia made the following statements in his report:

a. at page 20 -

'The Board convened to commence publicly receiving oral and physical evidence on 11 may, 1998. The findings conclusions and recommendations of the Board dated 28 August, 1998 were available to the inquest hearing together with transcripts of oral evidence and copies of most of the exhibits provided to the Board (in these reasons there are numerous to Board of Inquiry transcript and exhibits, the Board of Inquiry references are identified as such). The evidence provided to the Board of Inquiry has been of great assistance to me and its availability has obviated the need for me to further explore many issues which were exhaustively examined before the Board. In addition the Board's report deals with a wide range of issues in a comprehensive and most helpful way as a result of which it is not necessary for me to re-visit many of these issues.'

b. At page 21 –

'The submissions on behalf of the Commonwealth have contained a contention that I should as a general rule prefer the evidence given by witnesses to the Board of Inquiry to that give by the same witness at the inquest because of the closer time proximity of that evidence to the tragedy and the general rule that memories can be expected to deteriorate over a period of 5 years, particular to matters of detail and matters not seen as important at the time. It is also submitted that findings of the Board should be accepted in their entirety unless cogent reasons can be provided for a contrary view.

In my view such an approach would be over simplistic for a case such as this.'

I allege this demonstrates power claimed for Service Boards of Inquiry that is not available to private companies with whom the Defence Force conducts business.

134. I suggest to the Parliament that the Department of Defence not be allowed to conduct internal inquiries into matters where there is death, serious injury or potential prosecution and litigation and that such Inquiries be conducted before the Courts in a similar manner to civil society.

CONCLUSION

135. There is potential for Boards of Inquiry to be partial to the interests of their sponsor on important issues and that includes recommendations concerning prosecutions.

136. I suggest that Boards retire after witness statements have been read to allow adequate time for the Board to formulate their questions.

137. I suggest that because Captain Callaghan is a Naval Officer and I allege the questioning of Mr Old reflects poorly on the Navy and the Military justice system; so the questioning of Mr Old ought to be

raised with him and appropriate disciplinary action taken if competent authority finds that to be appropriate.

138. I suggest to the Parliament that the Department of Defence not be allowed to conduct Boards of Inquiry into matters where there is death, serious injury or potential prosecution and litigation and that such Inquiries be conducted before the Courts in a similar manner to civil society.

139. I suggest that COMCARE take a more aggressive role in future Inquiries.

140. I suggest that whether Navy ought to be prosecuted under the Occupational Health and Safety (Commonwealth Employment) Act 1991 be referred to a competent authority.

QUALITY ASSURANCE

INTRODUCTION

141. I quote two authors to make a point.

142. I quote Mr Malcolm Fraser from his recent book 'Common Ground'[10] where he in turn quotes John Maynard Keynes[11] to emphasise the importance of ideas:

> '*The ideas of economists and political philosophers both when they are right and when they are wrong are more powerful than is commonly understood... practical men, who believe themselves to be quite exempt from intellectual influences are usually the slaves of some defunct economist, which are dangerous for good or evil.*'

143. Mr Fraser continues: '*How well a social or economic or political system works, its prospects for surviving depend not merely on how efficiently or rationally the bits are arranged. It is not a machine. It is a cooperative enterprise involving men and women, and its success depends crucially on their understanding of it, their attachment to it, their commitment to the philosophy which animates it and gives it meaning. ...*'. I think that is also important with the application of administrative philosophies such as quality assurance.

144. 'The fish rots from the head' conveys a reported ancient Chinese meaning that organisations fail due to poor leadership from the top. It is the title of a book on directing companies, by Mr Bob Garrett, a company director, lecturer and author[12]. I simplify a point that policy, strategy and tactics/operations are a responsibility of boards and that these ought to be dynamic learning processes for the organisation[13]. Defence was engaged in a process of change culminating in the Defence Efficiency Review and that process was driven by ideas. The basics of quality assurance ought to have been effectively communicated and implemented from the formation of the DQAO in 1989 to its demise at the time of HMAS Westralia's Assisted Maintenance Period 12 (AMP12), through the process of the Board of Inquiry to the present. I allege something failed on QA policy.

145. I think that the source and definition of the ideas behind the quality assurance philosophy pursued by the Department of Defence at the time of the Fire in HMAS Westralia helped shape the attitude to that element of contract supervision by those involved in the procurement and fitting of the fateful hoses.

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[10] Penguin Viking. Page 9.

[11] Keynes J.M. The General Theory of Employment Interest and Money Macmillan, London 1940 pp 383-4.

[12] Garratt, Bob. The Fish Rots From The Head – The Crisis In Our Boardrooms: Developing The Crucial Skills Of The Competent Director, Harper Collins Business, First published 1996. Also author of 'The Learning Organisation' and 'Learning to Lead and Developing Strategic Thought'.

[13] ibid p 31.

146. I agree with the statement at Section 12.4 that '*The assumption that a certified QMS guarantees quality of product is not appropriate.*' I show evidence to support that position. But, on the other hand I hope to show that it was possible for that mistaken opinion to be held.

147. I could have reduced the size of this submission considerably had I simply made two points:

a. Specialist outside witnesses ought to be called on disciplines such as quality assurance, and

b. A professional engineer ought to have been included as a member of the Board to sharpen the focus on the science and administrative aspects of the engineering tasks.

However, I have chosen to write more in the hope that I can lift the submission beyond an opinion.

THE SOURCE OF QUALITY ASSURANCE INFORMATION FOR THE BOI REPORT

INTRODUCTION

148. Section 12 of The BOI Report contains statements about quality assurance. The source of the statements is confined in the BOI Report to participants at the inquiry. So makes it possible to infer that the statements represent a particular perception of quality assurance and contracting by the participants at the inquiry and the authors of Section 12.

149. I regard the authors of the BOI Report are regarded as participants for the purpose of this part of the review.

SOURCES

150. The sources of information are as follows.

151. Those listed as witnesses in the BOI Report on Quality Assurance were:

a. WO Jones, OAWA, Navy, Section 12.3

b. Mr Sergeant, ADI, Section12.3,

c. CMDR Coverdale, OAWA Navy, Section 12.10,

d. Mr Singh, ADI, Section 12.20 to 12.22 inclusive, and

e. Mr Old, Enzed, ADI Sub-Contractor 12.26 to 12.27 inclusive. At T3006 and T3007 Mr Old states that he left the RAN on 14 November 1997 and became a '...hose doctor by trade ...' from 22 December 1997. He received 2 weeks formal training from Parker ENZED in Wodonga and road experience with other Hose Doctors before taking up his franchise. I allege that Mr Old's actions reflect his naval training.

152. CAPT Callaghan, Senior Counsel, RANR, asks some questions of Mr Old at T 3056 which I allege shows his understanding, of quality assurance. The material might not be his total understanding but it gives a picture of Navy's understanding.

153. Exhibit 7373 is '*Defence Quality Assurance Activity Report: WESTRALIA AMP 10...*' and is listed as 'Commercial-in-Confidence'. It's content is not known. The period was 1996 (Section 10.11). The incident developed before AMP12 and the process to install the hoses began in early 1988 (Section 10.38).

154. The Chairman of the BOI, Commodore Lamacraft, is listed as having engineering, project management and possibly quality assurance experience and or knowledge in the biography at the back of the Report. As Director of the ANZAC Ship Project he ought to have had a close interest in the subject.

DISCUSSION

QA An Administrative Philosophy

155. Purchasing quality assurance is an administrative philosophy. The fact of Section 12 of the BOI Report testify's to its importance.

156. The Australian standards provide a framework for establishing standard operating rules for businesses. The standards are to be read and applied by the supplier: they are not addressed to the customer.[14] I think that how well those rules were understood and an operating philosophy developed and communicated by the Commonwealth, the Department of Defence and the Navy over time has a bearing on the development of people's understanding of quality systems and hence actions.

157. I think that what happens at the bottom levels of organisations, reflects how well leaders form and articulate policies and discipline is accepted by individuals. I think that if the fundamental concepts are understood and applied then the absence or disrepair of formal systems recorded on paper has little effect on performance.

158. Quality assurance policy within the Commonwealth and Department of Defence is hierarchical and has a strong horizontal component to make the hierarchical principles practical. The horizontal component within the Department of Defence ensures that industry has a common approach from the Department. I see the hierarchy at the time of the HMAS Westralia incident as:

a. Audit Act 1901 –1973 - Section 34 (5),[15]
b. Financial Regulation – Reg 42 Procurement Guidelines,
c. Financial Regulation – Reg 45 Responsibilities of Certifying Officers,
d. The Financial Management and Accountability Act 1997,
e. Occupational Health and Safety (Commonwealth Employment) Act 1991,
f. Quality Assurance Commonwealth Policy, 2nd Edition, Purchasing Australia, May 1993,
g. Risk Based Approach for Assuring Quality, Purchasing Australia, May 1997,
h. DIG (LOG) 02-1 (NAVY LOG 63-1) titled 'Defence Quality Assurance' dated 9 May 1991,
i. Defence Procurement Policy Guide Version 1.0, February 1997, Chapter 19, Quality Assurance in the Management of Risk,
j. Defence Quality Assurance – Policy and Operating Procedures[16],

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[14] AS/NZS 9000.1:1994, Section 3.

[15] The Financial Management and Accountability Act 1997 was proclaimed on 1 January 1998. The Commonwealth entered into a contract with ADI on 14 April 1997, which became operative on 15 May 1997 (Section 10.5). My reading of the FMA Act 1997 is that it is not specific as Section 34 of the Audit Act 1901-73.

[16] These would have been the DQAO Policy and procedures that came into being from January 1994. They would have become the basis for future Defence Purchasing Quality Assurance policy and procedures. The aught to have been reflected in any Navy procedures or at least Navy applied the principles.

k. Navy quality assurance - policy and operating procedures[17], and the

l. AS/NZS ISO 9000 family of documents.

159. The listed documents indicate:

a. A period of change in the philosophies guiding procurement and quality assurance. The BOI Report shows that the Ordering Authority Western Australia (**OAWA**) had an out dated quality system (Section 12.10). The BOI Transcript (T3276-7) shows that OAWA had a heavier workload and had been reorganised. The DQAO[18] had been disbanded following the Defence Efficiency Review from about August 1997, which placed responsibility for quality assurance on the Navy. So, I argue that the incident occurred in a period of change; which is a classic time for accidents: a heavier workload adds to the pressure.

b. That the incident had wider implications than for the Navy.

No Visible Evidence

160. The transcript carries a statement by CAPT Callaghan at T5 '*...Ultimately the Board will be making a report. That task will require the Board to make findings of fact and those findings must be based on evidence presented to this hearing. That evidence will comprise oral and written evidence from witnesses and various documents and items of material tendered as exhibits to the enquiry.*'

161. The BOI Report lists ISO 9001, ISO 9002 and AS 3902 at the beginning of Section 12. AS/NZS ISO 9001: 1994, includes a bibliography of standards 'for information'[19]. Quality related documents are named in the list of exhibits. But, I do not see in these the documents:

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[17] I don't have the details of the Navy's policy and procedures operative at the time. So, I have written in lower case.

[18] The name was changed to DQA probably some time in 1996. But the BOI transcripts show Navy staff

[19] I list the numbers
[1] ISO 9000-1:1994, Quality management and quality assurance standards - Part 1: Guidelines for selection and use.
[2] ISO 9000-2:1993, Quality management and quality assurance standards - Part 2: Generic guidelines for the application of ISO 9001, ISO 9002 and ISO 9003.
[3] ISO 9000-3:1991, Quality management and quality assurance standards - Part 3: Guidelines for the application of ISO 9001 to the development, supply and maintenance of software.
[4] ISO 9002:1994, Quality systems - Model for quality assurance in production, installation and servicing.
[5] ISO 9003:1994, Quality systems - Model for quality assurance in final inspection and test.
[6] ISO 10011-1:1990, Guidelines for auditing quality systems - Part 1: Auditing.
[7] ISO 10011-2:1991, Guidelines for auditing quality systems - Part 2: Qualification quality systems auditors.
[8] ISO 10011-3:1991, Guidelines for auditing quality systems - Part 3: Management of audit programmes.
[9] ISO 10012-1:1992, Quality assurance requirements for measuring equipment - Part 1: Metrological confirmation system for measuring equipment.
[10] ISO 10013:-[1)], Guidelines for developing quality manuals. ,
[11] ISO/TR 13425:-[1)], Guidelines for the selection of statistical methods in standardization and specification.
[1)] To be published

a. Govern the certification of quality systems by JAS-ANZ, or

b. the statements by Navy and Defence policies governing certification.

The standards listed in footnote 9 bring forward further standards including AS/NZS ISO 8402 titled 'Quality management and quality assurance – Vocabulary' but not ISO/IEC Guide 62:1996:1996 titled 'General requirements for bodies operating assessment and certification/registration of quality' which governs the system assessment.

162. No Defence or non-defence quality assurance agency is reported to have made statements on the quality assurance activities of ADI and Navy to the Board in the BOI Report. A report by an unidentified external auditor has been tabled and the findings criticised; but neither that body nor JAS-ANZ is shown as called to answer any questions about the auditing practices for the national quality assurance accreditation system in general or ADI and Enzed in this particular incident (Section 12.21).

163. It is a normal practice to reference the principle sources of information in professional papers. It may be a bit picky to complain about ISO 9000-1:1994 and AS/NZS ISO 8402:1994 being left out of the list of referenced documents but not ISO/IEC Guide 62:1996:1996 which is more significant. I will develop the argument later.

The Guide On QA is Not Identified

164. Sections 12.17 to 12.28 inclusive presume knowledge of quality assurance on the part of the author and those conducting the Inquiry. The counsel assisting the BOI would have needed some guidance to ask pertinent questions. The source of guidance is not identified.

A Snapshot of Navy?

165. It is notable that all of those listed were Navy or ex-Navy staff. I allege they would have carried perceptions of quality assurance from their service experience or at least working on HMAS Westralia refits. I allege that a deeper observation may be made that it represented the depth of the Navy's training of its staff and its general ability to manage its maintenance. This is recognised in a general sense in the BOI Report as follows:

a. *'13.22 All the ADI personnel were ex-RAN and were selected for their engineering experience, knowledge of naval maintenance procedures in general and their familiarity with WESTRALIA. Such a selection policy can either be seen as to narrowly focused or as wholly logical, employing like-minded and similarly trained individuals, steeped in the way 'the Navy does business'. [T3862]'*

b. *'13.23 The danger of such a policy is that inherent practices and attitudes become entrenched and introverted. There was certainly limited appreciation of the implications of retaining a ship in class. In the case of HMAS WESTRALIA, there was a requirement that the safety provisions and standards 'should not vary from commercial to military unless an essential need is demonstrated.' [E58 Tab 1]*

166. Therefore, I allege the understanding of quality assurance and its practice for the HMAS Westralia AMP 12 is reflected in what is recorded in the BOI Report: it is s snap-shot of ideas on which the Board reported. To take the matter further, it raises the question of whether it also reflected Navy's contracting practice or was an isolated case. The BOI Report confines itself to activity at ADI in Western Australia.

167. In the context of this paper I accept that Navy has most likely addressed most quality assurance issues by now. But, I allege that Section 12 is representative of the quality assurance knowledge of the time.

Time Scale

168. The BOI Report tells us of the proposal first to fit hoses appearing around November 1996 and the actual TM200 required to authorise action was raised in early 1998 (Sections 10.11 and 10.38). ADI and the Commonwealth are shown to have entered a contract on 14 April 1997 to commence work on 14 May 1997 (Section 10.5). It would have taken time for the contract between the Commonwealth and ADI to be negotiated so we may be able to project back twelve months to 1996. So, I allege that we are looking at attitudes to quality assurance that were well established.

Conclusion To The Discussion

169. So, it is a fair question to me to ask whether this:

a. represented a Navy attitude towards quality assurance from about April 1996 or earlier? and

b. the limit of knowledge of those who advised the Board for the preparation of the document.

CONCLUSION TO THE SOURCE OF QUALITY ASSURANCE PRACTICE IN THE BOI REPORT

170. The BOI Report gives an indication of the Navy's and the Board's understanding of quality assurance at the time of and leading to the incident and at the Inquiry. Unfortunately, it is not more definitive.

JOINT ACCREDITATION SYSTEM OF AUSTRALIA AND NEW ZEALAND

INTRODUCTION

171. I incorporate this because I believe BOI Recommendation 113 is impractical because it I think it repudiates the Commonwealth's obligations to JAS-ANZ. I think a better recommendation would have been how to make the system work more to the favour of the Navy.

172. The Executive Director of the Joint Accreditation System of Australia and New Zealand **(JAS-ANZ)**, Mr John Hulbert, published two articles on the BOI Report in the Quality Certification News, an industry newsletter published by Information Australia, in 1999, explaining the correct application of quality systems. I allege that had Mr Hulbert been asked to provide a statement or at least some research of the appropriate JAS-ANZ documents and Australian standards then there would have been a more authoritative starting point for inquiry and recommendations.

173. Mr Hulbert actually published statements in Quality Certification News after the BOI Report was published.

174. So, I would like to suggest that future inquiries ought to:

a. Look more closely at procurement practices, and

b. Call appropriate expert witnesses where systems, such as JAS-ANZ, have been used and their misapplication is suspected to be a contributing factor to the incident.

175. I have taken the opportunity to provide some information on the use of quality systems below.

JOINT ACCREDITATION SYSTEM OF AUSTRALIA AND NEW ZEALAND

176. 'JAS-ANZ is a not for profit, self funding international organisation established under a Treaty between the Governments of Australia and New Zealand on 30 October 1991 to act as the joint accreditation body for Australia and New Zealand for certification of management systems, products and personnel. On 28 March 1996 a regulation was made under the Australian International Organizations (Privileges and Immunities) Act 1963 declaring JAS-ANZ to be an international organisation to which the Act applies. New Regulations re-affirming JAS-ANZ's status were made on 18 June 1998.' (From the JAS-ANZ web site at: http://www.jas-anz.com.au/)

177. Commonwealth Quality Assurance policy at the time recognised JAS-ANZ:

a. The Quality Assurance Policy, Commonwealth First Edition dated May 1992 and Second Edition dated May 1993, Department of Administrative Services, and

b. Quality Assurance, Risk Based Approach for Assuring Quality, Purchasing Australia, May 1997

DEFENCE ACCEPTANCE OF JAS-ANZ

178. The Department of Defence formally agreed with JAS-ANZ on 25 March 1997 that it would require new Defence contracts from 1 July 1997 to specify third party certification where quality systems are required.

179. JAS-ANZ has rules to manage certification and certifying bodies. There is scope for complaints from dissatisfied parties to be addressed by the certifying body and JAS-ANZ. Feedback and corrective action is important to the maintenance of good standards and Australia's international reputation.

180. The United Kingdom Ministry of Defence quality assurance policy accepts third party certified quality systems. MIL-STD-1916 appears to recognise third party certified quality systems at paragraph 4.1.2. for the United States Department of Defense. So, both the United Kingdom and the United States governments operate under similar conditions.

PUBLIC STATEMENTS BY THE EXECUTIVE DIRECTOR OF JAS-ANZ

181. The Executive Director of JAS-ANZ, Mr John Hulbert, has commented on the BOI Report in the Quality Certification News, an industry newsletter published by Information Australia. I quote from the Newsletter below. Direct quotations are in italics and summaries are in normal print.

182. Quality Certification News Vol.6 No.95 dated January 21,1999 (pages 1 and 4).

'As far as providing confidence in a company's ability to provide goods or services, certification should only be used as an indicator of competence in a given area. ...'

'A purchasing organisation should take appropriate means to establish confidence in its own mind the supplier can deliver goods, based on a number of factors, including what the certification covers and the capability of the company concerned. ... '

'Mr Hulbert says a complex project may require the supplier to provide a quality plan to the purchaser showing how it's going to apply the quality system for the production of the specific item.'

'We're talking about a complex scenario, which does not take away from the purchaser, the responsibility to seek demonstration of capability for the particular purchase.'

'If the Navy is going to rely on ADI to make decisions of that nature on its behalf, the Navy should make sure ADI has a system which will guarantee they will look to these quality issues in every purchase. That hasn't happened.'

183. Quality Certification News Vol.6 No.96 dated February4, 1999

'All would-be users of third-party ISO 9000 certification need to understand some fundamental rules, the first being that the responsibility for a purchase rests with the buyer. That means the buyer has to take whatever action is necessary to be satisfied that the purchased item, be it a good or service, complies with the buyer's requirement.'

'If the buyer relies on the judgement of the a third party, then the buyer is responsible for ensuring the third party is capable and competent to make that judgement. Similarly, if the buyer relies on another party to provide assurance of compliance to a requirement, the buyer is again responsible to ensure the third party is capable and competent to give that assurance.'

'...the second rule – that certification to ISO 9000 has little meaning without knowledge of the scope of certification.'

'The first responsibility under this rule therefore must be to match the purchase with the relevant ISO 9000 management system standard.'

'The second responsibility is to ensure that certification of the supplier's management system has been evaluated as being effective within the technology used by the supplier.' Details of certification are available in 'The JAS-ANZ Register of Accredited and Certified Organisations', which is available on the Internet or by telephone.

'Assuming that a buyer has taken all precautions to determine the potential supplier's quality management system has been certified as compliant with the appropriate standard, and the scope of certification covers the specific technology required to be applied to the purchase, the buyer still has to take all necessary action to assure the quality of the purchase.'

'In many cases, this may be a simple matter. However, in the case of complex or high-risk items, the buyer may need to take other measures, such as approving the quality plan in order to establish the necessary confidence the supplier will assure the quality of the product within the specified requirements.'

'A simple procedure for any buyer to follow would be to first, clearly define the requirement and determine the appropriate ISO 9000 standard to cover the type of purchase.'

'The next step is to consult the JAS-ANZ Register to determine whether the supplier's quality management system has been certified as compliant with the relevant ISO 9000 standard and whether the approved scope of certification covers the technology of the product.'

'If the scope of the certification is adequate, the next step is to determine whether there are any additional actions by the buyer such as requiring the supplier to provide the quality plan for the product.'

'If this simple procedure had been in place at the Navy's prime contractor, the contract for the design, manufacture and installation of a high-risk item would not have been certified as compliant only to ISO 9002.'

DISCUSSION

184. BOI Report Recommendation 113 and as stated BOI Report Section 12.30 is:

'Defence should re-examine the policy of quality accreditation for companies engaged in Defence work with a view to contracting the accrediting organisations to work on Defence's behalf. A price reduction resulting from the transfer of responsibility for the work should be vigorously pursued.'

185. Adoption of the recommendation at Section 12.30 would place the government in the position of telling Australia's global trading partners that it had no confidence in JAS-ANZ. That leads to no confidence in the integrity of the third party certifiers and ultimately to no confidence in the integrity of Australian business and self - regulation. So, the government has no option but to make the JAS-ANZ system work.

186. It is notable that the Third Party Certifying Company and JAS-ANZ did not appear before the Board and neither did any other competent body appear that could advise on the subject of certification. That stands in strong contrast to effort taken to determine the cause of hose failure and the circumstances.

187. Given the criticism of the Third Party certification in the BOI Report at Section 12.30, it would have been appropriate for the Navy to lodge a complaint with JAS-ANZ and received a response. There is no evidence in the BOI Report of a Navy complaint or a JAS-ANZ response and neither does the BOI Report make any recommendations in that regard[20].

188. Finally, the Ordering Authority Western Australia (OAWA) is listed in the BOI Report as operating an ISO 9002 quality system having dated and unsatisfactory procedures[21]. However, the BOI Report is silent on the integrity of the certification of that system which would presumably have been done by Navy, Defence or contracted third party certification agency paid by a Defence or Navy budget allocation. I allege that weakens the BOI Report's claims about obtaining more reliable results from a body controlled by Defence.

189. The test of the recommendation is whether Defence has adopted the recommended course of action.

CONCLUSION TO JAS-ANZ

190. I allege that the BOI Report does not positively address the JAS-ANZ method of operation to which Defence made with JAS-ANZ in 1997: in fact is irresponsible.

[20] The issue of lodging a complaint with JAS-ANZ was not in the DPPM Version 1.0 of February Chapter 19 but was in the DPPM Version 2.1: July 1999 Section 5 Chapter 3.

[21] Section 12.1 and 12.10 to 12.12 inclusive.

RELIANCE ON CERTIFICATION

AIM

191. The aim is to:

a. develop argument to support my suggestion of calling outside witnesses and expertise in all areas before Boards of Inquiry, and

b. lessen the adverse impact on WO Jones.

REASONS FOR INCLUSION

192. The principle reason for writing is a sense that WO Jones is the public face of somebody else's policy and management failure and so is treated unjustly. I accept the reported actions by WO Jones as true. I don't think that the Section on quality assurance is well developed. Although, if that was the only reason for writing, it would be an indulgence. But, I think that WO Jones is shown more unfavourably than he could be on the issue of quality assurance.

193. I think that WO Jones acted within a culture that was informed through the ideas and attitudes of those around him and the upper management of the Department. I think that Warrant Officers, Senior Non-Commissioned Officers are important, capable and generally good people; but they don't normally set policy. I think they generally do the best they can with what they are given.

194. I confine myself to what might have been reasonable for a Board of Inquiry to bring to public attention that might have mitigated the legal or moral consequences for WO Jones.

195. I think that if expert witnesses, such as Mr Hulbert of JAS-ANZ, had been called to give evidence on the application of quality systems then it is possible that the section on quality assurance would have also focused more closely on the efficacy of Defence and Navy policy and resourcing for quality assurance. I believe that would have lessened the impact on WO Jones.

196. I accept the statements of the participants at face value.

197. I agree with the statement at Section 12.4: '*The assumption that a certified QMS guarantees quality of product is not appropriate.*' and the material I present makes that very plain.

ISSUE ADDRESSED

198. I think the issue of 'Reliance on Certification' is satisfactorily addressed in the Defence statements on quality assurance that I am aware of at the time of writing.

THE BOI REPORT

199. The BOI report states at Section 12.4: '*The assumption that a certified QMS guarantees quality of product is not appropriate.*' The issue of 'reliance on certification' is a significant statement. However, the BOI Report does not take the issue any further. There is no recommendation that the matter be made plain in Navy procedures.

THE AUSTRALIAN STANDARDS

Introduction

Aim

200. The aim is to determine whether the Australian Standards specify, imply or are ambiguous on the idea that '*...a certified QMS guarantees quality of product...*'.

List of Australian Standards

201. Australian Standards are written and published by Standards Australia.

202. I review the following standards with that question in mind:

a. AS/NZS ISO 9000.1:1994 titled 'Model for Quality assurance in design, development, production, installation and servicing.'

b. AS/NZS ISO 8402:1994 titled 'Quality management and quality assurance – Vocabulary';

c. AS/NZS ISO 9001:1994 titled 'Quality Systems - Model for quality assurance in design, development, production, installation and servicing';

d. ISO/IEC Guide 62:1996 titled 'General requirements for bodies operating assessment and certification/registration of quality systems';[22]

e. AS3911.1-1992, NZS 10011.1:1992, ISO10011-1:1990 titled 'Guidelines for auditing quality systems Part1: Auditing'.

f. AS3911.2 -1992, NZS 10011.2:1992, ISO10011-2:1990 titled 'Guidelines for auditing quality systems Part 2: Qualification criteria for auditors'.

g. AS3911.3:1992, NZS 10011.3, ISO10011-3:1991 Guidelines for auditing quality systems Part 3: Management of audit programs.

h. AS/NZS9004.5:1998 titled 'Quality management and quality system elements Part 5: Guidelines for quality plans'.

Clarifying Notes

203. The following notes are included because I think them pertinent to my argument.

204. AS/NZS ISO 9000.1:1994 carries the following which I think appropriate to quote here:

> Introduction page vii '*...It is not the purpose of these international standards to enforce uniformity of quality systems. Needs of organisations vary. ...*'
>
> note at Section 3 Notes

[22] A similar statement is made in the introduction to SAA HB 18.4: 1991 titled 'Guidelines for third party assessment and registration of a supplier's quality system'

'*1. In all these international standards the grammatical format of the guidance or requirements text is addressed to the organisation in its role as a supplier of products ...*'

Put differently, the standards are designed to be read by the supplier from a supplier's perspective not a customers perspective. Further, there is no guide to how the customer may use the standards or a listing of references to the customer that occur in the standards.

205. AS/NZS ISO 8402:1994 carries the following in the Introduction:

'*In simplified terms, quality control concerns the operational means to fulfil the quality requirements, while quality assurance aims at providing confidence in this fulfilment, both within the organization and externally to customers (1.9) and authorities. Within International Standards, the English terms "ensure" and "assure" are used in the following sense: "ensure" means to make sure or certain, "assure" means to give confidence to oneself or to others. ...*'

"assure" means to give confidence to oneself or to others. ...'.

Comment. 'Assure' doesn't carry the same weight as 'ensure'. I believe 'assure' takes us into the realm of 'inductive' reasoning and so decisions on the basis of probability. But it still implies that the customer ought to take action to establish a factual basis for applying the inductive reasoning process.

206. My summary is that the standards are addressed to the supplier who fulfils the operational requirements for quality. The customer seeks 'assurance', that is establishes confidence to self, that the requirements have been fulfilled.

Definitions

207. I include some definitions below for convenience[23]:

Quality assurance

208. all the planned and systematic activities implemented within the quality system (3.6), and demonstrated as needed, to provide adequate confidence that an entity (1.1) will fulfil requirements for quality (2.3)

NOTES

1 There are both internal and external purposes for quality assurance:

a) internal quality assurance: within an organization (1.7), quality assurance provides confidence to the management;

[23] Some of the AS/NZS ISO 8402:1994 definitions are also contained in AS/NZS ISO 9000.1:1994.

b) external quality assurance: in contractual or other situations, quality assurance provides confidence to the customers (1.9) or others.

2 Some quality control (3.4) and quality assurance actions are interrelated.

3 Unless requirements for quality (2.3) fully reflect the needs of the user, quality assurance may not provide adequate confidence.'

Quality audit

209. *systematic and independent examination to determine whether quality (2.1) activities and related results comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives*

NOTES

1 The quality audit typically applies to, but is not limited to, a quality system (3.6) or elements thereof, to processes (1.2), to products (1.4) or to services (1.5). Such audits are often called "quality system audit", "process quality audit", "product quality audit" or "service quality audit".

2 Quality audits are carried out by staff not having direct responsibility in the areas being audited but, preferably, working in cooperation with the relevant personnel.

3 One purposes of a quality audit is to evaluate the need for improvement or corrective action (4.14). An audit should not be confused with quality surveillance (4.7) or inspection (2.15) activities performed for the purposes of process control or product acceptance.

4 Quality audits can be conducted for internal or external purposes.'

Quality surveillance

210. *continual monitoring and verification (2.17)*[24] *of the status of an entity (1.1) and analysis of records (3.15) to ensure that specified requirements are being fulfilled.*

Notes

1. Quality surveillance may be carried out by, or on behalf of, the customer (1.9). ...

3. "Continual" may mean either constant or frequent. ...'

Quality system

211. *organizational structure (1.8), procedures (1.3), processes (1.2) and resources needed to implement quality management (3.2)*

NOTES

1 The quality system should be as comprehensive as needed to meet the quality (2.1) objectives.

2 The quality system of an organization is designed primarily to satisfy the internal managerial needs of the organization (1.7). It is broader than the requirements of a particular customer (1.9), who evaluates only the relevant part of the quality system.

3 For contractual or mandatory quality assessment (4.6) purposes, demonstration of the implementation of identified quality system elements may be required.

AS/NZS ISO 9000.1:1994

212. AS/NZS ISO 9000.1:1994[25] was first published in Australia as AS3900-1987/ISO 9000:1987 but contains more detail.

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[24] 2.17 verification
confirmation by examination and provision of objective evidence (2.19) that specified requirements have been fulfilled

Notes

1 In design and development, verification concerns the process (1.2) of examining the result of a given activity to determine conformity (2.9) with the stated requirements for that activity. ...'

2.19 objective evidence
information which can be proved true, based on facts obtained through observation, measurement, test or other means

[25] Quality management and quality assurance standards - Part 1: Guidelines for selection and use.

'ISO 9001-1 clarifies the principal related concepts and provides guidance for the selection and use of the ISO 9000 family for this purpose.' (Section 7.2)

213. My summary of points on AS/NZS ISO 9000.1:1994 is:

a. It is addressed to suppliers and positively encourages the adoption of quality systems at Section 4 titled 'Principal Concepts':

(1). 4.1 Key objectives – continuous improvement of products and operations; confidence that quality improvement is taking place, confidence to customers that the requirements for quality will be achieved.

(2). 4.2 Stakeholders – Identified as customers, employees, Owners, sub-suppliers, society

(3). 4.3 Distinguishes between the system and product requirements – customers use specifications.

(4). 4.4 Generic product categories – hardware, software, processed materials and services.

(5). 4.5 Facets of quality – broadly discusses quality due to product definition, product design, conformance to design and product support

(6). 4.6 Concept of a process – The ISO 9000 series is founded on the idea that all work is accomplished as a process. Processes engage people and resources in activities that transform 'inputs' into 'outputs'. Quality management aims to manage the process.

(7). 4.7 There is a network of processes in an organisation. It is a complex set of relationships. The processes and interfaces ought to be subject to analysis. Problems arise where people have to manage several processes and interrelationships especially where large processes span several functions.

(8). 4.8 Quality systems in relation to the network of processes – They are different and there needs to be co-ordination.

(9). 4.9 Evaluating quality systems:

(a) General- Processes to be:

(i) defined and documented,

(ii) deployed and implemented, and

(iii) effective in giving the expected results.

(b) Management Review to look at broad picture and act on internal and external audit results.

(c) Quality system audits are conducted by:

(i) First party – supplier audits provide management review information,

(ii) Second party – customer may choose to conduct audits to gain confidence ,

(iii) Third party – certification bodies.

b. Section 6 - Quality system situations. The standard lists four situations for using quality systems:

(1). Guidance for quality management,

(2). Contractual, between first and second parties i.e. supplier and customer,

(3). Second party approval or registration; and

(4). Third-party certification or registration.

Each situation and motivations are briefly discussed. The customer is addressed as '*...may be interested in certain elements...*'.

c. Section 7 – Selection and use of international standards on quality. The section has 16 subsections on a wide variety of subjects. It also covers quality system audits, auditors and the management of audits. It refers to 15 standards.

d. Section 8 – Selection and use of International Standards for external quality assurance. This is relevant to a contracting situation. It covers the selection and certification of a standard. The supplier is responsible for demonstrating the effectiveness and adequacy of the system. Section 8.4 covers some additional requirements that while addressed to the supplier are also applicable to the customer:

(1). 8.4.1 - Tailoring and contractual elements. Specific arrangements and requirements can be included in the contract.

(2). 8.4.2 – Review of contractual quality system elements. Both parties should review the contract to be certain of what is required.

(3). 8.4.3 – Supplementary quality assurance requirements. May be necessary to specify supplementary requirements to cover special requirements eg safety critical items.

(4). 8.4.4 – Pre-contract assessment. Customers may choose to conduct a precontract assessment.

(5). 8.4.5 – Audits after the award of the contract. Customers may conduct audits after the contract.

214. There are eight sections and three annexes covering 18 pages. They are focused on the idea that the 'supplier' will establish and maintain a system. The basic assumption is that work is done through the application of people and resources to transform inputs to outputs that conform to the customer's stated or implied needs. Many processes occur in organisations and most problems occur at the interfaces due to the complexity of co-ordinating the activities that comprise the processes. Quality management aims to manage the processes. The aims for using quality systems are essentially to improve productivity for the firm and provide satisfaction to customers. The standard draws a distinction between the specification that carries the customer's requirements and the system that manages the processes. System auditing is focused on system conformance to the standard: but systems ought to be effective.

215. The quality system will deliver tangible benefits for the supplier and the customer in acceptable quality supplies. The standard draws a distinction between the 'system' and the customer's 'specification'. There is provision for the customer to make use of the system to confirm that it is

operating as intended and to place special requirements in the contract. The customer is responsible for his or her actions.

216. The selection of definitions given at Annex A does not include the AS/NZS ISO 8402:1994 term 'surveillance', which is designated as a customer activity. Its inclusion in the standard may have given a hint that customer ought to do more than rely on the '*The assumption that a certified QMS guarantees quality of product...*'.

217. The standard does not say that '*...a certified QMS guarantees quality of product...*' neither does it say, 'buyer be ware' or, '*The assumption that a certified QMS guarantees quality of product is not appropriate.*' It aims to provide guidance for the selection and use of standards and so must be read in conjunction with the ISO 9000 series of documents. But, read alone I allege that somebody who had the idea '*...that a certified QMS guarantees quality of product...*' could be retain the idea!

218. So, I think the standard is ambiguous on the issue '*...that a certified QMS guarantees quality of product...*'.

AS/NZS ISO 9001:1994

Introduction

219. The important question being addressed is whether the Australian Standards specify, imply or are ambiguous on the idea that '*...a certified QMS guarantees quality of product...*'

220. The Introduction of AS/NZS ISO 9001:1994 contains the following statement:

> '*...It is emphasised that the quality system requirements in this international standard ISO 9002 and ISO 9003 are complementary (not alternative) to the technical (product) specified requirements. They specify requirements which determine what elements quality systems have to encompass, but it is not the purpose to enforce uniformity of quality systems. ...*'

221. I also restate the statement in the Section3 of AS/NZS ISO 9000.1:1994:

> '*...the grammatical format of the guidance or requirements text is addressed to the organisation in its role as a supplier of products ...*'
>
> So, the standard is intended to be read and applied by the supplier. It is not addressed to the customer.

Quality System Requirements

222. The standard lists 20 quality system requirements. The headings follow:

a. 4.1 Management responsibility

b. 4.2 Quality system

(1). General

(2). Quality system procedures

(3). Quality system planning

c. 4.3 Contract review

d. 4.4 Design control

e. 4.5 Document and data control

f. 4.6 Purchasing

g. 4.7 Control of customer supplied product

h. 4.8 Product identification and traceability

i. 4.9 Process control

j. 4.10 Inspection and testing

k. 4.11 Control of inspection, measuring and test equipment

l. 4.12 Inspection and test status

m. 4.13 Control of nonconforming product

n. 4.14 Corrective and preventive action

o. 4.15 Handling, storage, packaging, preservation and delivery

p. 4.16 Control of quality records

q. 4.17 Internal quality audits

r. 4.18 Training

s. 4.19 Servicing and

t. 4.20 Statistical techniques

223. Each of the headings indicates the content of the requirements placed upon the supplier. The basic notion is that the management of the organisation wants to employ a relevant and effective quality system. The requirements are reflect in the documented framework that describes the quality system.

Discussion

224. Management has responsibilities (4.1) in particular '*...The quality policy shall be relevant to the suppliers organisational goals and the expectations and needs of its customers. ...*(4.1.1). Also give responsibility to one executive (4.1.2.3) and review the system at defined intervals to ensure

its continuing suitability and effectiveness (4.1.3). Internal audits (4.17) are intended '*...to verify whether and results comply with planned arrangements and to determine the effectiveness of the quality system. ...*'

225. '*The supplier shall establish, document and maintain a quality system as a means of ensuring that product conforms to the specified requirements. ...*' (4.2.1). The system must have documented procedures and the supplier must plan the organisations work activities to ensure that they are governed by the rules of the system. The plans must be documented. Contracts must be reviewed (4.3) to ensure that the details are correct and that the quality requirements are deliverable.

226. Design processes, system documents and data are controlled by the rules of the system. It covers planning, identification of interfaces, the control of inputs and outputs, review, verification and validation of the design and the control of design changes.

227. The controls also flow into purchasing and subcontracts, product identification and traceability and the internal production, installation and servicing processes of the supplier.

228. Returning to the original question of whether the Australian Standards specify, imply or are ambiguous on the idea that '*...a certified QMS guarantees quality of product....*' The standard doesn't state that: '*...a certified QMS guarantees quality of product....*', the implication is that a quality system will produce quality product to the satisfaction of the customer. 4.6.4.2 titled 'Customer verification of subcontracted product' shows that the customer could choose to act to build confidence on subcontracted product. However, I think that if a person had the view that '*...a certified QMS guarantees quality of product....*' and that person didn't read beyond the standard then it is possible to me that they could find their errant opinion intact.

Conclusion

229. I think the standard is ambiguous on the idea that '*...a certified QMS guarantees quality of product....*'

ISO /IEC Guide 62:1996

230. The guide to the assessment and registration of quality systems by JAS-ANZ is ISO/IEC Guide 62:1996. The Introduction to ISO/IEC Guide 62:1996 titled 'General requirements for bodies operating assessment and certification/registration of quality systems'[26] states:

   a. '*Certification/registration of a suppliers quality system is one means of providing assurance that the certified/registered supplier is capable of supplying products or services that meet specified requirements.*' (First paragraph)

   b. '*Quality systems certification/registration involves only assessment of a suppliers quality system and not the certification of products, processes or services.*' (Fifth Paragraph)

[26] A similar statement is made in the introduction to SAA HB 18.4: 1991 titled 'Guidelines for third party assessment and registration of a supplier's quality system'

231. The executive director of JAS-ANZ, Mr John Hulbert, who formerly worked in quality assurance in the Department of Defence, is reported in an industry newsletter 'Quality Certification News'[27].

   a. *'As far as providing confidence in a company's ability to provide goods or services, certification should only be used as an indicator of competence in a given area.'*

   b. *'Mr Hulbert says a complex project may require the supplier to provide a quality plan to the purchaser, the responsibility to seek demonstration of capability for the particular purchase.'*

   c. *'If Navy is going to rely on ADI to make decisions of that nature on its behalf, the Navy should make sure ADI has a system which will guarantee they will look to these* quality issues in every *purchase.* ***That hasn't happened***.' [My emphasis and underlining]

232. The standard does not say that '*...a certified QMS guarantees quality of product...*' neither does it say, 'buyer be ware' or, '*The assumption that a certified QMS guarantees quality of product is not appropriate.*' But, I think it is very close to '*The assumption that a certified QMS guarantees quality of product is not appropriate.*'. I think for practical purposes it upholds the BOI Report.

AS3911:1992

Introduction

233. I include the standard because auditing was discussed and criticised in the BOI Report.

AS3911.1:1992

234. AS3911.1-1992, NZS 10011.1:1992 ISO10011-1:1990 is titled 'Guidelines for auditing quality systems Part1: Auditing.'

235. Section 4.1 gives the standards objectives for auditing. My summary of the objectives is to determine compliance of the system against a standard, effectiveness against quality objectives and seek improvements, and for regulatory and registration requirements. This may be initiated for contractual reasons or internal management. These notes at section 4.1:

   '12 Quality audits should not result in a transfer of the responsibility to achieve quality from operating staff to the auditing organisation.'

   '13 Quality audits should not lead to an increase in the scope of quality functions over and above those necessary to meet quality objectives.'

236. Section 4.2 covers the roles and responsibilities during audits. The audits are to have objectives, be planned, focused on the objectives and conducted in specific ways.

237. The remainder of the standard focuses the necessary things to be done in conducting and successfully completing the audit activity.

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[27] Vol. 6 No. 95, January 21, 1999. Information Australia (Newsletters) Pty Ltd 75 Flinders Lane Melbourne Vic 3000 Tel (03) 9654 2800.

AS3911.2:1992

238. AS3911.2-1992, NZS 10011.2:1992 ISO10011-2: 1990 is titled 'Guidelines for auditing quality systems Part1: Qualification criteria for auditors'.

239. Candidates are required to have completed secondary schooling and be competent at fluently expressing concepts orally and in writing (Section 4). They are trained in the minimum skills for conducting and managing audits: knowledge of the system standards, assessment techniques and any other necessary skills. They are examined orally and in writing (Section 5). They should have four years of appropriate experience with two of those years in quality assurance (Section 6). They ought to be able to exhibit certain personal attributes (Section 7) and maintain their competence (Section 9).

AS3911.3: 1992

240. AS3911.3-1992, NZS 10011.3:1992 ISO10011-3: 1990 is titled Guidelines for auditing quality systems Part 3: Management of audit programs.

241. The standard is directed at organisations that have an ongoing need to audit quality systems. It requires a standard, qualified staff[28], the monitoring and maintenance of auditor competence, attention to specific operational factors[29]. The standard also covers Joint audits, programme improvement and audit ethics.

Discussion on the AS3911 Requirements

242. AS3911 focuses on system auditing. The aim is to establish that the audited system complies to the requirements and is implemented (Part1 Sections 3.1, 4.1 and 5.4.2).

243. Inferred is that auditors should sufficiently understand the work undertaken by the auditee to enable them to relate what they observe to the requirements of the quality system as part of the audit process.

244. Coming back to the question of whether the Australian Standards specify, imply or are ambiguous on the idea that '*...a certified QMS guarantees quality of product....*', then I think the following is reasonable. I allege it throws attention to the auditing of systems and their effectiveness by 'qualified and independent' auditors. I allege that implies confidence that a quality system will deliver conforming product.

Conclusion

245. I allege that implies confidence that a quality system will deliver conforming product.

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[28] Section 4.4 titled 'Suitability of team members' lists '*the need for professional qualifications or technical expertise in a particular discipline*' as a factor in the selection of auditors for particular assignments.

[29] The factor cover: adequate resources, planning and scheduling, reporting, corrective action including follow-up and confidentiality.

AS/NZS9004.5:1998

246. AS/NZS9004.5:1998 titled 'Quality management and quality system elements Part 5: Guidelines for quality plans'.

4.2 Review and Acceptance

'...In contractual situations, a quality plan may be submitted to the customer by the supplier for review and acceptance, either as part of the precontract award-bidding process or after the contract has been awarded. ...'

247. To my reading the following paragraphs also recognise the customer 4.1, 4.2 in addition to the quoted portion above, 5.10g covers witnessing tests etc, 5.17 auditing. Paragraph 1.2 warns against using quality plans as an audit check list.

248. I allege the standard does no specify, imply or is ambiguous on the idea '*...a certified QMS guarantees quality of product....*'

AS/NZS 4360 - Risk Management Standard

249. Commonwealth and Defence[30] quality assurance policy statements at the time of the fire on HMAS Westralia applied the discipline of risk management. The applicable risk concept is traceable to AS/NZS 4360:1995 titled 'Managing Risk'[31].

250. '*Quality assurance, management and standards*'[32] is recognised in AS/NZS 4360:1995 as a treatment to control or reduce the likelihood of non-conforming product being delivered to a customer.

251. The AS/NZS 4360:1995 Risk Management Process[33] is summarised as:

a. Establish the Context,

b. Identify Risks,

c. Analyse Risks,

d. Assess Risks[34],

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[30] Commonwealth Procurement Guidelines: Core Policies and Principles, March 1998, Department of Finance and Administration and DPPM Version 1: February 1997 and Quality Assurance, Risk Based Approach for Assuring Quality, Purchasing Australia, May 1997

[31] MAB/MAIC Report No 22 Guidelines for Managing Risk in the Australian Public Service October 1996 and

'Managing Risk in Procurement - A Handbook, Purchasing Australia'

[32] AS/NZS 4360:1995 Appendix G

[33] From Figure 4.1

[34] 'Assess' was changed to 'Evaluate' in amendment No 2 of January 1998

e. Treat Risks, and

f. Monitor and Review.

252. 'Monitor and review' is applicable at each stage[35]. So, I allege risk management supports the proposition that the purchaser must take responsible steps to build confidence that supplies conform to the contract requirements.

253. I think that fact that the 'Monitor and Review' step is included would mitigate the acceptance of the idea that '*...a certified QMS guarantees quality of product....*'.

Discussion

254. The important question is to determine whether the Australian Standards specify, imply or are ambiguous on the idea that '*...a certified QMS guarantees quality of product...*'

255. The Australian and New Zealand Standards are addressed to the supplier. They are not addressed to the customer. The standards do not require the 'customer' to do anything. The standards make provision for the 'customer' to do things but I allege those things must be determined by the customer and negotiated in the contract. The customer bears the consequences of his or her actions. The supplier standards place a heavy responsibility on the supplier. So, ambiguity I allege there is ambiguity in the sense that the customer is not directed to do anything.

256. The list of conclusions reached above is:

a. AS/NZS ISO 9000:1994. I think the standard is ambiguous on the issue;

b. AS/NZS ISO 9001:1994. I think the standard is ambiguous on the issue;

c. ISO/IEC Guide 62:1996. I think it is very close to '*The assumption that a certified QMS guarantees quality of product is not appropriate.*', I think for practical purposes it upholds the BOI Report;

d. AS3911:1992. I allege that implies confidence that a quality system will deliver conforming product;

e. AS/NZS9004.5:1998. I allege the standard does no specify, imply or is ambiguous on the idea '*...a certified QMS guarantees quality of product....*'; and

f. AS/NZS 4360:1995. I think that fact that the 'Monitor and Review' step is included would mitigate the acceptance of the idea that '*...a certified QMS guarantees quality of product....*'.

257. Given that the standard is addressed to the supplier, my question of whether the standards are ambiguous on the idea of '*...a certified QMS guarantees quality of product....*' is a 'straw man'. The basic point is that the standards were not designed to address the issue.

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[35] 'Communicate and consult' is included in AS/NZS 4360:1999, which increases the idea 'checking' to give increased certainty that all matters are considered.

258. The standards do not specify that '*...a certified QMS guarantees quality of product....*' nor do I they imply that '*...a certified QMS guarantees quality of product....*' However, I believe that if I came to the standards with the idea in mind that '*...a certified QMS guarantees quality of product...*' then I believe that I could take some comfort from the basic aims for having quality systems. I think that to be the case where auditing covers both compliance and effectiveness. The idea of quality surveillance ought to take some of edge off the idea that '*...a certified QMS guarantees quality of product...*' but that is contained in a book of definition AS/NZS ISO 8402, which may not have much impact given the amount of information surrounding the definition.

259. I don't believe that the general reader would have ISO/IEC Guide 62:1996 so I don't think it would have a great impact.

260. So, I believe it would be possible for a person having the belief that '*...a certified QMS guarantees quality of product...*' could read the standards and come away with the belief in tact or slightly modified.

Conclusion

261. I believe it would be possible for a person having the belief that '*...a certified QMS guarantees quality of product...*' could read the standards and come away with the belief in tact or slightly modified.

RELIANCE ON CERTIFICATION

General

262. In our political tradition, Defence Departments have been heavily involved in the serious inspection of supplies from about the time of King James I to prevent fraud and ensure safety of equipment and men.

263. My experience is that the idea of '*a certified QMS guarantees quality of product*' had appeal to many people in the early days of quality systems. Basically, they could do away with 'inspectors'. Few people like having their activities monitored especially if that could lead to some form of material penalty or one imposed in their own minds due to being shown errors. It did lead to acrimony between contractor and the defence customer in factories. Further, the large number of inspectors employed by governments during the Second World War was expensive; a reduction in the number of inspectors leads to reductions in overheads.

264. The Defence concept of quality assurance was written in the Defence Standardisation Manual from about 1972 to 1994 when the document was cancelled. It was written for the introduction of quality system concept. It is stated below:

DEF(AUST) SPECIFICATIONS-
SECTION 5 – QUALITY ASSURANCE PROVISIONS

966. The Department of Defence concept of quality assurance is based upon:

a. the requirements being completely defined in all aspects, including quality, in the specification and contract;

b. the contractor being held responsible for controlling the quality of supplies and/or services and offering for acceptance only those supplies and/or services which conform to the contract requirements; and

c. the Defence quality assurance authorities ensuring that the contractual quality requirements have been met prior to acceptance.

967. Accordingly, all DEF(AUST) specifications are to include only the following paragraphs in Section 5 - Quality Assurance Provisions:

5.1 The contractor shall maintain effective control of the quality of supplies and/or services (including subcontracts), facilities and examinations and the contract conformance of services to requirements of shall offer for supplies and/or conform to these provide test perform all tests stated in to demonstrate supplies and/or the technical.

5.2 The contractor shall be responsible for the provision of objective evidence that controls and inspections are effective.

5.3 The Quality Assurance Authority reserves the right to perform any examinations or tests to ensure that supplies and/or services conform to the technical requirements of the contract.

5.4 Acceptance of all supplies and services shall be subject to agreement by the quality assurance authority that the quality requirements have been fulfilled. The Quality assurance authority reserves the right to reject any supplies which fail to meet the technical requirements of the contract.

968. The following paragraph is to be included in Section 7 - Notes - of all specifications:

The official tender invitation and contract shall nominate the Quality Assurance Authority, the conditions of inspection[36] and the requirements for contractor's Quality Control.'

However, it was also applicable where a formal quality system was not employed. It showed the Defence desire to place greater responsibility on the contractor and the basic responsibilities of the Department of Defence. The term 'dependent quality assurance' was introduced in the 1970's to describe the concept. When used with the classification of features in AS1057, which expressed a set of corporate values, it gave an embryonic risk management paradigm for the application of quality assurance. I think it actually fits the current ideas expressed in the current Commonwealth

[36] Inspection was meant in the dictionary sense: carefully looking into a matter.

Risk Based Approach for Assuring Quality. On the other hand I don't believe that a Board of Inquiry would necessarily have discovered the old concepts because those who may have been aware of them would not have been called before the Board.

265. The concept of quality systems sprang from manufacturing. Quality textbooks are written for businesses and most hold out the promise of very few errors and happy customers. Many of the items we purchase such as motor vehicles, white goods, machine tools, clothing and furnishings are made under the control of quality systems of some sort. I have had my refrigerator for about 30 years so it was built under pre AS1821-23 conditions. Why can't we rely on the supplier? The fact is we do rely on the supplier in our daily lives. But, if the new refrigerator or television doesn't work we send it back to the shop. Consumer legislation provides considerable protection. Domestic manufacturers don't stay in business if they consistently fail to get their quality right. So, why should Defence spend money on inspection, when contractors spend good money putting in quality systems and the Defence Concept places responsibility on the supplier?

266. Defence buys and uses household and industrial goods from commercial sources under much the same conditions as the civil community. But, Defence also crosses a boundary from the civil stores to military stores and military applications where returning goods to the supplier under warranty in battle is 'too little too late' and ultimately places men and the nation in danger.

267. Formal quality systems provide a standard framework for controlling processes that make it easier for people to understand what is occurring and where information may be found. Systems are only as good as the people who apply them; and that includes appropriate interaction by the customer.

268. The appeal of quality systems for a Defence Department ought to be the greater acceptance of responsibility for controlling processes by suppliers and less supervisory effort by Defence.

Industry Perspectives

269. I address the efficacy of reliance on certification by quotes from two professional books on quality assurance from the early 1990's, below. I allege the quotes show two points: the fact of the statements implies that sufficient people were assuming that '*...a certified QMS guarantees quality of product...*' and that '*The assumption that a certified QMS guarantees quality of product is not appropriate.*' The statements follow:

a. Roy Fox[37] an Australian Total Quality Management consultant makes the following statements in his book published in Australia in 1991:

'Quality systems provide the framework within which quality improvement can operate in a manner that ensures the gains are not dissipated due to a lack of a disciplined approach. The corollary of this, however, is that quality systems in themselves do not produce any guarantee of good quality. To use a rather facile expression, an accredited ISO system may just produce junk more efficiently. There is no automatic correlation between installation of a quality assurance system and improvement in product or service quality. ...'

[37] Fox, Roy. MAKING QUALITY HAPPEN – Six Steps To Total Quality management –McGraw-Hill Book Company ISBN 0 07452856 4 – Copyright 1991 Reprinted 1993.

b. David Mills[38], a former quality manager for Rank Xerox, published his book 'Quality Auditing' in the United Kingdom, in 1993. I quote liberally from the book to show:

(1). From Pages 24 and 25 under the heading of 'Compliance'.

From page 24

'...the wording of the official ISO definition implies a linkage between the degree of implementation of the system and the quality performance of the reduced result from the system. The problem we are faced with is that most standards and/or company quality systems, in measurable terms.
From page 25

'Although more and more systems are being written to include policy statements, these are usually couched in pretty general terms mentioning things such as 'customer satisfaction', 'innovative products', 'market leadership' etc.

While some of these may be used for objective measurement, others cannot. There can only be one market leader, for example, but this does not make the third placed company's quality system, non-complying to the standard, or necessarily less effective than those ranked higher up the list.

Let us look at the implications of the implementation of quality systems on quality performance. There certainly appears to be a number of misconceptions with regard to the implementation of a quality system, as defined in the ISO 9000 series. ...'

'While it is certainly true that the generation and putting into place of a formalised quality system will not have a negative effect on quality performance, there is little or no evidence to indicate a real relationship in regard to product performance. All too often, in advertising or some other published matter, a company that has obtained some formal registration of

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[38] Mills David, Quality Auditing, Chapman & Hall, ISBN 0 412 45890 X, First Edition 1993.

The book is dedication is to '*...that very professional group of friends and colleagues who formed Working Group 7 of ISO TC/176/SC2. In particular I would offer it as something of a tribute to the late Jacques Chove, the convener of the group, who by his inspired leadership, 'brought home the goods' in the form of ISO 10 011 in record time. ...*'

I adduce from his statements at pages 303 and 305 that the author was part of the group or intimately involved.

The Forward to AS/NZS ISO 9001: 1994 carries the following note:

'*International Standard ISO 9001 was prepared by Technical Committee ISO/TC 176, Quality management and quality assurance, Subcommittee SC2, Quality systems.*'

So, I allege it gives the author reasonable authority on the meaning of the standards.

conformity to one of the relevant quality system standards, links this to product quality, directly or by implication.' [My underlining]

'*Anyone with serious experience of the conduct of supplier audits will know that, unfortunately there appears to be no correlation between quality systems implementation and product performance.*' [My underlining]

(2). From pages 49 and 50 under the heading of 'Audit Types'.

'*...It is crucial here to note the difference between the quality system audit, which requires the measure of effectiveness, and that of the systems compliance audit which checks conformance to the system to some specified standard or specification.*

Because audits for obtaining the required registration of conformance to a standard such as BS 5750 Part 2, do not require the result which covers effectiveness of the system, they create something of a false impression.

.Compliance to the requirements of such a standard for the setting up of the quality system will not necessarily ensure that the level of product quality is satisfactory. ...[My underlining]

Quality results are obtained through attitudes of mind and a commitment to concepts, not through the publication of procedures and documentation. ...'

(3). From pages 304, 305 and 306 under the heading of 'Relationship Between Quality System Compliance And Product Quality'

From page 304:

'*...The question is often raised, when auditing for compliance to the ISO 9000 family of standards if there is a need to check on the quality performance levels. This question needs to be asked on the scope of internal audits. ...'*

From page 305:

'In ISO 9001, 9002 and 9003 there is no spelt out requirement that the quality performance levels be checked against the specified quality system for the organization. But, the whole wording of the standard certainly implies this and it was certainly the intention of the drafting group that this would be the case.

Under the policy heading of the standard there is a requirement that the policy be understood, implemented and maintained at all levels within the organization. As the policy itself is unlikely not to refer in some way to the expected level of quality performance checking this would be a necessary part of checking the policy's implementation.

Under the management review, the effectiveness of the system in meeting the business needs has to be established. Once again this can hardly be done without reference to the actual level of outgoing quality performance.

On the subject of internal audits the standards state that these are conducted to 'determine the effectiveness of the quality system'. It would seem impossible to do this unless the level of outgoing quality is tested against its specified target level. So it is totally illogical to look at the system defined without comparing it with its actual performance.

It can certainly be argued that without this connection between the system and the level of quality performance then the whole purpose of having a quality system and auditing it becomes redundant.

It is not the putting into place of a system that is important, it is ensuring that the system meets the business needs of the organization and that it is effective in achieving the required quality performance.

From page 306

'*... It is a proven fact that the overlay of a quality system onto a non-committed organisation will have minimum or zero effect on quality performance*. [My underlining]

High levels of quality performance stem from more than merely defining the elements of the system. They are due to the attitudes, commitment and culture of the organisation as a whole. The systems are only tools to help the achievement of the quality objectives. ...'

From page 307 under the heading 'Does Poor Performance Equal Lack of Conformity'.

'*Organisations with poor systems can have consistently high product quality levels and vice versa*. [My underlining] *One explanation for this is that quality performance stems from the application of TQM.*

This can be operating within the organisation without the system having been made very definitive. This type of situation is more likely to apply to the smaller sized operation and the effect will diminish as the organisation becomes larger and more complex.

Leadership, personal example and individual commitment to the delivery of quality performance will effect performance levels, more than the mechanical application of a system as defined within the ISO 9000 family of standards. ...'

270. I allege that both authors support the statement of the BOI Report at Section 12.4: '*The assumption that a certified QMS guarantees quality of product is not appropriate.*' I allege that it shows the currency of the ideas in industry. So, I allege that it is not unreasonable to assume that some in Defence would have that attitude.

271. Mr Mills brings forth the nexus between the effectiveness of systems against conformance to a standard and shows the difficulty of obtaining objective measures. In this sense I believe he supports the BOI Report Sections 12.17 to 12.25 inclusive. He also expresses the idea that the culture of the organisation is important and I think that reflects on Navy and Defence, as much as ADI, given the regulatory and organisational changes occurring at the time of AMP 12.

Commonwealth QA Policy

272. The Commonwealth quality assurance policy in force at the time of the HMAS Westralia incident was: Quality Assurance, Risk Based Approach for Assuring Quality, Purchasing Australia, May 1997[39].

[39] I raised these concerns in a submission to the Senate Inquiry into Materiel acquisition and management in Defence. The Commonwealth 'Risk Based Approach for Assuring Quality' was edited and reissued in 2003. The

273. The Forward of the Commonwealth policy guide states: '*Use this guide for each procurement you undertake. It will give you confidence that you have matched the risk with the level of assurance required and the means to achieve it.*', which shows the intention for the guide to be used at the working level for each procurement.

274. The Commonwealth policy defines ***Quality assurance1***

> *The sum of all those planned and systematic actions that are measured and managed to give users confidence that the end result will satisfy their requirements. Assuring quality through the AS/NZS ISO9000 quality system standards is about managing the production processes rather than the product itself.*
>
> *1. Popular usage has made the term quality assurance virtually synonymous with certification to the AS/NZS ISO9000 standards. This implies a much narrower approach than is the case with the Commonwealth's policy for assuring quality. The Commonwealth's policy is about outcomes rather than processes. Consequently, the expression assuring quality is preferred. It signals that there is a range of options available to buyers that suppliers may use to demonstrate their ability to provide consistent products.*

275. I make the following comments on the policy:

a. The statement '*The sum of all those planned and systematic actions that are measured and managed to give users confidence that the end result will satisfy their requirements.*', is the heart of the definition. The definition implies some action. But I allege the remainder of the document of 22 pages is about the allocation of resources in the language of risk management. It lists AS/NZS 4360 titled 'Risk management' in a footnote at page 3 and uses the terms from the standard. It does not list the 'Monitor and Review' risk management process step, which implies that the customer must 'check' (BOI Report 12.3).

b. The statement '*Assuring quality through the AS/NZS ISO9000 quality system standards is about managing the production processes rather than the product itself.*', misses the point about the ISO 9000 quality systems concept. The systems are designed to manage the product to ensure that product is effectively managed to produce the desired outcome. System Audits are supposed to show that systems are effective at producing product with the specified characteristics.

c. *1. Popular usage has made the term quality assurance virtually synonymous with certification to the AS/NZS ISO9000 standards.* I allege that is a statement along the lines of '*...a certified QMS guarantees quality of product...*'. The statement is not rebutted in the document.

d. *Consequently, the expression assuring quality is preferred. It signals that there is a range of options available to buyers that suppliers may use to demonstrate their ability to provide*

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forward, definitions and reference to AS/NZS 4360 have been removed. The language still uses the language of risk management and does not mention the 'Monitor and review' element of the AS/NZS 4360 Risk management process. There is no advice that '*The assumption that a certified QMS guarantees quality of product is not appropriate.*' I believe it is still possible to read the policy to mean that '*...a certified QMS guarantees quality of product...*'.

consistent products. That is fine and the statement lists some alternatives at page 8 and in the remainder of the document. However, Appendix A begins with this sentence:

'*Intermediate quality systems can give you adequate confidence that moderate risk goods and services can consistently conform to your requirements.*'

The noun '*confidence*' is subject of the objective clause in the definition. I allege that is representative of the tone of the Appendix.

Defence QA Policy

Introduction

276. The Defence quality assurance policy and practice was listed in three places in the period of HMAS Westralia's AMP 12. These were:

a. Defence Procurement Policy Guide (DPPG) Chapter 19 Version 1.0 dated

b. DI(G) LOG 02-1 [NAVY LOG 63-1] Defence Quality Assurance dated 9 May 1991.

c. DQA Policy and Procedures manuals.

DPPG

277. The following is extracted from the DPPG:

...19.6 Common means of assuring quality include the following:

- *normal commercial practices such as warranties, supplier's reputation and past performance;*
- *customer quality control such as acceptance inspection or testing;*
- *product certification where the product is certified by a third party as meeting a specified technical or safety standard or other specified requirement;*
- *quality system certification where the supplier's quality system is certified either by a third party or by the customer (the second party) as meeting a specified standard; and*
- *quality audit and quality surveillance of supplier's processes and/or products. This would typically include observation of activities and review of objective evidence to ascertain compliance with the specified requirements for quality and quality management requirements,*

19.7 Which one of these approaches or combination thereof, is employed must be commensurate with the risk associated with receiving non-conforming goods or services. Accordingly for higher risks, a more comprehensive QA approach should be adopted.'

19.9 ***Recognition of third party certification.***
For contracts where it is assessed that the supplier must have a certified quality system, Defence recognises third party quality system certification i.e. by an organisation which is accredited by the joint Accreditation System - Australia New

Zealand (JAS-ANZ) or equivalent international accreditation organisation. This recognition is conditional on the quality system standard and scope of the certified quality system meeting the contract specified needs. (See Annex H)

278. I allege that 19.7 permits the idea to be held that '*...a certified QMS guarantees quality of product...*'.

279. The statements recognise that the standard and scope must be appropriate to the contract.

DI(G) LOG 02-1 [NAVY LOG 63-1]

280. DI(G) LOG 02-1 contained the following:

a. First paragraph of the introduction stated:

'Defence quality assurance is directed towards ensuring that procured materiel and associated services conform to Defence requirements. It is generally not sufficient to rely on the supplier's assertion of quality, or on a technical inspection after delivery. An optimum program of evaluation, prevention and corrective action has replaced the manpower intensive inspection and screening operations of the past. A range of techniques is now employed with emphasis on accrediting suppliers that have a demonstrated capability to control quality during design, production and maintenance: and subsequently verifying that their approved quality plans are implemented, and are effective.' [My underlining]

281. The heading of 'Defence Quality Assurance Policy' heads page 2 which I summarise as follows:

a. The purpose of procurement quality assurance is: safety, maintenance of capability and to prevent the expenditure of funds on unsatisfactory supplies.

b. The principles of quality assurance are:

(1). Define the requirements,

(2). The supplier is responsible for controlling quality,

(3). Ensure that the supplies conform to requirements before acceptance,

(4). Procurement is preferred from suppliers having quality systems and assurance chiefly derived from knowledge of the adequacy of the system.

c. DQAO is to be effective and efficient.

d. The following is contained on page 3:

'16. Typically, the activities performed by the DQAO for a procurement project fail into the following major areas:

a, contributing to the definition of contract requirements by defining quality assurance and acceptance requirements, reviewing technical specifications and participating in tender evaluation and contract negotiation:

b, establishing that the supplier's quality system meets the requirements of the contract:

c. ensuring by a process of audit and surveillance, covering both product and the quality system, that the requirements of the contract are being met: and

d, witnessing or otherwise participating as necessary in acceptance testing and performing acceptance of the supplies.'

282. I don't believe that DI(G) LOG 02-1 supported the idea that '*...a certified QMS guarantees quality of product...*'. On the other hand, it showed the importance of quality management systems to the Defence view of quality assurance. If I held the view that '*...a certified QMS guarantees quality of product...*then DI(G) LOG 02-1 wouldn't discourage me from acting as though '*...a certified QMS guarantees quality of product...*'.

283. The principles of quality assurance on page 2 reflect Chapter 9 of the Defence Standardisation Manual.

284. I believe that DI(G) LOG 02-1 gives some useful principles of purchasing quality assurance if the reference to DQAO is ignored.

285. Considerable effort was made to replace DI(G) LOG 02-1 of 1991 and might not have had strong authority in 1997. It eventually was replaced with DI(G) LOG 02-1 of 24 September 1999. The new document stated that it was compliant with Commonwealth policy. Provided a statement of responsibilities and referred to the Defence Procurement Policy Manual Section 5, Chapter 3[40] for guidance.

DQA Procedures

286. I do not have a copy of the Policy and Procedural document of DQA at he time of the HMAS Westralia incident. They were held on a computer system. However, I hold a copy of the paper DQAO policy and procedures that were used before the DQA computerised procedures came into use. My hard copies of procedures are amended to Amendment 12 of 28/10/96. I think they would be reasonably close to the period of AMP 12 to be of some use[41].

287. QA Policy No 27 titled In – Contract Quality Assurance dated 31 January 1994 states:

'quality assurance is achieved by initiating a continuous program of surveillance, including audits of the suppliers quality system, processes and product carried out at the suppliers premises by a DQAO Quality Assurance Representative (QAR), who may be resident at the supplier's works or visit on a regular basis...'

'Where a contractor is not accredited or does not operate an officially recognised quality system, the QAR is required to exercise more stringent surveillance.'

[40] Version 2 July 1999.

[41] I hold the copies because I had and still have some performance appraisal issues to argue with the Department from 1993 and 1994 and the documents are relevant. That is my reason for having the documents.

288. DQA National Operating procedure 205 titled 'Contract Quality Audit and Quality Surveillance'. I take the following from the document:

From page 1

Introduction

5. DQA quality audit and quality surveillance activities performed by an appointed Quality Assurance Representative (QAR) are a means of evaluating the status of a supplier's quality system, quality planning, process control, products and associated records to gain confidence that the requirements for quality stated in the relevant contract are being satisfactorily met by the supplier. Depending on the criticality and complexity of the supplies (refer NOP 203) and the past performance of the supplier in quality management, DQA quality audit and quality surveillance should encompass, as applicable, suppliers' design, development, manufacturing, and/or installation activities through:

a. quality audits of Defence-certified quality systems;

b process audits;

c. product audits;

d. surveillance of the suppliers' work standards;

e. audits/surveillance/witnessing of tests and trials;

f. attendance at meetings, eg critical, functional and physical design reviews, progress meetings, nonconformance investigation meetings, configuration management meetings; and

g. ensuring corrective and preventive actions are timely and effective.

a. From page 5

21. Quality surveillance, as defined in AS/NZS ISO 8402, is not an activity that lends itself tp precise planning. The extent of surveillance depends on the QAR's impression of the supplier's management performance. Surveillance of work being performed is a valuable adjunct to formal quality audits, and QARs should perform certain levels of surveillance. This is particularly so in the early stages of a contract; as the QAR's confidence in the supplier grows, supplier activities can be reduced. ...

b. From Annex D – Conduct of Quality System and Process Audits

6. ... Quality systems are to be subject to formal quality system audit only where the system has been certified by DQA, or where the system has not been certified by any organisation.

Quality systems certified by JAS-ANZ accredited third party certification bodies are not to be formally audited by DQA, but audit is to concentrate on the application of the- quality system through application of the supplier's quality plan, if one has been issued, to the work performed under the contract. For DQA-certified quality systems, system audits are to be related to the elements of the quality system standard specified in the contract ...' [My underlining]

289. I don't believe that the DQAO procedures support the idea that '*...a certified QMS guarantees quality of product...*'.

290. The DQA procedure 205 gives considerable space to auditing, which is a formal activity. Less space is given to surveillance, which is regarded as a less formal activity. I believe that carries on from earlier Defence usages of the terms. But a reading of the definitions in AS/NZS ISO 8402 points to 'surveillance' being the customer's activity. That doesn't rule out the customer performing audits, but I think there is a possible difference in interpretation. Hence, there could be a difference between the DQA approach to contract quality assurance and that of the standards.

291. The underlined part of paragraph 6 is the heart of the 'dependent' form of quality assurance. The quality plan relates to the product that flows from the contract. A quality plan is usable regardless of whether the supplier has a formal quality system. It is doubtful to me whether somebody reading the procedure to get guidance would have picked that up or an Inquiry would necessarily found the matter.

Discussion on QA Defence Policy

292. The important question is what would a Board of Inquiry find if it followed back into Defence policy.

293. I believe that the policy would have shown things favourable to the BOI Report:

a. The importance of the specification, in this case the TM200.

b. The contractor was responsible for controlling quality, and

c. Defence ought to conduct some assurance activities.

294. On the other hand I believe it ought to have found that the DPPG permitted the assumption of '*...a certified QMS guarantees quality of product...*'. The DPPG also endeavoured Defence personnel not to use DQA and to accept commercial standards. The DPPG was the later of the documents and reflected where defence was heading.

295. So, the BOI had the potential opportunity to comment on Defence policy.

CAPO MACS(WA) 0044 Section 6 Quality

296. I don't intend quoting much from the CAPO. It required the application of quality systems to AS/NZS ISO 9001 and 9002 as appropriate.

297. The term 'Quality Audit' is used in the document to indicate project Authority activity. 6.3.2 states:

'*The Project Authority may conduct Quality Audits or product and record verification of the work performed under the Contract.*'

298. The CAPO also required the preparation of a Quality Plan for the contract by the Contractor and its approval by the Project Authority (Section 6.2).

Discussion

299. The idea that '*...a certified QMS guarantees quality of product...*' had a strong appeal to sufficient people for it to be held. I allege that the two authors quoted lend support to claim that it was held by sufficient in business for it to be commented upon by authors on quality assurance.

300. I have considered whether it would be reasonable for an Inquiry to search Department records to see whether those ideas were held in the Department of Defence. I would be surprised if there would have been sufficient people with knowledge to actually know where to look.

301. The ISO 9000 family of documents were addressed to the supplier who wished to implement a quality system. The customer had to hold a philosophy of purchasing quality assurance from which to approach suppliers who had adopted quality systems. I allege that the standards hold out the promise that customers will receive conforming supplies because the quality systems will control the work to produce the product.

302. I allege that the Commonwealth policy at the time of the fire in HMAS Westralia was written in such a way that it would permit a person who held the idea that '*...a certified QMS guarantees quality of product...*' to be confirmed in that opinion. If we take the next step and read the DPPG that could further reinforced.

303. Some observations of the Commonwealth and Defence policies are:

a. The Department of Defence claimed its policies were Commonwealth policy,

b. I allege that Commonwealth policy was written in a manner that supported the idea that '*...a certified QMS guarantees quality of product...*',

c. Both the Commonwealth and Defence policies were 'risk based' and used the language of AS/NZS 4360 and didn't address the important issue of applicable corporate values, and

d. The Commonwealth policy left out the AS/NZS 4360 risk management step of 'monitor and review.

304. The point in raising this is that the Board of Inquiry confined itself very narrowly to the incident. The Commonwealth and Defence policies come from outside the Navy. So, the findings of the Board have repercussions beyond the Navy. I allege that is more so with purchasing and changes to logistics in the Department of Defence since the late 1980's, the Defence Efficiency Review and the more recent action with the Defence Materiel Organisation. Future Service inquiries ought to look at the ramifications beyond the immediate incident.

Conclusion

305. I allege there were some grounds for the idea that '*...a certified QMS guarantees quality of product...*'. It had some currency in industry in the early 1990's. I allege that Commonwealth and Defence policy permitted that view to be held. It seems reasonable to me that naval officers could hold that view.

306. I allege that the questioning did not show that those involved actually held the view implied by the statement at Section 12.4 '*The assumption that a certified QMS guarantees quality of product is not appropriate.*'

307. I allege that the BOI Report did not adequately explore the policy implications for the Department of Defence, which would be more important for inquiries due to the integrated nature of materiel management processes.

308. Future Inquiries ought to look beyond the immediate incident to look at implications for other services.

RELEVANT INCIDENTS

Introduction

309. The Navy is an element of the Department of Defence. The Navy's Quality Assurance Policy ought to have been compatible with the Defence policy and the experiences of the Army and Air Force with quality systems ought to have provided feedback to Navy and vice versa.

Were There Any Warning Incidents?

310. I think that a reasonable question for the Board was:

> Were there any incidents with Defence stores that showed that quality systems had potential dangers for Defence that could have acted as a warning?
>
> The Board does not show evidence that it posed the question or called any officers of the Navy or the former DQAO to answer that question.

311. The importance of the question is that if there were indicators why weren't they fed into the policy areas and appropriate warnings given and could that happen again?

312. I believe that two public incidents in Australian military experience can point to failures of quality systems. These may not have been obvious.

RAAF Nomad

313. On 12 March 1990, a Nomad aircraft crashed near Edinburgh Airbase in South Australia. The pilot was killed. The Aircraft had been subject to testing at Aerospace Technologies, which was an AS3901 Quality System contractor. I believe that the DQAO had no involvement with the aircraft testing or movement. However, the Department of Defence used the company for aerospace contracts and relied upon the quality system combined with contract performance auditing for assurance purposes. I believe that both the *Government Aircraft Factory and Aerospace Technologies Australia Ltd* were listed in the Defence Register of Assessed Suppliers (DRAS) and probably assessed by Defence Quality Assurance Organisation (DQAO) and before that Defence Quality Assurance - Air Force.

314. The newspaper report said that the Ombudsman's office[42]:

> *'... strongly criticised the conduct of the RAAF, the Government Aircraft factory, Aerospace Technologies Australia Ltd and the Civil Aviation Authority in the lead up to the accident. ...*
>
> *'... The Government Aircraft factory had recognised the incidence of tailplane cracking about eight years before the crash but had failed to establish definitely the reasons for the cracks or how they grew. It did not advise other authorities on the extent of the problem for fear the planes would be grounded.'*

[42] Age 12 July 1994 page 7.

'The plane was transferred to the RAAF in 1987 but was not properly checked. It was then leant to Aerospace for testing, including stressful ground tests, without the preparation of an acceptance condition report. ...'

'The report said that Aerospace, which did tests for tailplane cracking, did not report adequately on the planes return to the RAAF with a condition report on how it was used. ...'

'According to the report, the RAAF allowed the plane to fly on the day it crashed despite its records showing that it was over due for an anti-deterioration check. It is believed the plane was due to fly senior air force officers to Woomera the next day.'

315. The significance of the incident to me in the context of the HMAS Westralia fire is that the company had Defence and before that Air Force assessed quality systems. The systems were there to cover the operations of the aircraft factories. To my mind the system ought to have covered the safe return of RAAF aircraft after testing. That ought to have raised some questions about reliance on the effectiveness of quality systems within Defence.

316. I understand that the DQAO had not been called to perform any assurance activities for the testing.

ADI St Marys

317. There was a grenade incident at ADI St Marys, New South Wales, around 1995/96 in which a worker was seriously injured. ADI was producing the grenades for sale to the Australian Army. ADI St Marys had a quality system in place to cover the manufacture of the grenades; the factory was in a run-down operation prior to the closure and sale of the facility. This was reported in the newspapers at the time and was the subject to an official inquiry. I believe that the reports would be available. The quality issue is: 'What was the cause of the incident and did it indicate a failure of the ADI St Marys' quality system and did that have serious implications for the acceptance of the grenades made under its control'?

Conclusion

318. The two incidents ought to have been a signal to the Department of Defence that companies with quality management Systems can have problems.

319. The BOI Report does not raise any questions about whether there had been any problems with quality systems, what corrective actions were taken for the Defence Force.

GENERAL DISCUSSION

General

320. There are no conclusions or recommendations from the sub-section of the BOI Report headed 'Reliance on Certification'.

321. The section implies a perception of quality systems by a significant member of the management team that is plainly wrong. But I don't believe it is possible to say whether that was his view, or a view placed on him by the structure of the BOI Report.

322. The question that follows is whether that was a general perception in the Navy that ought to be corrected. Given the changes that had taken place in Defence with the demise of the DQA it at

least raises the question of whether the perception might have been more widespread. The BOI Report is silent on the matter.

323. The dates of the books at paragraph 269 shows evidence that reliance on certification was held by sufficient people to have the core issue appear in the text of books by two important industry people, one located Australia and the other in the United Kingdom. The words 'reliance on certification' are not used in the books. 'reliance on certification' is not given prominence in either book by a chapter or heading. None the less, the presence of the idea in industry is evidenced.

324. The Commonwealth Quality Assurance policy[43] states: '*Popular usage has made the term quality assurance virtually synonymous with certification to the AS/NZS ISO 9000 standards.*' and in the absence of any mention or discussion of 'audit and surveillance' or the risk management process element of 'Monitor and Review' in the text or definitions leaves it open to assume that '*...a certified QMS guarantees quality of product...*' is an acceptable position. Further I believe a reading of the DPPG[44] at 19.6 and 19.7 leaves it open to accept that position also. On the other hand neither policy positively states that '*...a certified QMS guarantees quality of product...*' is an acceptable position.

325. From a QA insider's point of view not related to Navy operations, I think it might have been difficult for an inquiry to elicit statements from anyone with authority in Defence quality assurance at that time due to the organisational changes introduced by the Defence Efficiency Review. I believe there were some significant differences of opinion in the DQAO on quality assurance policy and practice but I don't believe that a Board of Inquiry would have brought them to public attention. I don't intend raising them in this paper because seem more vindictive than helpful.

326. It represents a serious failure in quality management systems by Navy and Defence. The BOI Report made no recommendation to correct that position.

WO Jones

Section 12.3

327. Section 12.3 states: 'During the hearing, WO Jones was asked '*...is there any scrutiny or check made on behalf of Navy, or the Commonwealth, of RPLSS performance of that sort of obligation?'(supplied products meeting specified requirements) [T1958], to which he replied, 'No'. WO Jones later explained [T1958-1960] that when goods arrive, the invoice is checked, '... and if companies have been suppliers to ADI and have the logo of the five ticks, quality accredited, ... (I am) heavily reliant on those sort of things, sir.*' ... . That plus a statement by Mr Sergeant leads to the statement at 12.4 that: '*The assumption that a certified QMS guarantees quality of product is not appropriate.*'

328. The discussion in the BOI Report on the reliance on certification rests on the reported actions of WO Jones. I accept what is written on face value.

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[43] Quality Assurance, Risk Based Approach for Assuring Quality, Purchasing Australia, May 1997

[44] the Defence Procurement Policy Guide, Version 1.0 February 1997, ISBN 0 642 26676 X, DPUBS: 26687/97 (**DPPG**), Chapter 19 and is titled 'Quality Assurance in the Management of Risk'.

Some Perceptions of QA Activity

Transcripts

329. The transcripts contain perceptions of the work of Defence Quality Assurance in Western Australia at he time leading to the fire in HMAS Westralia.

330. LCDR Crouch, at T2914. *'Could you tell the Board who or what is DQA and what it comprises of ? --- Yes, sir. It's Defence Quality Assurance. They are to do periodical audits of contractors and, indeed, in-service organisations, on their quality systems, how they're managing it. They are available to the ship if we have any specific requests. However, over the AMP we didn't feel there was a requirement to bring DQA into it.*

Okay? --- In previous AMP, we felt that there was; and we did use them. ...' The transcript carries on to LCDR Crouch identifying three people in DQA at the time, a naval architect, a hull surveyor and one other.

331. LCDR Crouch, at T2917. CMDR Walsh asks for some recommendation for improvements. LCDR Crouch responds. *'...Well, quality seems to his ongoing concern. Well, it is for me anyway, and there –I don't know, I've raised this subject with higher authority, saying "Help. I am concerned about quality output by contractors. What can we do about it?" There's no plans ahead. My question to the person was, "Are we going to kick off DQA properly? And get them involved in the quality" and the answer to that was, "No." Well, I believe that we need to get away from relying on the contractor, this 9002, and get some sort of organisation that can come in and really do a good job of it --- and really do a good job of it, of maintaining --- not maintaining the quality, to get in there and --- I don't want supervisors but I want --- as soon as there is a failure in quality I want the engineer to be capable of raising an NCR, a non-conformance report, and getting that off into the organisation. ...'*

332. LCDR Crouch, at T 2918. *'...Okay. Would DQA as it's currently configured here for Western Australia, do what you have just been talking about ? Are they sufficiently staffed to do that? --- No. I don't believe they could. I believe they could go in and they could audit the management system of the people involved, the contract involved, but I don't believe they could do the quality control component of the -- ...'*

333. President and WO Jones T2151. The President establishes that WO Jones has done quality audits in his career. Then,

I'm just trying to establish what a quality audit entails? ---
Yes, sir.

And what does a quality audit entail? --- Sorry. A quality audit I will task DQAO, Defence Quality Assurance Office, to undertake as paper audit of taskings underway during an activity and they will go down to site and undertake according to their inspection and test plan which has been drawn up by them and agreed to and they will audit against that. Any discrepancies they then raise a 271, an SG271, which is an advice of non-conformance for rectification to be carried out by the contractor.

This audit then is it against say the quality of a particular component manufactured under a job or is it an audit of the systems in place? --- Systems in place, sir, to give assurance of quality.

So it's not like the old days of quality control where someone goes in and physically checks that something is manufactured in accordance with drawings? --- No, sir. ...'

334. CAPT Callaghan makes the following statements at T 3056 in examination of Mr Old of Enzed:

'If you go down to the last paragraph in section 6, paragraph 6.7, you see a reference there for the "QAR". The QAR, the definitions tell us, is ADIs quality assurance representative, and you see that the QAR had the right to perform examinations and so forth. ...'

There's no need ... You see, the QAR, whoever that may have been, had the right to come in and indeed go into Enzed's premises and look at records, data and plans for the purpose of ensuring compliance with the requirements of the contract. Did you or did Enzed, you think, have records, data and plans there which could have been looked at, which showed or would demonstrate a compliance with the requirement of the contract which you made? ...'

Navy Directions

335. The CAPO at paragraph 296 contains the quality clauses for the AMP 12 contract.

336. ABR 5454 at paragraph 105 contained directions on quality assurance.

337. Navy Minute AF 1-1-208 FNAO 112/97 AF Memorandum 11/97 Quality Management For Ships Undergoing Contractor Maintenance dated 2 April 97 Annex A.

'c. *...Ship's staff should witness appropriate tests and equipment set to work being conducted by the contractor, to ensure that the contractor and/or the sub-contractor is adhering to documented procedures and that results are being accurately recorded. Any deviation identified is to be passed immediately to the CA as a Problem Identification Report (PIER) ....'*

d. *Maintain a close liaison with DQA, having established the liaison through the OA. Ship's staff should ensure they are kept informed of all relevant correspondence between DQA and the contractor and between OA and DQA. DQA is not responsible for QC, which is the responsibility of the contractor. DQA is responsible for QA. To achieve this DQA should plan audit schedules, in conjunction with the OA and ship's staff, and conduct system, record and product audits to ensure that the contractor is complying with the requirements of the contract....*

f *Be familiar with the Prime Contractor's Quality Plan (AS/ANZ 9002 - clause 4.2.3). A quality plan is a document that sets out the quality practices, resources and sequence of activities that are relevant to the particular product, project or contract. It may reference the applicable parts of a contractor's Quality Manual; ...*

h. *Via the OA, review the outcomes of audits conducted by DQA and ensure the OA con the results of the audits conducted by DQA on the contractor. Audits will determine whether the quality activities and related results comply with planned arrangements and whether those arrangements are implemented effectively and are suitable to achieve contracted objectives and specifications; and ...*

Discussion

338. The reason I quote from the transcripts is that they show me that both WO Jones and LCDR Crouch saw DQAO[45] as auditing systems. That would fit with the preponderance of writing in DQA NOP 205 quoted above at paragraph 288, the language of the CAPO at 296 and the Navy Minute quoted at paragraph337.

339. Capt Callaghan, a counsel assisting the Board, shows an understanding of contract quality assurance that reflects WO Jones 'paper audit' and I allege ignores common sense in the possibility that somebody could actually look at the processes performed by Mr Old. I think that viewing of work was at the heart of LCDR Crouch's concerns.

340. It is my view that people used the terms 'audit' and 'surveillance' loosely rather than in the precise terms of the standard. Similarly with the term 'quality control'.

341. LCDR Crouch appears to have wanted a return to 'quality control', but I interpret that as a desire to exercise grater witnessing of contractor performance. I believe that was possible under the 'quality system' regime of the ISO 9000 series of documents, the DQA Procedure NOP 205 covering 'Contract Quality Audit and Quality Surveillance' under 'surveillance' and the Navy Minute at paragraph 337.

342. The DQA probably could not provide 'surveillance' by the time of AMP12 due to staff reductions and its demise following the Defence Efficiency Review. Although, LCDR Barrett told the Board that DQA agreed to audit work during AMP 12 if invited (T3398). The only way to have been certain was for the Board to have inquired more fully into the DQA's practice of quality assurance and availability of staff.

343. I allege the Defence Efficiency Review shifted quality assurance activity back onto the Services without necessarily giving adequate resources and ensuring that service personnel, as demonstrated in this case, had adequate skills.

Australian National Audit Office

344. The Australian National Audit office (ANAO) conducted an audit of the Department of Defence in 1996 and 1997. The title was 'Performance Management of Defence Inventory' Audit Report No.5, tabled 17/10/1997; Part Three was 'Defence Quality Assurance, Preliminary Study'. The ANAO report was addressed to the Parliament and tabled.

345. '*This preliminary study was conducted between December 1996 and March 1997. The audit approach was first to review public information, and hence establish some issues to examine.*'[46] This places the study in the period when the proposed changes to the fuel system of HMAS Westralia were being discussed. The publication date of 17/10/1997 brings it closer to 1 February

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[45] 'DQAO' meant 'Defence Quality Assurance Organisation'. The name was changed to Defence Quality Assurance (DQA). Issue No 2 of National Operating Procedure No 205 Contract Quality Audit and Quality Surveillance is dated 19 July 1996 and refers to DQA.

[46] Under the subheading 'Conduct of the Preliminary Study'.

1998 when the TM 200 was raised. See BOI Report Sections 10.18 to 10.47 inclusive. The ANAO did not proceed with an audit due to the Defence Reform Program but made observations.

346. The principal observation taken from the Summary and applicable in the context of the paper is: '*...there is no comprehensive statement of quality policy, or statement of relevant performance indicators (measures of QA performance)*.' This is expanded in the report under the heading of '*Performance information and cost-effectiveness*'. That is significant given the statement of quality assurance policy in the DPPG of February 1997 and the fact that DQAO had policy statements and operating procedures[47]. The ANAO doesn't give any indication of when the DQAO procedures were first written or DQAO was formed. But, I take it to mean that there was no definition of a Defence quality assurance process that would allow for measurement of performance. It is significant that Defence is reported as having no significant disagreements with the contents of the ANAO report[48].

347. The heading of '*Skills and knowledge of QA staff*' covers paragraphs with the following statements.

a. *'Given that many DQA tasks are carried out by staff working individually and using their judgment at a supplier's establishment, the question of appropriate skills and knowledge is important. ...'*

b. *'The relevance of technical background to quality assurance has not been well defined. Both DQA managers and customers felt that QA people should have a technical background appropriate to the type of industry for which QA services are provided. However, a DQA skills survey emphasised generic tasks, and did not address specialist technical knowledge despite this being listed, as a customer need. DQA has attempted to recruit people with appropriate technical background and skills but has not then ensured that these technical skills are maintained.'*

Discussion on WO Jones

348. I note that the BOI Report states at Section 1.7 that arrangements were made for WO Jones to have legal representation. That implies that the Board thought there might have been serious consequences for him from the proceedings of the Board.

349. The BOI Report at Section 12.3 states there was no scrutiny or checks *'... and if companies have been suppliers to ADI and have the logo of the five ticks, quality accredited, ... (I am) heavily reliant on those sort of things, sir.' ...*

350. The BOI Report doesn't explore beyond the statements at Section 12.3. We do not know whether WO Jones performed no scrutiny or checks because:

a. he actually believed that '... *a certified QMS guarantees quality of product ...*', or

[47] There is a heading of 'DQA procedures' and mention of a Continuous Improvement program in the Report.

[48] See the last paragraph of the 'Summary'.

b. he was forced by circumstances to adopt a stance of relying on paper, or a combination of both positions, or

c. an entirely different reason again.

351. There is no indication of whether the absence of the Chief Petty Officer assistant to WO Jones on training before transfer impacted upon his effectiveness in performing his duties[49]. I think it reasonable to speculate that such instances would be common in the Navy due to the posting system. I allege any complaint would probably have been met with '*...in the light of current resource limitations...*' no. (See BOI Report 11.4 quoted below).

352. There is no indication of whether there had been an adequate transfer of the quality assurance function from the DQAO /DQA to Navy taking into account the manpower and experience that would have been required. Radio Australia raised the issue of staffing in 'Westralia: Fit for Purpose'[50] on 9 August 1998, but not the Board of Inquiry Report which is dated 28 August 1998. Section 11.4 of the BOI Report brings forward the idea of more skilled engineering staff:

> '*11.4 The key to the right approach is good professional engineering judgement. Ideally, this would be exercised in the first instance by the initiator of the potential change but a professional engineering authority should validate it before work is set in train. The Board has not explored whether the RAN has the right resources close to or at the waterfront to exercise this role. The staffing of OAWA is certainly inadequate in terms of qualifications and capacity to assume this responsibility. In the light of resource limitations, there may be no choice but to persist with current unsatisfactory arrangements for configuration change.*'

While Section 11 deals with Configuration Management and not quality assurance it touches upon the issue of adequate staff numbers. I allege it does not address whether WO Jones may have been overwhelmed by the workload and loyally endeavoured to addressed the issues before him in the best traditions of the Service as he knew them. I allege that the Board did not question witnesses on the issue of whether sufficient personnel were committed to the maintenance of the Westralia and whether the Board received any submissions to support the statement '*In the light of resource limitations...*' (From above)

353. A Warrant Officer would mostly have been dependent upon the Navy for his training. WO Jones was a member of the OAWA staff and was not guided by current quality procedures. The lack of OAWA procedures was not reported to be his responsibility. Like most of us, he would have to rely on his training and experience in the absence of current procedures. ANAO Report No5 tabled 17/10/1997 *there is no comprehensive statement of quality policy, or statement of relevant performance indicators (measures of QA performance).* The ANAO report also states that there were few complaints about DQA performance[51], from which I make inferences that the DQA staff

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[49] BOI Report Section 10.167.

[50] Background Briefing

[51] Under the heading 'Customer relationship'. Also the complaints were: service agreed in one state would be refused in another and had not detected defects in supplies.

may have been working from their basic training and experience rather than procedures or perhaps the reported customers didn't have knowledge to be more critical[52]. So, what quality assurance knowledge and experience was transferred to the Navy service personnel with the departure of the DQA staff, if there was no comprehensive statement of quality policy, is not addressed.

354. The ANAO Report No.5, tabled 17/10/1997 makes the point that DQAO senior managers and customers were concerned that quality assurance staff ought to have appropriate technical backgrounds. I draw the Parliament's attention to the fact that this was before the work on the hoses for HMAS Westralia began. The BOI Report makes the point that Navy staff were trained as operators[53] and showed the importance of technical knowledge in decision-making. The BOI Report does not address the knowledge of quality assurance that informed WO Jones or whether it had a wider currency in the Navy. The importance of technical knowledge is that it helps the individual quality assurer to know where to focus attention.

355. Service personnel work under different industrial conditions to civilians. Refusal to perform a duty could be severely punished under law and as stated by the ANAO[54] to the Parliament, '*... A culture of loyalty (for example, to a commander, unit or Service) and an attitude of 'getting the job done' are instilled in recruits. ...*' I believe WO Jones would always have done the best he could in the circumstances in which he was placed and was under pressure. WO Jones would have acted according to the instilled culture: 'Getting the job done'!

356. The public Defence policy document of the time makes the statement: '*...19.4 Defence QA policy is compliant with Commonwealth policy and is applied to the management of procurement risk. ...*[55]' I allege that the Commonwealth policy[56] and paragraphs 19.6 and 19.7 in the DPPG leave it open for readers to assume that a certified QMS guarantees quality of product. The Forward of the Commonwealth policy guide states: '*Use this guide for each procurement you undertake. It will give you confidence that you have matched the risk with the level of assurance required and the means to achieve it.*', and shows the intention for the guide to be used at the working level for each procurement. So, I think it would have been an important action for the Board to look at WO Jones reported actions against those policies. I allege that the Commonwealth policy and the DPPG offer a mitigating circumstance for WO Jones, if he had thought '*...a certified QMS guarantees quality of product...*' or didn't monitor the work, he would have been acting on high authority.

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[52] A reasonable deduction if the customers had sent their QA expertise to the DQAO/DQA at its formation in 1987.

[53] BOI Report Section 9.65

[54] ANAO Report No 22 tabled 14/12/2000 titled 'Fraud Control in Defence' paragraph 3.6.

[55] Defence Procurement Policy Manual (DPPM) Version 1:0 February 1997.

[56] Quality Assurance, Risk Based Approach for Assuring Quality, Purchasing Australia, May 1997.

Commonwealth Procurement Guidelines: Core Policies and Principles, March 1998, Department of Finance and Administration.

357. Defence helped initiate Australian Standards 1821-23 in 1975 [57] and consistently accepted quality systems from about 1985. Navy was deeply involved in the process and the idea '*...a certified QMS guarantees quality of product...*[58]' ought not have been present: if in fact it was.

358. The above points to the possibility that WO Jones, a Non-Commissioned Officer, was left in a no win position by Defence and Navy well before the incident developed.

Conclusion – Reliance on Certification

359. The BOI Report statement '*The assumption that a certified QMS guarantees quality of product is not appropriate*' is supported by the quality standards and industry leaders and is a matter of public record. However, some in business held the view that '*...a certified QMS guarantees quality of product ...*' The standards are addressed to a supplier who aims to install an ISO 9000 quality system so a person with errant views may might not find them challenged. The Board of Inquiry Report made no recommendations to correct that view[59].

360. I allege that the Commonwealth and Defence higher policy documents gave comfort to those who thought '*...a certified QMS guarantees quality of product ...*'. I allege that the Commonwealth policy still does give comfort to the idea that '*...a certified QMS guarantees quality of product ....*'.

361. Had the Board began the Inquiry into the application of quality assurance by listing and examining the Commonwealth and Defence authorities and witnesses, it may have come conclusions that could have produced more helpful recommendations to the Commonwealth and Defence.

362. I think WO Jones appears to be treated unreasonably by the report.

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[57] The Preface to AS 1821to AS1823 –1975 has the following acknowledgement:

'In preparing these standards, cognisance was taken of NATO quality assurance publications, UK Ministry of Defence DEF 05-21, DEF05-25 and DEF 05-29, and draft DEF(AUST) standards prepared by the Quality Assurance Sub-Committee of the Defence Standardization Committee of the Australian Department of Defence.'

[58] I have extracted the statement from the BOI Report statement at Section 12.4: '*The assumption that a certified QMS guarantees quality of product is not appropriate.*' I will use the statement in the text without further referencing.

[59] A statement has been included in the Version 3.0 2002 at paragraph 525 page 3.5.4. The DPPM is the basic policy document on procurement. The DPPG Version 1:0 February 1997 was operative at the time of the incident and the following Version 2.1 July 1999 and did not carry any warnings on the assumption that '*...The assumption that a certified QMS guarantees quality of product is not appropriate'.*

NAVY STAFF WORKLOAD

AIM

363. My aim is to show that the workload was heavy and to question whether overloading and job design was a contributing factor.

STATEMENTS

364. My reading of the BOI Report and my own work experience leaves me with a question of whether the people involved were overloaded. I allege that there is no evidence the issue was seriously addressed by the Board in the hearing. The evidence tells me the workload was heavy.

365. I allege the impression from Section 12.3 the BOI Report is that WO Jones was probably overloaded with work. WO Jones at T1952 states '*This approval was done on an urgent basis when a large number of other jobs were being undertaken*[60]'. At T4451 LEUT Renwick for WO Jones makes a statement the about the process of clarifying the technical details of TM200 and I allege his closing sentence '*... given the very large number of changes and work going on on the ship. It's quite impossible for WO Jones to monitor all of those.*' gives support to the idea that WO Jones was overloaded. Also,

366. I quote from Mr Moreland's statement at T2663 to show that the workload was heavy:

> *'...All right. During this AMP there was approximately 65 jobs to start with, was there, that you were involved in?---That I personally looked after?*
>
> *Yes?---I was probably around about the 30 - - high 30 mark.*
>
> *The high 30 mark? All right. What about other people - -? Yes, there - -*
>
> *- - from ADI? How many jobs was ADI, to your knowledge, undertaking?--- Oh, I couldn't comment on that, but there was quite a few.*
>
> *All right. Well, you were responsible for 34 jobs?---Yes.*
>
> *How would you describe the pressure of work?---Quite hectic. A lot of times that - - we're not there basically to oversee the contractor. We're just there to liaise between and coordinate it between the ship and the - - and the actual subcontractor itself. The sub-contractor usually has his own supervisors and they maintain the work. If they've got problems, then they come and see us. ...'*

[60] Covers a Contract Change Proposal at 10.146 of the BOI Report.

367. LCDR Crouch is asked at T 2918. '...*Okay. Would DQA as it's currently configured here for Western Australia, do what you have just been talking about ? Are they sufficiently staffed to do that? --- No. I don't believe they could. I believe they could go in and they could audit the management system of the people involved, the contract involved, but I don't believe they could do the quality control component of the -- ...*'. The question doesn't extend to: 'Is the Navy sufficiently staffed to do that?

Note: I allege that it was possible to provide a closer supervision of the contract within the guidelines of the DQA procedures and the ISO 9000 series of documents under the concept of 'surveillance'.

368. CMDR Hoyle for LCDR Crouch at T 4466 : '...*It was not part of his duty to oversee or supervise contractors. ...*'

DISCUSSION

369. I argue on the forgoing that work was heavy during AMP12. In fact that would probably be the case for any ship undergoing maintenance. The question to me is did the people involved have sufficient time to think through all that was before them, write the appropriate plans and monitor activities.

370. The numbers of people historically involved in quality assurance in Western Australia could have been ascertained by an Inquiry. My reading leads to the ship having that responsibility. My sources for the wider numbers of staff shows the following for Western Australia.

a. The Crellin Report in 1987[61] stated that a team of four people was provided from the existing resources for resources but numbers had not been fully identified.

b. DQAO training notes[62] from around 22/02/1995 put the number of staff assigned to Navy in Western Australia as one Technical Officer Level 4 and six Technical Officers Level 3.

c. LCDR Crouch at T 2914 on 23.6.98 identified the DQA Staff as three; a naval architect and two others.

Obviously the numbers would be smaller if only one ship is involved.

371. An issue related to workload is job design. Who has the over riding control of the task of project supervision?

372. Section 11.4 ends with the sentence: '...*In the light of resource limitations, there may be no choice but to persist with current unsatisfactory arrangements for configuration change.*' I recognize that refers to configuration change and not the general levels staff available to perform maintenance, but it reflects a policy position. Section 14.10 is an answer in response to a COMCARE question to the Board and refers to a reduction of future safety audits due to the Defence Efficiency Review. However, I cannot find any reference to a possible source for the statements in the documents.

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[61] Kinhill Engineers, 100 Hardwick Crescent, HOLT ACT 2615, 404005 October 1988. LD 88-23881 DGTSP 2431/88 dated 18 October 1988.

[62] DQAO Course 1, Defence, DQAO and Change date from some of the modules is 22/02/95.

373. The transcript carries a statement by CAPT Callaghan at T5 '*...Ultimately the Board will be making a report. That task will require the Board to make findings of fact and those findings must be based on evidence presented to this hearing. That evidence will comprise oral and written evidence from witnesses and various documents and items of material tendered as exhibits to the enquiry.*' This suggests that the Board has made a statement on staffing policy without having the issue placed before the Board in the public proceedings or privately.

374. I think staff levels was a sensitive issue due to the recent conduct and implementation of the Defence Efficiency Review and a Federal Election. I think that managements are always obliged to be effective and efficient in their use of staff and that it was proper for the governments to proceed to restructure the Department of Defence to achieve efficiencies. But, I think the issue of staff levels ought to have been more openly addressed by the Board and that the government and Navy ought have made a public statement to the Board.

375. I can not say whether workload or job design were contributing factors.

CONCLUSION

376. Looking to future Inquiries I suggest that staff workload and job design be investigated to determine whether they are contributing factors.

PARKER ENZED HOSE THAT FAILED A MANUFACTURING TEST

AIM

377. I aim to question the value of the statement and make a helpful suggestion for future inquiries.

STATEMENTS

378. The BOI Report at Section 12.27 reported that

> *Assembly, installation and testing*
>
> *10.148 On and between 7 and 10 April 1998, Mr Old assembled and pressured tested the hoses. The pressure testing was at 1000 kPa for 5 minutes. All supply hoses passed the test, but one return hose failed. In accordance with what he said was his ordinary practice, Mr Old destroyed that hose to prevent re-use, and made up a new one. The new hose passed the pressure test. Mr Old then completed the test certificates and tagged the hoses.[T3015,T3016, T3061, T3063]*
>
> *10.149 The destruction of the hose without fully investigating and documenting the failure, and indeed the failure to inform ADI, suggests poor quality control procedures on the part of Mr Old. LCDR Crouch stated in evidence that if he had known about that one hose failure it would have caused him to question the integrity of all the hoses.[T2832] Mr Old did record the failure of the hose in his closing report. That report was not given to the ship before she sailed on 5 May 1998.[T229] 10.150 Mr Old installed the hoses between 8 and 10 April 1998. He made up and pressure tested the 8 spare hoses on 11 April 1998. Mr Old bagged the spare hoses for storage and gave them to Mr Morland.*

379. The BOI Report at Section 12.27 reported that

> *'12.27 In any event, procedures that are normally expected as part of a quality system were not carried out. For example:*
>
> *a. No test certificate or entry into the test register was made of the hose that failed the pressure test [T3061]. The only documentation recording the failure was the open and closing statement, which the ship had not received at the time of the incident. (ISO 9002 Inspection and Test Records Criteria)*
>
> *b. Mr Old did not keep the length of hose that failed, or inform anyone that a failure had occurred, or investigate the cause of the failure himself.[T3063] (ISO 9002 Corrective Action Criteria).'*

380. The contracts:

a. The HMAS Westralia RPLSS states at 6.4 Control of Non-Conforming Supplies:

(1). *6.4.1* *The contractor shall obtain the agreement of the tasking Authority for the recording and disposition of materiel or work which does not conform to the requirements of the contract (i.e. Disposition of Non-Conformity) where the non-conformance becomes evident in the course of the production of the supplies.*

(2). *6.4.2* *The contractor shall not make use of non-conforming or repaired materials or work in the supplies unless the contractor has the approval of the tasking authority. ...*'

b. ADI *Sub*-contract

(1). 6.1 All work performed under the contract shall be subject to the Quality Assurance standards detailed in AS/NZS ISO 3902:1994.

(2). 6.2 The contractor shall maintain effective control of the work, including subcontracts, provide test

DISCUSSION

381. What is normal? Tests are included in manufacturing processes to demonstrate conformance to specification. Failure of a test has the significance assigned by the designer or manufacturer; or customer if the it is a contract requirement[63]. It may be that scrapping components without investigation is the most economical solution and that analysis of failed components may give little or no useful information[64]. The design issue of spill pulses and the attendant fatigue failure of the hoses was the dominant technical issue in the Westralia incident. It seems reasonable to me that the hoses sold by Parker Enzed would have to be designed to take account of vibration and fluctuating pressures from the variety of machinery to which they would be connected. The practical problem is that the application was beyond the capacity of the hoses supplied. The important issue in the context of manufacture is what test is appropriate and what does the test show? The Parker Enzed action might be normal in its industrial context.

[63] AS/NZS ISO 9001:1994 Sections 4.9, 4.10, 4.11.

[64] 4.13 'Control of non conforming product' requires the supplier to establish documented procedures to control non-conforming product. It permits non-conforming product to be rejected or scrapped. The important conformance issue is what the ENZED quality system required. The introduction states '*... it is not the purpose ... to enforce uniformity of quality systems.*'

382. The BOI Report shows that the Managing Director of Parker Hannifin Australasia was present and clarified the meaning of SST for the Board and the reasons behind catalogue classifications for the Board. The transcript (T3120) shows that one counsel had thought about reasons for testing and raised the subject with Mr Old by reference to earlier statements (3061). It seems reasonable to me that the Managing Director of Parker Hannifin Australasia might have been asked to assist by explaining the reasons behind the test practices and if he could not do so personally then to arrange for a statement to be made to the Board.

383. The Record of Investigation into Death by the Coroner for Western Australia at[65]:

a. Page 90 '*I accept the Board of Inquiry conclusions in relation to the testing of the hoses by Enzed at p 192 (volume I) as follows: ...*'

b. page 91 '*...As the failed hose was destroyed by Mr Old it is not now possible to determine whether an examination of that hose would have provided an insight into why the hoses failed on 5 May, 1998. I would not be prepared to exclude the possibility that a competent and professional approach to the testing would have identified potential problems in using the hoses and prevented tragedy. ...*'

384. I respect the Coroner's the point. But, I think it would have been appropriate to call a witness with experience in the design and manufacture of hoses. The witness could then have put the hoses and testing into an industry perspective. The Enzed actions when placed in an industry perspective could have been more understandable and seen to be safe or revealed a grey area where something more positive could have arisen for the industry and the community in general.

385. In conclusion, I allege that the Board found something to criticise and made a point against Enzed, but failed to investigate the technical issue of the meaning of manufacturing tests for hoses and so possibly did an injustice or lost an opportunity to be a catalyst for helpful change in the industry. I think it detracts from the professional standing of the criticism.

Conclusion

386. I suggest that this illustrates the importance of future Boards calling knowledgeable people as witnesses to clarify technical background.

[65] Inquest into the deaths of Shaun Damian Smith; Phillip John Carroll; Megan Anne Pelly and Bradley John Meek (HMAS Westralia