

The Parliament of the Commonwealth of Australia

OIL SPILLS - A RESPONSE STRATEGY

A Review of the Auditor-General's Audit Report
Is Australia ready to respond to a major oil spill?

**Report from the House of Representatives Standing
Committee on Transport, Communications and Infrastructure**

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**HOUSE OF REPRESENTATIVES STANDING COMMITTEE ON
TRANSPORT, COMMUNICATIONS AND INFRASTRUCTURE**

(37th PARLIAMENT)

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PREFACE

The committee welcomed the opportunity to review the Auditor-General's audit report - *Is Australian ready to respond to a major oil spill?* It complements the committee's work on ship safety.

The key feature of an oil spill strategy is prevention. Fundamental to prevention is crew competency. As mentioned in the committee's *Ships of Shame* report, the human factor is a principal cause of shipping incidents and accidents.

Public and media attention focuses too often on isolated tanker collisions, ruptures and spillages. Tanker accidents, however, account for only 12 percent of all oil pollution of the marine environment. A higher proportion of oil pollution of the marine environment comes from general vessel operations and industrial discharge and urban run-off.

The committee is concerned that insufficient attention is given to other marine pollutants such as hazardous and noxious substances. Many chemicals transported by sea present greater danger to people and the environment than crude oil.

The grounding of the *Iron Baron* resulting in a spillage of 350 tonnes of fuel oil occurred during the review. Due to time limitations, only brief reference has been made to the *Iron Baron* in this report. It should be examined more closely by this committee in the next Parliament. The committee's interim assessment suggests that risk assessment criteria underrated the navigational difficulty in the River Tamar area of the Tasmanian coast.

I thank my committee colleagues for their co-operation in the conduct of this inquiry. I would also like to thank the committee secretariat including the Secretary, Mr Malcolm Aldons, inquiry Secretary, Mr Stephen Boyd and administrative officers Mrs June Murphy and Mrs Sue Cox.

PETER MORRIS MHR
Chairman

ABBREVIATIONS

AMOSC	Australian Marine Oil Spills Centre
AMSA	Australian Maritime Safety Authority
ANAO	Australian National Audit Office
ATAC	Australian Transport Advisory Council
IPIECA	International Petroleum Industry Environmental Conservation Association
MOSAP	Marine Oil Spills Action Plan
National Plan	National Plan to Combat Pollution of the Sea by Oil
NPAC	National Plan Advisory Committee
NPC	Newcastle Port Corporation

CONCLUSIONS AND RECOMMENDATIONS

Introduction

1. Pollution of the sea by oil is a major world problem. For Australia with its 37 000 km of coastline and a diverse marine environment, the threat of an oil spill is particularly significant. Accordingly, it is essential that Australia has an adequately resourced prevention oil spill strategy.

2. The Auditor-General's Audit Report No. 9 of 1994-95, *Project Audit-Is Australia ready to respond to a major oil spill?* reviewed Australia's readiness to respond to a major oil spill focusing on organisational and equipment capabilities. The Australian National Audit Office (ANAO) wanted to know whether Australia was able to deal with a major marine oil spill and whether there was scope for improvement in current arrangements.

3. The committee's review of the audit report has three objectives, namely:

(a) with respect to the recommendations:

(i) to check implementation of recommendations agreed to by the audited organisation;

(ii) where there is disagreement to adjudicate on the differences;

(b) to assess the value added by the audit; and

(c) where relevant, to examine other measures that improve the effectiveness of the subject matter of the audit.

4. AMSA has agreed in whole or in part to 15 of the 18 recommendations made in the Report. The ANAO commented, in its submission of 15 June 1995, 'that it was pleased by AMSA's positive response to the Report' and 'is further encouraged by the progress report provided by AMSA in its submission' to the inquiry (Submission 2, page 13).

AMSA's powers and Commonwealth State relations

5. AMSA did not agree with recommendations 6, 12 and 18. The committee has focussed on these areas of disagreement in order to adjudicate on the difference. This satisfies the committee's objectives set out in paragraph 3(a)(ii).

6. The ANAO's recommendations 6 and 12 suggested that AMSA's administrative powers for an oil spill response should be more clearly defined. Recommendations 6 and 12 stated:

- that AMSA propose a clear definition of responsibilities which will ensure only one party is responsible for an oil spill (R6).
- that AMSA request governments define overriding powers for AMSA for all oil spill responses at sea (R12).

7. Although recommendations 6 and 12 have some basis in management theory, they are unrealistic given the constitutional barriers to achieving a desirable outcome and, accordingly, the committee accepts AMSA's position of disagreement on these recommendations.

Shoreline clean-up standards

8. In recommendation 18, the ANAO recommended that AMSA develop indicative standards for shoreline clean-up. The ANAO commented that this will 'promote better understanding, assessment and planning of shoreline human resources and equipment needs' (ANAO 1994: 58).

9. AMSA's response to recommendation 18 is overall disagreement. The actual response, however, is a 'wait and see' approach. AMSA suggested that if the experience of shoreline clean-up standards in the US and Canada show benefits as suggested by the ANAO, then 'consideration would be given to implementation in Australia' (ANAO 1994: xxxii).

Recommendation

10. The committee recommends that:

1. The National Plan Advisory Committee monitor the development of shoreline clean-up standards in Canada, the United States and other parts of the world and if realistic benefits are shown, then the Australian Maritime Safety Authority be requested to implement appropriate standards in Australia. (paragraph 3.38)

Risk assessment, equipment and resource location

11. The grounding of the *Iron Baron* occurred during the committee's review of the audit report. The committee notes that, currently, there is a separate review of the National Plan response to the *Iron Baron* pollution incident. Accordingly, the committee, at this stage, will limit its comments to risk assessment.

12. In the *Review of the National Plan to Combat Pollution of the Seat by Oil*, the Report of the Working Group on Equipment and Resource Locations (the Working Group) rated the hazards to navigation as low in the Tamar to Stanley area of Tasmania (AMSA 1993: 139). Evidence received by the committee confirms that the entrance to the Tamar River is difficult for ships and extreme care is required. The oil tanker *Bethioua* grounded in the entrance to the Tamar River near George Town in 1976 spilling 350 tonnes of motor gasoline.

13. The Working Group, chaired by AMSA, consisted of representatives from Queensland, Western Australia and the Australian Institute of Petroleum. Further enhancement to risk assessment and equipment location requirements could be made by broadening the membership of this group. For example, the quality of information on navigational complexity could be improved with the addition of a person with current pilotage expertise.

14. In addition, there is a need to improve existing risk assessment methodology. It is a complicated matter that is fundamental to developing contingency plans and for positioning oil spill equipment and resources. As such, the Working Party membership should also include a person qualified in formal risk assessment.

Recommendation

15. The committee recommends that:

2. The Australian Maritime Safety Authority expand membership of the Working Group on Equipment and Resource Locations to include a person with current pilotage expertise and a person qualified in formal risk assessment. (paragraph 3.57)

Crew competency

16. The committee notes that there was little comment in the audit report or in submissions on the issue of crew competency. The committee in its report *Ships of Shame* commented that the human factor has been identified as a principal cause of shipping incidents and accidents (House of Representatives Standing Committee on Transport, Communications and Infrastructure 1992: 88). This is an issue which the committee is reviewing as part of its ongoing ship safety inquiry. The committee strongly believes that the issue of crew competency must be tied in with the assessment of Australia's oil spill prevention strategies.

Recommendation

17. The committee recommends that:

3. The Australian Maritime Safety Authority ensures that crew competency is effectively incorporated into the management of the National Plan. (paragraph 5.15)

Oil sampling in the Port of Newcastle

18. AMSA indicated that the practice of taking samples of ship's oil was only done in the port of Newcastle. The Port of Newcastle commenced routine sampling of bilges and fuel oil in January 1991 as part of Newcastle Port Corporation's (NPC) continuous improvement in environmental management. The NPC reports that the total cost of the sampling procedure, including disposal, is \$7.00 per vessel (Submission 11, page 133).

19. The Newcastle program is intended to raise awareness about the impact on the environment of marine pollution. In addition, it is claimed that the program is a deterrent to ship sourced pollution. AMSA commented that 'Newcastle has recorded a marked decrease in pollution incidents since the program has been in operation' (Submission 11, page 87).

Recommendation

20. **The committee recommends that:**

4. **The National Plan Advisory Committee, as a matter of urgency, request that all its members introduce oil sampling practices similar to those of the Newcastle Port Corporation. (paragraph 5.27)**

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes the need for transparency and accountability in financial reporting.

2. The second part of the document outlines the various methods and techniques used to collect and analyze data. It highlights the importance of using reliable sources and ensuring the accuracy of the information gathered.

3. The third part of the document provides a detailed overview of the results of the study. It includes a summary of the key findings and a discussion of their implications for the field of research.

Chapter One

INTRODUCTION

The reference and objectives of the review

1.1 On 17 November 1994 the Auditor-General's audit report No. 9 of 1994-95-Project Audit-*Is Australia ready to respond to a major oil spill?* was tabled in the House of Representatives. On 30 March 1995 the House of Representatives referred the report to the House of Representatives Standing Committee on Transport, Communications and Infrastructure.

1.2 Given the adverse affects of oil spills on the marine environment and the significant interest in and the international acclaim of the *Ships of Shame* report, the committee welcomed the opportunity to review the report.

1.3 Pollution of the sea by oil is a major world problem. For Australia with its 37 000 km of coastline and a diverse marine environment, the threat of an oil spill is particularly significant. Accordingly, it is essential that Australia has an adequately resourced prevention oil spill strategy

1.4 The committee's review of the audit report has three objectives, namely:

- (a) with respect to the recommendations:
 - (i) to check implementation of recommendations agreed to by the audited organisation;
 - (ii) where there is disagreement to adjudicate on the differences;
- (b) to assess the value added by the audit; and
- (c) where relevant, to examine other measures that improve the effectiveness of the subject matter of the audit.

Conduct of the inquiry

1.5 On 18 August 1995 a subcommittee comprising Mr Morris, MHR, Mr McArthur, MP and Mr Hollis, MP inspected the Australian Marine Oil Spills Centre (AMOSC) at Geelong. As part of the inspection, the subcommittee was briefed on oil pollution response equipment, training programs and logistics for transporting equipment from AMOSC to a potential oil spill.

1.6 A subcommittee comprising Mr Morris, MHR, Mr Cameron, MP and Mr O'Connor, MP took evidence at the public hearing on 21 September 1995. A list of witnesses who gave evidence at the public hearing is at Appendix Two.

1.7 There were 14 submissions to the inquiry which are listed at Appendix Two. The committee also received two exhibits which are listed at Appendix Two.

Report structure

1.8 The next chapter describes the role and objectives of the Australia Maritime Safety Authority (AMSA). In addition, AMSA's management of the *National Plan to Combat Pollution of the Sea by Oil* is explained.

1.9 Chapter three examines AMSA's response to the audit recommendations. In particular, recommendations 6, 12 and 18 which were not accepted by AMSA are examined in detail.

1.10 Chapter four assesses the value of the audit in improving the effectiveness and efficiency of Australia's oil spill response strategy.

1.11 Chapter five discusses broader issues and makes recommendations on matters which need further attention.

Chapter Two

THE AUSTRALIAN MARITIME SAFETY AUTHORITY

The role and objectives of AMSA

2.1 In January 1991 the Australian Maritime Safety Authority (AMSA) was established as a government business enterprise to enhance efficiency and contain costs in the delivery of safety and other services to the Australian maritime industry. The *Australian Maritime Safety Authority Act 1990* (the Act) sets out the functions, powers and funding of AMSA.

2.2 AMSA's services are provided on a cost recovery basis financed from fee and levy revenue sources, and by the Commonwealth Government as a Community Service Obligation. Section 48 of the Act provides for payments to be made to AMSA through amounts received by the Commonwealth under the *Marine Navigation Levy Act 1989*, the *Marine Navigation (Regulatory Functions) Levy Act 1991* or the *Protection of the Sea (Shipping Levy) Act 1981*.

2.3 In 1994-95, AMSA's total revenue for the year was \$68.32 million which included \$31.25 million from the Marine Navigation Levy, \$11.58 million from the Safety Regulatory Levy, \$3.49 million from the Marine Oil Pollution Levy, \$12.99 million from the Commonwealth for Community Service Obligations and \$9.01 million from other revenue (AMSA 1995: 5).

2.4 AMSA's major areas of operation include:

- navigational services;
- ship and personnel safety services;
- maritime safety services; and
- marine environment protection services.

2.5 AMSA's Marine Environment Protection Services division seeks to protect Australia's marine environment by coordinating a national pollution prevention and response capability, appropriate to the threat of pollution from shipping in the Australian region (AMSA 1995: 56).

2.6 AMSA's prevention strategies focus on the implementation of legislative and administrative requirements regarding internationally agreed ship construction and operational requirements (AMSA 1995: 56).

2.7 AMSA has a response capability through its work with the States, Northern Territory and the oil and exploration industries in managing the National Plan to Combat Pollution of the Sea by Oil (the National Plan).

The National Plan

2.8 The National Plan came into operation in October 1973. The impetus for the development of the National Plan was the grounding of the tanker *Oceanic Grandeur* in Torres Strait on 3 March 1970 which highlighted Australia's inability to deal with a major oil spill (House of Representatives Standing Committee on Environment and Conservation 1978: 51).

2.9 The National Plan represents a combined effort by Commonwealth, State and Northern Territory Governments and the industry and exploration industries to provide an effective response strategy to oil pollution incidents in the marine environment. The National Plan provides a framework for responding to major oil spills and includes the following major elements:

- divisions of responsibility;
- equipment levels and location;
- contingency plans; and
- training programs.

Divisions of responsibility

2.10 An oil spill in the marine environment can occur in different jurisdictional boundaries. Accordingly, it is essential that the Commonwealth, the States, Northern Territory and industry are able to provide a coordinated response to an oil spill. The National Plan sets out the divisions of responsibility for responding to an oil spill. The lead agency responsible for providing a response to a marine oil spill is:

- **at oil exploration rigs, platforms and pipelines** - the relevant oil company with assistance, as required, from the National Plan State Committee or AMSA, depending on area of jurisdiction;
- **at oil terminals** - the relevant oil company under the industry Marine Oil Spills Action Plan (MOSAP) arrangements, unless the response is beyond the capability of its resources, in which case responsibility is transferred to the respective State/Northern Territory through the National Plan State Committee, with assistance from AMSA as required;
- **in ports (other than oil terminals) and within the three mile coastal limit** - the responsible State/NT authority through the National Plan State Committee, with assistance from AMSA as required;
- **beyond the three mile coastal waters limit** - the Commonwealth through AMSA, except in those incidents when oil is likely to come ashore. In these circumstances, the State/NT through the National Plan State Committee will be the lead authority for protecting the coastline while AMSA assumes responsibility for ship operational matters, such as salvage; and

- **in the REEFPLAN area of the Great Barrier Reef** - the Queensland Government through the National Plan State Committee, with assistance from AMSA as required (AMSA 1994: 5).

Equipment levels and location

2.11 The unpredictable nature of an oil spill and factors such as oil type, temperature, location and sea state complicate the response strategy. The National Plan seeks to ensure, as far as possible, that the best response can be mounted to an oil spill. This includes stockpiling oil spill response equipment, and ensuring that transport and logistical arrangements are available to deliver the equipment to the location of the spill.

2.12 Through National Plan arrangements, stockpiles of oil spill dispersants and recovery equipment are located at major ports. This complements equipment already held by port authorities and individual oil companies. A major industry stockpile is held at the Australian Marine Oil Spill Centre, Geelong (AMOSC).

2.13 AMOSC is a subsidiary company of the Australian Institute of Petroleum and assists AMSA in responding to major oil spills. The centre is equipped with an extensive range of oil spill response equipment sufficient to respond to a major oil spill of nominally 10 000 tonnes (AMSA 1995a: 24). AMOSC operates on a 24 hour stand-by for rapid deployment of equipment and personnel to a major oil spill anywhere around the Australian coast. The centre has access to road and air transport.

2.14 The National Plan provides for risk assessment and the development of contingency plans as an aid to stockpiling and locating oil spill equipment.

Risk assessment, equipment and resource location

2.15 Evidence shows that most marine accidents are due primarily to negligence by a ship's crew (AMSA 1993: 57). Accordingly, risk assessment plans are made more difficult due to the variables introduced. The review of the National Plan in 1993, when defining equipment needs, focussed on three major risk assessment factors:

- the environmental sensitivity of the area;
- traffic density; and
- hazards to navigation (AMSA 1993: 57).

2.16 These factors suggest the risk of a marine accident, such as a collision or grounding, increases with increasing shipping traffic and areas where navigation is difficult. In addition, the environmental sensitivity of the area will heighten the urgency of an effective response (AMSA 1993: 58). The Working Group on Equipment and Resource Locations (the Working Group) used these risk assessment criteria as the basis for resource and equipment locations. The report of the Working Group is Annex 1 in the *Review of the National Plan to Combat Pollution of the Sea by Oil*.

2.17 If in the opinion of the Working Group a zone was considered to pose a risk in any two of the risk assessment points listed above, 'then that zone was accepted as requiring appropriate equipment to mount an initial Tier 2/3 response' (AMSA 1993: 127-128). The Tiers are:

- Tier 1: oil spills less than 10 tonnes;
- Tier 2: oil spills 10 to 1 000 tonnes; and
- Tier 3: oil spill greater than 1 000 tonnes.

Contingency plans

2.18 The International Petroleum Industry Environmental Conservation Association (IPIECA) has produced a guide to contingency planning. This guide suggests that preventative controls to avoid spillages should receive high priority. The inevitability of oil spills requires that oil spill contingency plans are developed that are 'sufficiently flexible to provide a response appropriate to the nature of the operations, the size of the spill, local geography and climate' (IPIECA 1991a: 2).

2.19 In Australia, the umbrella contingency plan is the National Plan to Combat Pollution of the Sea by Oil. The State and Northern Territory Governments develop their own plans with assistance from State environment/heritage authorities for special areas and parks. Local contingency plans are developed by oil companies, port authorities and State Governments with assistance from local councils for areas outside ports (AMSA 1993: 61).

Training

2.20 AMSA provides technical advice and training to the States, Northern Territory and the oil exploration and maritime industries in providing cost effective and environmentally sound response methods to oil spill incidents (AMSA 1994: 46). AMSA's training program includes courses for oil spill commanders, on scene co-ordinators, equipment operators and scientific support coordinators. In addition, workshops are provided in oil spill response techniques and contingency planning.

Review of the National Plan

2.21 In October 1991 the Australian Transport Advisory Council Ministers established a high level working party to review the National Plan. The working party consisted of representatives from the Commonwealth, State and Northern Territory Governments and from the oil industry. The terms of reference for the review included but were not confined to the following:

- review the need for a National Plan having regard to funding, levels of risk, equipment and training needs, and National Plan management issues;
- examine the existing National Plan philosophy and operations with a view to revising the Plan to accord with recommended outcomes of the review; and
- examine the division of responsibility between AMSA, the States/NT, and the oil and shipping industries.

2.22 The working party made 30 recommendations of which 27 were implemented as at October 1995. A key change recommended was:

. . . that the National Plan, to date largely a matter for State and Federal Governments, needs to be refocussed, to ensure full integration of all government and industry activities (AMSA 1993: 3).

2.23 In fulfilling this objective, the review recommended that an advisory committee, known as the National Plan Advisory Committee (NPAC) be established to 'enable the various parties to the National Plan to have a forum in which to express their opinions and decide the future of the National Plan (AMSA 1993: 46). Membership of the NPAC includes:

- Australian Maritime Safety Authority;
- Commonwealth Department of Transport;

- Emergency Management Australia;
- Commonwealth Department of Primary Industries and Energy;
- Environment Protection Agency;
- Great Barrier Reef Marine Park Authority;
- Each State and the Northern Territory Government;
- Australian Shipowners Association;
- Australian Institute of Petroleum including the Australian Marine Oil Spills Centre;
- Australian Petroleum Exploration Association; and
- A representative of the State Scientific Support Co-ordinators Advisory Group.

2.24 NPAC provides 'advice and assistance to the AMSA Board in the development and implementation of programs such as training, equipment monitoring, acquisition, maintenance policies exercising contingency plans and other issues which affect the interests of all parties to the National Plan' (AMSA 1993: 6).

Chapter Three

RESPONSE OF AMSA TO THE AUDIT

The project audit - reasons and scope

3.1 The Auditor-General's Audit Report No. 9 of 1994-95, *Project Audit-Is Australia ready to respond to a major oil spill?* reviewed Australia's readiness to respond to a major oil spill focusing on organisational and equipment capabilities.

3.2 The report commented that the potential for large economic and environmental loss from a major oil spill in Australia's marine environment is significant. The threat and damage from oil spills was shown through recent disasters such as the *Exxon Valdez* incident. In 1989, the *Exxon Valdez* spilled 36 000 tonnes of oil onto the Alaska coastline. Closer to Australia, the *Kirki* incident off the coast of Western Australia in 1991 resulted in 17 900 tonnes of oil spilt into the sea.

3.3 The potential risk of a disaster is influenced by the level of shipping traffic in Australian waters. Each year, more than 22 million tonnes of oil is shipped in Australian waters. All classes of vessels make over 26 000 port visits each year.

3.4 In view of these considerations, the Australian National Audit Office (ANAO) wanted to know whether Australia was able to deal with a major marine oil spill and whether there was scope for improvement in current arrangements. In addition, the ANAO commented that the volume of media coverage on oil spills was another reason for the audit (Transcript: page 15).

3.5 An oil spill response is divided into three levels, namely prevention, response and long-term effects. Prevention is the first line of defence against pollution of the marine environment, but once there is 'oil on water', a spill response is required. The audit focused on the arrangements for responding to oil spills and did not extend to a review of the prevention of oil spills.

3.6 In addition, while the ANAO reviewed equipment requirements for a response it did not analyse personnel, transport and logistics support requirements (ANAO 1994: xiv).

Major findings and progress to date

3.7 The audit is effectively a review of AMSA's *Review of the National Plan to Combat Pollution of the Sea by Oil*, 1993 (Transcript: page 25). The Senate Standing Committee on Industry, Science, Technology, Transport, Communications and Infrastructure in its report, *Disaster Management*, June 1994, commented that AMSA's review 'successfully confronted many of the problems of co-operation and co-ordination that had previously occurred in marine oil spills'. (Senate Standing Committee on Industry, Science, Technology, Transport, Communications and Infrastructure 1994: 54).

3.8 The ANAO's report contained 18 recommendations of which AMSA has agreed in whole or in part to 15. The ANAO's overall conclusion was:

. . . that with the technology currently available there is no certainty that a major oil spill can be dispersed before it impacts on the shoreline. However, the ANAO believes that there is scope for improving oil spill response arrangements and the assessment of equipment requirements.

It believes also that AMSA should encourage the States, Northern Territory and industry to assume greater responsibility for response operations, equipment storage and personnel training.

This would allow AMSA to assume a more strategic leadership role in managing the plan (ANAO 1994: xxiii).

3.9 The ANAO noted weaknesses in oil spill preparedness including a lack of clear response standards, lower levels of response equipment than is required in some areas in northern Australia and insufficient testing of response arrangements. With respect to representation on the National Plan Advisory Committee, the ANAO commented that there was:

. . . no representation of the salvage industry, coastal local government councils, commercial, recreational and environmental groups on the National Plan Advisory Committee (ANAO 1994: viii).

3.10 The ANAO's recommendations are contained in full at Appendix One. In summary, the ANAO recommended that AMSA define its role as manager of the National Plan and agree this with the States, Northern Territory and industry. In addition, AMSA was advised to adopt a more strategic leadership role, oversighting the States and Northern Territory, possibly, by establishing quality assurance style arrangements (ANAO 1994: ix).

3.11 At the response and operational level, the ANAO recommended that AMSA consider establishing a National Response Team of specially trained operators, available on request to respond quickly and expertly to an oil spill, regardless of jurisdictional boundaries (ANAO 1994: ix).

3.12 At the international level, the ANAO recommended that AMSA consider a regional alliance between Australia and its northern neighbours covering oil spill prevention and response matters, thus improving protection to Northern Australia (ANAO 1994: ix).

3.13 Finally, the ANAO recommended that AMSA quantify oil spill response planning standards and define equipment requirements to meet these standards. In addition, AMSA should clarify current planning assumptions regarding the design spill size and establish a benchmark for the National Plan capability (ANAO 1994: ix).

3.14 As mentioned above, AMSA has agreed in whole or in part to 15 of the 18 recommendations made in the Report. The ANAO commented, in its submission of 15 June 1995, 'that it was pleased by AMSA's positive response to the Report' and 'is further encouraged by the progress report provided by AMSA in its submission' to the inquiry (Submission 2, page 13).

3.15 The committee is satisfied with AMSA's response to the audit as noted by the ANAO. In addition, it is encouraging that nine of the 15 accepted recommendations have been fully implemented. AMSA have advised that the remainder of the recommendations will be implemented during 1995-96. This satisfies the committee's objective, set out in paragraph 1.4(a)(i), of checking the implementation of recommendations. The status of each recommendation as at September 1995 is detailed in Appendix One.

AMSA's powers and Commonwealth/State relations

3.16 AMSA did not agree with recommendations 6, 12 and 18. The committee has focussed on these areas of disagreement in order to adjudicate on the difference. This satisfies the committee's objectives set out in paragraph 1.4(a)(ii).

3.17 The ANAO's recommendations 6 and 12 suggested that AMSA's administrative powers for an oil spill response should be more clearly defined. Recommendations 6 and 12 stated:

- that AMSA propose a clear definition of responsibilities which will ensure only one party is responsible for an oil spill (R6).
- that AMSA request governments define overriding powers for AMSA for all oil spill responses at sea (R12).

3.18 As recommendations 6 and 12 are both concerned with defining responsibility for an oil spill response, they will be examined together. Through these recommendations the ANAO wanted to ensure that only one party is responsible for an oil spill response. This situation would avoid any confusion and in theory provide for a rapid and more effective response.

3.19 The ANAO suggested that responsibility for an oil spill could change as the oil spill moved into different regions of responsibility (see paragraph 2.10). The ANAO commented that this situation could lead to a 'dispute if one of the parties did not agree with the prediction for the movement of the oil' (ANAO 1994: 20). The ANAO stated:

. . . the need for management hand-overs during oil spill responses should be avoided to ensure that operational efficiency is not put at risk and a clear path of accountability is maintained. . . when an oil spill occurs one responsible party should be identified and the oil spill response managed by that party from the beginning to the end, regardless of geographic or jurisdictional boundaries (ANAO 1994: 20).

3.20 AMSA rejected recommendations 6 and 12 because there was little likelihood of agreement between the Commonwealth and the States on who should have responsibility for an oil spill response. AMSA commented that the 'States/Northern Territory rejected the proposal for an overriding oil spill response Commander, primarily because it was not consistent with State Emergency arrangements which must be suitable for a range of potential disasters of which a major oil spill is but one eventuality' (ANAO 1994: xxvii).

3.21 In addition, AMSA suggested that these recommendations confronted States' rights issues. AMSA commented that the 'State/Northern Territory Governments clearly stated their objections to such an arrangement in the course of the National Plan Review' (ANAO 1994: xxix). In addition, AMSA commented that 'there is no way that one organisation like AMSA can override what is in the constitution' (Transcript: page 35).

3.22 Evidence from the Australian Marine Oil Spills Centre supported this view, and went one step further commenting that the 'arrangements that have been developed are as good as you can get' (Transcript: page 14).

3.23 The committee received evidence on a real life example of jurisdictional problems. The Westernport and Peninsula Protection Council are opposed to plans to develop an oil terminal at Crib Point and allow the introduction of tankers into Westernport Bay (Submissions 5 and 12).

3.24 The Westernport and Peninsula Protection Council received advice from the Victorian Minister for Planning, the Hon Robert Maclellan, MLA, who stated that it is at the level of the Commonwealth Government that 'responsibility actually lies for regulation of petroleum imports and exports and shipping in general' (Exhibit 2).

3.25 Despite this, advice received by the committee indicates that the Crib Point Terminal and control of shipping in Westernport Bay are solely the jurisdictional responsibility of the Victorian State Government (Submission 13, page 177).

3.26 The Federal Minister for Environment, Sport and Territories, Senator the Hon John Faulkner, stated in response to a question on notice about jurisdictional responsibility in Westernport Bay:

. . . it is the Victorian Government which is responsible for responding to oil spills in State waters; it is the Victorian Government which has control of shipping within State waters (Parliamentary Debates (Hansard), Senate, 19 October 1995, page 2226).

3.27 Although recommendations 6 and 12 have some basis in management theory, they are unrealistic given the constitutional barriers to achieving a desirable outcome. Accordingly, the committee accepts AMSA's position of disagreement on these recommendations.

3.28 This is not to say that there is no room for improvement in the management systems in place to deal with an oil spill. The committee notes the ANAO's concern that in the procedure manual documentation that existed when the audit commenced 'there were things that were not well defined and required clarification' (Transcript: page 19). Given the need for an effective management system to respond to an oil spill, AMSA should, through the National Plan Advisory Committee, regularly evaluate management structures for the National Plan.

Standards for shoreline clean-up

3.29 In recommendation 18, the ANAO recommended that AMSA develop indicative standards for shoreline clean-up. The ANAO commented that this will 'promote better understanding, assessment and planning of shoreline human resources and equipment needs' (ANAO 1994: 58).

3.30 The impact of an oil spill on a shoreline and the length of coastline affected can vary widely. In Canada, during March 1979, the *Kurdistan* spilt 7 000 tonnes of oil and affected 1 320 km of coastline. In contrast, the *Arrow*, during February 1970, spilt 9 000 tonnes of oil and affected 80 km of coastline (ANAO 1994: 59).

3.31 Shoreline clean-up equipment includes items such as sorbent booms, shovels, mops, buckets, vacuum pumps, spotlights, portable generators. A basic set of this equipment is usually stored on stand-by at the central stockpile in the various coastal zones.

3.32 The ANAO noted that shoreline clean-up standards are in use by Canada and the United States. Canada has a standard that requires 500 metres of shoreline to be cleaned in one day. The Exxon Oil Spill Response Field Manual suggests 2 km a day (ANAO 1994: 58).

3.33 AMSA is opposed to the development of shoreline clean-up standards and commented that 'while the concept of shoreline clean-up standards appears attractive, it is realistically impossible to develop meaningful standards for the range of circumstances likely to be confronted in a pollution clean-up operation' (ANAO 1994: xxxii).

3.34 AMSA pointed out that Norway and the United Kingdom 'do not use any planning standards at all' (Transcript: page 42). In addition, AMSA was critical of the Canadian standards commenting that 'they did not take into account the spreading effect, the surface tension, the changes, the type of oil' and, as such, 'those planning standards do not stand up' (Transcript: page 43).

3.35 The committee notes the arguments for and against the development of shoreline clean-up standards. The evidence provided to the committee is, however, limited and inconclusive.

3.36 AMSA's response to recommendation 18 is overall disagreement. The actual response, however, is a 'wait and see' approach. AMSA suggested that if the experience of shoreline clean-up standards in the US and Canada show benefits as suggested by the ANAO, then 'consideration would be given to implementation in Australia' (ANAO 1994: xxxii).

3.37 More evidence is needed on the costs and benefits of shoreline clean-up standards. Accordingly, the committee does not accept AMSA's outright disagreement with Recommendation 18.

Recommendation

3.38 *The committee recommends that:*

1. **The National Plan Advisory Committee monitor the development of shoreline clean-up standards in Canada, the United States and other parts of the world and if realistic benefits are shown, then the Australian Maritime Safety Authority be requested to implement appropriate standards in Australia.**

Equipment levels and contingency planning

3.39 The committee noted other areas where there was disagreement between the ANAO and AMSA. The ANAO suggested that there were lower levels of equipment and dispersant than are required in parts of northern Australia. AMSA stated that this was technically incorrect, and that levels of equipment in parts of northern Australia had been assessed by 'industry and oil spill response experts' (ANAO 1994: 62).

3.40 In response to this, the ANAO commented, in a supplementary submission, that it 'stands by the validity of its analysis' (Submission 7, page 51). The ANAO is, by implication, suggesting that its analysis is superior to 'industry and oil spill response experts'. It is noted that the ANAO commissioned consultants for its report. In seeking a resolution to this disagreement, it is suggested that AMSA quantify equipment information as suggested by the ANAO at paragraph 3.48 of its report.

3.41 This area of disagreement alerted the committee to the quality and accuracy of risk assessment and contingency planning. The ANAO's recommendations 2 and 3 focused on contingency planning issues. Recommendation 16 dealt with the planning approach to the assessment and allocation of equipment around the Australian coastline.

3.42 There was, however, only limited analysis of the quality of individual contingency plans, and the risk assessment factors used in their development. In view of this, the committee believes it is essential that all contingency plans should be reviewed on a regular basis, and welcomes advice from AMSA that the NPAC, on 27 September 1995, endorsed a framework for assessment of local contingency plans as proposed in recommendation 3 of the Audit Report (Submission 10, page 72).

The *Iron Baron* oil spill

3.43 The grounding of the *Iron Baron* occurred during the committee's review of the audit report. The committee notes that, currently, there is a separate review of the National Plan response to the *Iron Baron* pollution incident. Accordingly, the committee, at this stage, will limit its comments to risk assessment.

3.44 The Report of the Working Group on Equipment and Resource Locations (the Working Group) rate the hazards to navigation as low in the Tamar to Stanley area of Tasmania (AMSA 1993: 139). Evidence received by the committee confirms that the entrance to the Tamar River is difficult for ships and extreme care is required. The oil tanker *Bethioua* grounded in the entrance to the Tamar River near George Town in 1976 spilling 350 tonnes of motor gasoline.

3.45 In response to the grounding of the *Bethioua*, Police and State Emergency officials evacuated about 500 people from the shores of the Tamar River to escape fumes from the leaking ship. Residents were warned not to light fires because of the danger of an explosion. Dispersants were spread around the ship to coagulate the fuel and make it sink.

3.46 The Port of Launceston Authority advised that, during the last five years, there have been two other incidents where ships have grounded in the River Tamar. In February 1993, a woodchip grounded at the entrance to the river. This was followed in August 1993, when a twin screw Ro-Ro vessel grounded during river transit (Submission 10, page 73).

3.47 The Working Group did not rate any location in Tasmania as a likely area where a spill would occur. The Working Group stated that the five most likely areas, based on shipping statistics, for a spill to occur are:

- Qld: Cape York/Hervey Bay
- NSW: Port Stephens/Lake Illawarra
- Vic: Cape Liptrap/Cape Otway
- WA: Western Pilbara

- WA Southern Ports (AMSA 1993: 126)

3.48 In view of the Tamar River's navigational difficulty and serious groundings occurring in this area, the committee questions the risk assessment applied to this part of the Tasmanian coast.

3.49 The Working Group recognised nine factors as contributing to the risk of a major oil spill. These include:

- the risk of collision;
- the risk of grounding;
- hazards to navigation;
- seaworthiness of vessels;
- negligence of crews;
- size/type of vessel;
- type/amount of oil carried;
- traffic density; and
- environmental factors including tidal flow and weather ect.

3.50 The Working Group reduced these factors to three major points to assess equipment requirements, namely:

- environmental sensitivity of the area;
- traffic density; and
- hazards to navigation (AMSA 1993: 127).

3.51 If in the opinion of the working group, 'a zone was considered to pose a risk in any two of these points then that zone was accepted as requiring appropriate equipment to mount an initial Tier 2/3 response'. A zone posing a risk in only one of the points above 'should only be considered for Tier 1 port type spills' (AMSA 1993: 128). Tier 1 is an oil spill of less than 10 tonnes.

3.52 The Tamar to Stanley region of the Tasmanian coast was assessed as posing a risk in only one of the factors listed above. Under the criterion of 'hazards to navigation', the risk assessment was rated as low. As such, the Working Party identified no equipment shortfall and no additional equipment was recommended (AMSA 1993: 139).

3.53 In view of the serious groundings, near the entrance to the Tamar river, of the *Bethiouna* and the *Iron Baron*, the committee questions the risk assessment methodology. The Working Group commented that 'the most likely locations for oil spills to occur are those with higher traffic densities' (AMSA 1993: 124). By emphasising this point, other factors may not be given adequate consideration.

3.54 Risk assessment should give due consideration to navigational complexity. It is not clear that this is adequately represented in the existing risk assessment criteria. In condensing the risk assessment factors into the three listed above, the Working Group may have produced over simplified risk assessment criteria.

3.55 The Working Group, chaired by AMSA, consisted of representatives from Queensland, Western Australia and the Australian Institute of Petroleum. Further enhancement to risk assessment and equipment location requirements could be made by broadening the membership of this group. For example, the quality of information on navigational complexity could be improved with the addition of a person with current pilotage expertise.

3.56 In addition, there is a need to improve existing risk assessment methodology. It is a complicated matter that is fundamental to developing contingency plans and for positioning oil spill equipment and resources. As such, the Working Party membership should also include a person qualified in formal risk assessment.

Recommendation

3.57 The committee recommends that:

2. The Australian Maritime Safety Authority expand membership of the Working Group on Equipment and Resource Locations to include a person with current pilotage expertise and a person qualified in formal risk assessment.

Chapter Four

ASSESSMENT OF THE AUDIT REPORT

Introduction

4.1 The second objective of the committee review (paragraph 1.4(b)) is to assess the value added by the Audit. The purpose of the ANAO's project audit is set out in section 54 of the *Audit Act 1901*. The main objective is to provide recommendations which lead to better control of resources, to greater efficiency or economy, or to improved performance and management practices.

4.2 The committee has focused on how the ANAO's recommendations have helped to improve AMSA's control of resources and management practices. Appendix One sets out the ANAO's recommendations and AMSA's response and progress in implementing the recommendations. Of the 15 recommendations agreed, 9 of the recommendations have been completely implemented and the remainder will be implemented during 1995-96.

Timing of the audit report

4.3 AMSA and AMOSC suggested that the audit was too soon after the *High Level Working Party Review of the National Plan to Combat Pollution of the Sea by Oil* which started in October 1991 and reported to the Australian Transport Advisory Council (ATAC) Ministers in June 1993. The ANAO started its audit of AMSA in March 1993.

4.4 The review of the National Plan made 30 recommendations, many of which, claim AMSA and AMOSC, were still being implemented when the audit started (Transcript: pages 7, 32 and 36). AMSA commented that many of the ANAO's findings were 'outcomes that were included and identified in the review of the National Plan itself, and would have been picked up in the course of the period anyway' (Transcript: page 32).

4.5 AMSA suggested that more value would have come from the audit if it had come some 18 months to two years after the review of the National Plan. This assumes that the National Plan was fundamentally correct. Given the importance of an oil spill response strategy and the associated importance of public accountability, the committee accepts the timing of the audit.

Scope of the report

4.6 As stated in paragraphs 3.5 and 3.6, the ANAO focussed on arrangements for responding to oil spills and did not review the prevention of oil spills. In addition, the ANAO did not examine personnel, transport and logistics support requirements.

4.7 All groups agree that prevention remains the best protection against oil pollution and environmental damage (Transcript: pages 3, 26, 34 and 35). An important if not essential part of a prevention strategy is port state control. In its progress report on ship safety, November 1994, the committee recommended that AMSA produce a set of region based performance indicators for inclusion in its annual port state control report (House of Representative Standing Committee on Transport, Communications and Infrastructure 1994: xi).

4.8 The ANAO justified its decision to focus on oil spill response capabilities in view of the committee's own examination of prevention issues in its report *Ships of Shame* (Transcript: pages 16 and 26). In addition, the committee notes that project performance audits tend to examine smaller areas of an agency's operations than do efficiency audits (ANAO 1994a: 1).

4.9 The committee, however, believes that in view of the importance of prevention issues, and in view of the matters raised in paragraph 4.6, further examination of marine pollution prevention strategies is needed. On this point, the committee notes that the Senate References Committee on Environment, Recreation, Communications and the Arts is currently conducting an inquiry into marine pollution.

Assessment

4.10 The main objective of the project audit was to improve AMSA's management practices leading to greater operational efficiencies in the management of the National Plan.

4.11 ANAO's recommendations have led to a number of major improvements. AMSA has strengthened its regional alliances, particularly with respect to the management of an oil spill in Australia's northern seas. AMSA has signed memorandums of understanding with Papua New Guinea and Indonesia. In addition, discussions have started in the Asia Pacific Economic Community forum on the possibility of developing an APEC/ASEAN regional pollution assistance arrangement (R1).

4.12 The monitoring and development of local contingency plans will be improved with AMSA accepting that contingency planning should be coordinated centrally. This will ensure that standards of contingency planning are maintained and appropriate (R3).

4.13 The quality of oil spill reporting requirements will be improved. For example, the States and Northern Territory will review pollution reporting requirements and ensure that all pollution incidents are reported to AMSA (R4).

4.14 With respect to the management of an oil spill response, the relationship between primary agency and lead agency will be clarified and made more effective. The primary agency has statutory authority if the oil spill occurs in its area of jurisdiction. The lead agency has operational responsibility to manage an oil spill as specified in the appropriate contingency plan. In situations where the primary agency considers that the lead agency cannot respond effectively to an oil spill, the primary agency may assume control of the response (R5).

4.15 As a result of the audit, AMSA will fully define its role as manager of the National Plan in consultation with the National Plan Advisory Committee (R9). The ANAO commented, with respect to management, that there 'are some very important areas that need better definition of roles and responsibilities (Transcript: page 19).

4.16 In view of these developments, the committee concludes that the ANAO's report has contributed to improving AMSA's management of the National Plan. Consequently, the ANAO has met its objectives as set out under section 54 of the *Audit Act 1901*.

4.17 The committee notes that the ANAO had not previously audited Australia's oil spill response capabilities. An oil spill has the potential to cause large economic loss and cause significant damage to the marine environment. Thus, the ANAO's audit of AMSA is appropriate, has provided a number of effective recommendations, and, perhaps more importantly, raised further issues for consideration.

Chapter Five

SIGNIFICANT ISSUES OUTSIDE THE AUDIT

The nature of oil spills - a perspective

5.1 The committee's review of the audit report, the matters raised in its previous report, *Ships of Shame*, and its continuing inquiry into ship safety issues has alerted it to a number of areas which need further investigation and clarification. This satisfies the committee's objective as set out under paragraph 1.4(c).

5.2 First, the nature of oil pollution of the marine environment must be put in perspective. Oil pollution by oil tankers can attract significant media attention and there is the perception that pollution from this source is the greatest danger. Certainly, there is significant shock and impact from large oil tanker spills such as those of the *Amoco Cadiz* (220 000 tonnes spilt) and the *Exxon Valdez* (36 000 tonnes spilt). Oil spills of this size, however, are exceptional.

5.3 Data showing the cumulative percentage of spills versus spill size shows that over 80 percent of recorded oil spills are less than 1 000 tonnes. Only five percent of oil spills are greater than 10 000 tonnes (International Petroleum Industry Environmental Conservation Association (IPIECA) 1991b: 8). In Australia in the 10 year period to 1992, 98 percent of marine oil spills were less than 7 tonnes, 1.75 percent were between 7 to 700 tonnes and the remaining 0.25 percent were greater than 700 tonnes (AMSA 1993: 123).

5.4 Data showing the source of oil pollution shows that tanker accidents account for only 12 percent of all oil pollution of the marine environment. General vessel operations account for a further 33 percent. A major, and often over looked, source of oil pollution of the sea is from industrial discharge and urban run-off which accounts for 37 percent of all oil pollution of the sea (IPIECA 1991a: 7).

5.5 A further fact is that international experts advise that it is rare to recover at sea more than 10 percent of the volume of oil spilt (ANAO 1994: xiii). In a similar vein, the review of the National Plan, under recommendation 3, sought to inform the community of the limitations in responding to a major oil spill. The review commented 'that other than in favourite circumstances current technology does not exist to prevent weather driven oil coming ashore on a coastline or to guarantee prevention of environmental damage and economic loss' (AMSA 1993: 5).

5.6 In making these observations, the committee is seeking to ensure that perceptions of an oil spill are not just limited to oil spilt from oil tankers. This is but one part of the problem and in ensuring that Australia has the most effective oil spill response strategy, all sources of oil pollution must be assessed and improvement made.

5.7 In addition, the committee asserts that the emphasis should be on reducing and preventing marine pollution per se. There are other highly toxic forms of marine pollution, such as chemicals. The case of the *Sanko Harvest* is one example. It struck a reef off Esperance, Western Australia on 14 February 1991 releasing a cargo of 30 000 tonnes of soluble fertiliser.

5.8 In September 1995 the 6 710 tonnes Panamanian registered motor tanker, *Jovian Loop*, grounded on Unison Reef in the inner two-way route of the Great Barrier Reef. The ship was carrying 500 tonnes of melted down fats for making candles and soap. Fortunately the ship was not holed and no pollution resulted, but this example shows the potential risk of pollution to the marine environment by chemicals and other substances.

5.9 The *Review of the National Plan to Combat Pollution of the Sea by Oil* recommended that AMSA, in conjunction with interested parties, conduct a review into the requirements to respond to chemical spills at sea. A draft of the National Chemical Spill Plan commented that 'many chemicals transported by sea present a far greater pollution and human health threat than that of crude oil' (AMSA 1995: 6).

5.10 Hazardous materials can react with water in different ways. These reactions are divided into four groups:

- **substances which form gas and vapour clouds** - products can include ammonia, chlorine, methane and propane butane which are transported under pressure or in a refrigerated state. When these substances escape they form a gas which may be explosive and toxic;
- **substances which float** - chemicals in this group can include vegetable oils, refined petroleum products and solvents;
- **substances which dissolve or disperse** - these chemicals can include alcohols, sulphuric and phosphoric, nitric acids, acetone and caustic soda; and
- **substances which sink** - these chemicals can include tetraethyl lead and tetrachloromethane.

5.11 An examination of single voyage permits for the carriage of goods by sea since 1992 reveals some of the chemicals transported in quantity in Australian waters:

- sulphuric acid;
- sodium cyanide;
- ammonium nitrate;
- sulphur;
- propane;
- butane
- caustic soda;
- soda ash;
- resin;

- fertiliser; and
- explosives

5.12 In addition to these matters, the committee investigations focussed on the following issues:

- crew competency;
- oil types and reaction when mixed with sea water;
- reporting of oil spills; and
- equipment effectiveness.

Crew competency

5.13 The committee notes that there was little comment in the audit report or in submissions on the issue of crew competency. The committee in its report *Ships of Shame* commented that the human factor has been identified as a principal cause of shipping incidents and accidents (House of Representatives Standing Committee on Transport, Communications and Infrastructure 1992: 88). This is an issue which the committee is reviewing as part of its ongoing ship safety inquiry. The committee strongly believes that the issue of crew competency must be tied in with the assessment of Australia's oil spill prevention strategies.

5.14 The committee notes that in AMSA's organisational chart and division of responsibilities, marine qualifications and crewing of ships is separated from the Marine Environment Protection Services division which is responsible for the management of the National Plan (AMSA 1995: 8). The committee, in recognising the importance of crew competency, needs to be reassured that the current divisions of responsibility ensure that crew competency issues figure prominently in the management of the National Plan.

Recommendation

5.15 The committee recommends that:

3. The Australian Maritime Safety Authority ensures that crew competency is effectively incorporated into the management of the National Plan.

Oil types and reaction when mixed with sea water

5.16 There was only minor comment made on the different types of oils and the chemical changes that occur when oils are mixed with sea water. Knowledge of the type of oil spilt and its properties is vital to ensuring that an effective response is mounted. Different oils display varying toxicity and disperse at different rates. For example, spills of lighter oil have the greatest toxic damage, but spills of heavy oils such as crudes and bunker fuels are less likely to disperse and may kill organisms through smothering them. In addition, some oils are more susceptible to natural or chemical dispersion (IPIECA 1991a: 6).

5.17 The terms of reference for the Working Group on Equipment and Resource Locations mentioned the need to 'define the types (quantities/locations/condition) of spill to be used as a benchmark for the assessment' (AMSA 1993: 118).

5.18 The committee is concerned that the three risk assessments factors, described at paragraph 3.50, may not give due regard to oil type. The committee notes that the International Petroleum Industry Environmental Conservation Association's recommendations on preparing contingency plans should include information on the types of oil likely to be spilled (IPIECA 1991b: 17). IPIECA commented:

It is recommended that companies prepare a list of the properties of oils commonly traded in their area or produced from exploration and production operations and be aware of their probable

behaviour on water and their responses to chemical dispersants (IPIECA 1991b: 9).

5.19 More detailed information on oil types and chemicals likely to be transported, by shipping route, should be collated. The committee is not aware that statistical data of this detail is collected. A database showing the likely oils and hazardous cargoes transported by shipping route could assist with the distribution of dispersants and equipment.

Oil sampling - Port of Newcastle

5.20 The ANAO recommended that AMSA give a high priority to progressing its efforts to strengthen oil spill reporting requirements (R4). The committee notes that the ANAO did not examine the situation where oil had been spilt but not reported (Transcript: page: 30). AMSA indicated that there are five or six occasions a year where oil comes ashore and the polluter is not identified (Transcript: page: 45). AMSA indicated that the clean up costs for these spills is in the order of \$15 000 to \$20 000 each.

5.21 One method of identifying the ship responsible for an unknown spill involves taking oil samples from all ships while in port and through matching these samples to an unknown spill, it is possible to identify the polluter. It is necessary, however, to take a sample from an unidentified spill within twelve hours or the oil will degrade.

5.22 AMSA advised that samples of ships' oil were taken in the Port of Newcastle. AMSA suggested that the value of conducting this procedure in other ports would be 'labour intensive with little return' (Transcript page: 46). The evidence provided by the Port of Newcastle did not support this.

5.23 The Port of Newcastle commenced routine sampling of bilges and fuel oil in January 1991 as part of Newcastle Port Corporation's (NPC) continuous improvement in environmental management. The NPC reports that the total cost of the sampling procedure, including disposal, is \$7.00 per vessel (Submission 11, page 133).

5.24 The Newcastle program is intended to raise awareness about the impact on the environment of marine pollution. In addition, it is claimed that the program is a deterrent to ship sourced pollution. AMSA commented that 'Newcastle has recorded a marked decrease in pollution incidents since the program has been in operation' (Submission 11, page 87).

5.25 In the event that an unidentified oil spill is reported in the NPC's area of responsibility, all ships within Newcastle Port would be re-sampled. The NPC commented that there would be a 'clearly established line of legal traceability of the sample from the source to the laboratory for analysis' (Submission 11, page 134). The NPC commented, however, that this sampling procedure is more expensive.

5.26 The Newcastle program is low cost, helps identify the source of oil spills and has helped to reduce pollution incidents. In the committee's view, there is a strong case that this program be extended to ports throughout Australia.

Recommendation

5.27 The committee recommends that:

4. The National Plan Advisory Committee, as a matter of urgency, request that all its members introduce oil sampling practices similar to those of the Newcastle Port Corporation.

Equipment effectiveness

5.28 The committee notes that in the ANAO's assessment of oil spill equipment, no examination was made of equipment effectiveness. For example, is the equipment in storage around Australia, appropriate for the contingency plans developed and in good working order? In addition, there was no comment about which designs are best, durability and compatibility with interstate and overseas equipment. AMOSC can provide equipment to all parts of Australia and in turn can request additional equipment from Singapore or Southampton. It is vital that all equipment be interchangeable and compatible.

5.29 The *Review of the National Plan to Combat Pollution of the Sea by Oil* commented on the importance of having a preventative maintenance program to ensure that equipment is always in a serviceable condition. The review raised the concern that because of the widespread placement of equipment 'and the absence of a structured maintenance program, the present arrangement is prone to failure'. In addition, the review stated that a 'significant improvement in preventative maintenance management is still required' (AMSA 1993: 151-152).

5.30 The committee notes that The *Review of the National Plan to Combat Pollution of the Sea by Oil* recommended a 'detailed maintenance program be established by AMSA by which States/NT are provided with a maintenance schedule for each item of National Plan equipment held on loan' (AMSA 1993: 152).

Peter Morris MHR
Chairman
20 November 1995

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APPENDIX ONE

SUMMARY OF AUDIT RECOMMENDATIONS AND AUSTRALIAN MARITIME SAFETY AUTHORITY RESPONSES

IMPLEMENTATION OF ANAO AUDIT RECOMMENDATIONS

Rec'n No	Terms of ANAO Recommendation and AMSA response	Implementation or proposal to implement	Proposed Completion date
1	<p>The ANAO recommends that AMSA consider the formation of a regional alliance for the management of oil spill planning and response in northern Australian waters.</p> <p>Agreed. AMSA has already completed a Memorandum of understanding with New Zealand. Similar agreements with Indonesia and Papua New Guinea are well advanced and are expected to be signed in 1995. AMSA will then seek to formalise the MoUs as a regional arrangement between the four countries involved.</p> <p>In addition, AMSA and the Queensland Government have undertaken the development of a Torres Strait Contingency Plan to ensure the best possible response to an incident in the Torres Strait.</p> <p>AMSA will continue to develop and improve these arrangements and to assist neighbouring countries in oil spill planning and response.</p>	<p>Formal Memorandum of Understanding (MoU) signed with NZ.</p> <p>MOU with Indonesia has been finalised, to be signed by end of 1995.</p> <p>MoU with PNG has been forwarded to that country for approval and it is expected to be signed soon.</p> <p>After completing negotiations with all parties it is proposed to develop a mutual agreement between the four countries. Early discussions have also commenced in the APEC forum on the possibility of developing an APEC/ASEAN regional pollution assistance arrangement.</p> <p>The Philippines is acting as lead country in preparing a document providing details of all regional oil spill response arrangements and MOUs etc. Australia will offer to assist the Philippines at the forthcoming APEC meeting.</p>	<p>Completed September 1994</p> <p>December 1995</p> <p>December 1995</p> <p>1995/96</p>
	<p><i>Footnote: Acronyms/terms used in this document:</i></p> <p>ANAO Australian National Audit Office AMSA Australian Maritime Safety Authority APEC Asia Pacific Economic Cooperation EWG Equipment Working Group (a sub-committee of NPAC) MoU Memorandum of Understanding NPAC National Plan Advisory Committee National Plan National Plan to Combat Pollution of the Sea by Oil</p>		

2	<p>The ANAO recommends that AMSA consider developing a mechanism for more effective representation by the salvage industry, coastal local government councils, commercial, recreational and environmental groups.</p> <p>Agreed AMSA considers that current arrangements, recommended by the National Plan Review, in which Commonwealth, State and Industry representatives attend the National Plan Advisory Committee is the most effective senior level representation for the National Plan. AMSA will encourage States to ensure that relevant interest groups are represented on State, regional and local committees to ensure focussed attention to specific requirements of those groups.</p> <p>Salvage operations are an integral part of the National Plan and feature prominently in all contingency plan training courses. Also, salvors are extensively used in scenario exercises.</p> <p>The remaining groups have their interests represented by way of State Government and Federal Government portfolio representatives. State/NT National Plan Committees and regional or local contingency planning involve these interests directly and in a manner that AMSA considers ensures more effective specialised input than membership of NPAC.</p> <p>Peak bodies representing these groups are encouraged to make submissions to NPAC on matters of concern to them.</p>	<p>NPAC4 agreed that:</p> <ul style="list-style-type: none"> • it is inappropriate to have any further organisations represented on NPAC. • Australian salvage interests have stated that they do not wish a permanent seat on NPAC forum. Agreed they address each State/NT NATPLAN Committee. Strong links between salvage interests and AMSA remain. It is proposed to develop an MOU with Australian salvage interests. • Specific environmental input is provided to State/NT NATPLAN Committees. Regional or local community/environmental groups should have involvement in appropriate community groups to be set up by or supported by State/NT National Plan Committees. • each State/NT will ensure they receive input from these groups and report relevant matters to NPAC as proposals or information. • any significant proposal from a community or environmental support group having national relevance may be raised with NPAC direct and the organisation concerned will have access to the Committee to present its case. • Feedback to the community on NPAC activity will be provided in EPA Newsletters and the Maritime Coastal Community Network Newsletter "WAVES" (published by Ocean Rescue 2000) • a standing reporting agenda item on this issue will ensure appropriate coverage is given at each NPAC meeting 	<p><u>Completed</u> 30 March 1995</p>
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3	<p>The ANAO recommends that AMSA monitor the development of local contingency plans, to ensure plans address all relevant matters in accordance with AMSA guidelines.</p> <p>Agreed. AMSA accepts that contingency planning should be coordinated centrally. NPAC has set and reviews guidelines for contingency planning, coastal resource atlases and individual members report back on progress of implementation in each area of responsibility.</p> <p>AMSA will seek NPAC agreement to monitor the implementation of such plans to assure conformity with agreed standards and introduction of audit arrangements sufficient to engender confidence that local contingency plans are adequate for the purpose for which they are intended.</p>	<p>NPAC4 agreed that all levels of contingency planning around Australia will follow existing established and agreed standards and will be properly monitored at all levels.</p> <p>This will be achieved by:</p> <ul style="list-style-type: none"> • each State/NT will provide to AMSA a schedule of existing contingency plans for the State/NT. The schedule will contain details of the date on which each plan was created and last amended. • In addition, States/NT will advise the degree to which these plans conform to NPAC agreed pro forma circulated in December 1993. • The Schedule will be updated on an annual basis. AMSA will choose a number of plans at random each year for review. Framework for assessment of plans approved at at NPAC5 • Petroleum Industry contingency plans for terminals will be monitored on the same basis 	<p><u>Completed</u> 30 March 1995</p> <p>6 October 1995</p> <p>6 October 1995</p> <p>Ongoing</p> <p>Ongoing</p>
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5	<p>The ANAO recommends that AMSA include in the National Plan Administrative Arrangements a clearer definition of the primary agency role, and the relationship to the lead agency.</p> <p>Agreed.</p>	<p>NPAC4 agreed the following definition of primary agency role and the relationship to the lead agency. The definition has been incorporated in the National Plan Administrative Arrangements.</p> <p>"Primary Agency - has statutory authority in the area in which the pollution incident occurs - as specified in the appropriate contingency plan.</p> <p>Lead Agency - has operational responsibility to take action to respond to an oil spill - as specified in the appropriate contingency plan.</p> <p>In some cases the Primary and Lead Agencies will be the same entity.</p> <p>In incidents where the Primary and Lead Agencies are not the same entity, should the Primary Agency consider that the incident has exceeded, or is likely to exceed, the capacity of the Lead Agency to respond effectively or the response is not being conducted effectively, the Primary Agency may assume control of the response. Contingency plans will contain local arrangements for the implementation of this policy."</p>	<p><u>Completed</u> 30 March 1995</p> <p>Implemented</p> <p>Implemented</p> <p>Implemented</p>
6	<p>The ANAO recommends that AMSA propose a clear definition of responsibilities which will ensure only one party is responsible for an oil spill response.</p> <p>Not agreed. The existing arrangements represent the most efficient arrangement that could be negotiated in the light of jurisdictional responsibilities under the Constitution. This matter was subject to serious consideration and debate in the National Plan Review and was raised to State/NT ministerial level. The States/NT rejected the proposal for an over riding Commander, primarily because it was not consistent with State Emergency arrangements which must be suitable for a range of potential disasters of which a major oil spill is but one eventuality.</p>	<p>NPAC4 unanimously agreed that no action is necessary and that the objectives of the recommendation are well satisfied in the arrangements agreed by the National Plan Review and reflected in Commonwealth, State and NT Ministers' approval of the Administrative Arrangements.</p>	<p><u>Completed</u> 30 March 1995</p>

7	<p>The ANAO recommends that AMSA formalise the industry commitment to assist a third party such as National Plan members.</p> <p>Agreed. AMSA considers that by its participation in the National Plan, industry (both oil and shipping) has accepted its responsibilities. The oil industry's Marine Oil Spills Action Plan (MOSAP) details the responsibilities and action industry has accepted and will undertake. Specific legally binding agreement has been developed concerning access to and use of industry equipment and other resources in an oil spill incident.</p>	<p>Signing of an Industry/AMSA agreement which will ensure that industry equipment is available for use in National Plan responses.</p>	<p>13 October 1995</p>
8	<p>The ANAO recommends that AMSA clarify who will be responsible for the final decision as to when to terminate an oil spill response.</p> <p>Agreed. This is already a State and Northern Territory responsibility for oil spills in their jurisdictions. AMSA will nevertheless raise this matter in the NPAC forum and seek formal agreement by all parties to the proposal.</p>	<p>NPAC4 agreed the following terms of formal agreement for termination of an oil spill response:</p> <p>"An oil spill response will be terminated when the Primary Agency considers that the effective completion of the response is achieved based on expert On-Scene Coordinator and environmental advice.</p> <p>The Primary Agency will formally announce the termination of the response.</p> <p>These arrangements are to be specified in all contingency plans."</p> <p>This policy will be incorporated in National Plan Administrative Arrangements.</p>	<p>Completed 30 March 1995</p> <p>Implemented</p> <p>Implemented</p> <p>Ongoing</p> <p>Implemented</p>

9	<p>The ANAO recommends that AMSA fully define its role as manager of the National Plan.</p> <p>Agreed. This will be done in consultation with NPAC.</p>	<p>NPAC4 endorsed the following definition of AMSA's role as managing agency of the National Plan and this statement has now been incorporated in National Plan Administrative Arrangements:</p> <p>"AMSA's role as managing agency of the National Plan includes:</p> <ul style="list-style-type: none"> • setting of standards for contingency planning, equipment, training and implementation of oil spill responses; • managing the development and delivery of annual and longer term training and equipment acquisition programs; • reviewing selected regional and local contingency plans on a quality assurance basis; • audit and inspection of equipment stockpiles and maintenance programs; • coordination and audit of National Plan training programs; • review and report on State/NT or industry spill responses; • encouraging and initiating research and the dissemination of information on improved response and planning techniques; • be accountable for the Commonwealth's responsibilities as outlined in the NATPLAN Administrative Arrangements; • managing National Plan revenue and expenditure and provide financial statements; • managing the coastal resource atlas and oil spill trajectory programs; 	<p><u>Completed</u> 30 March 1995</p>
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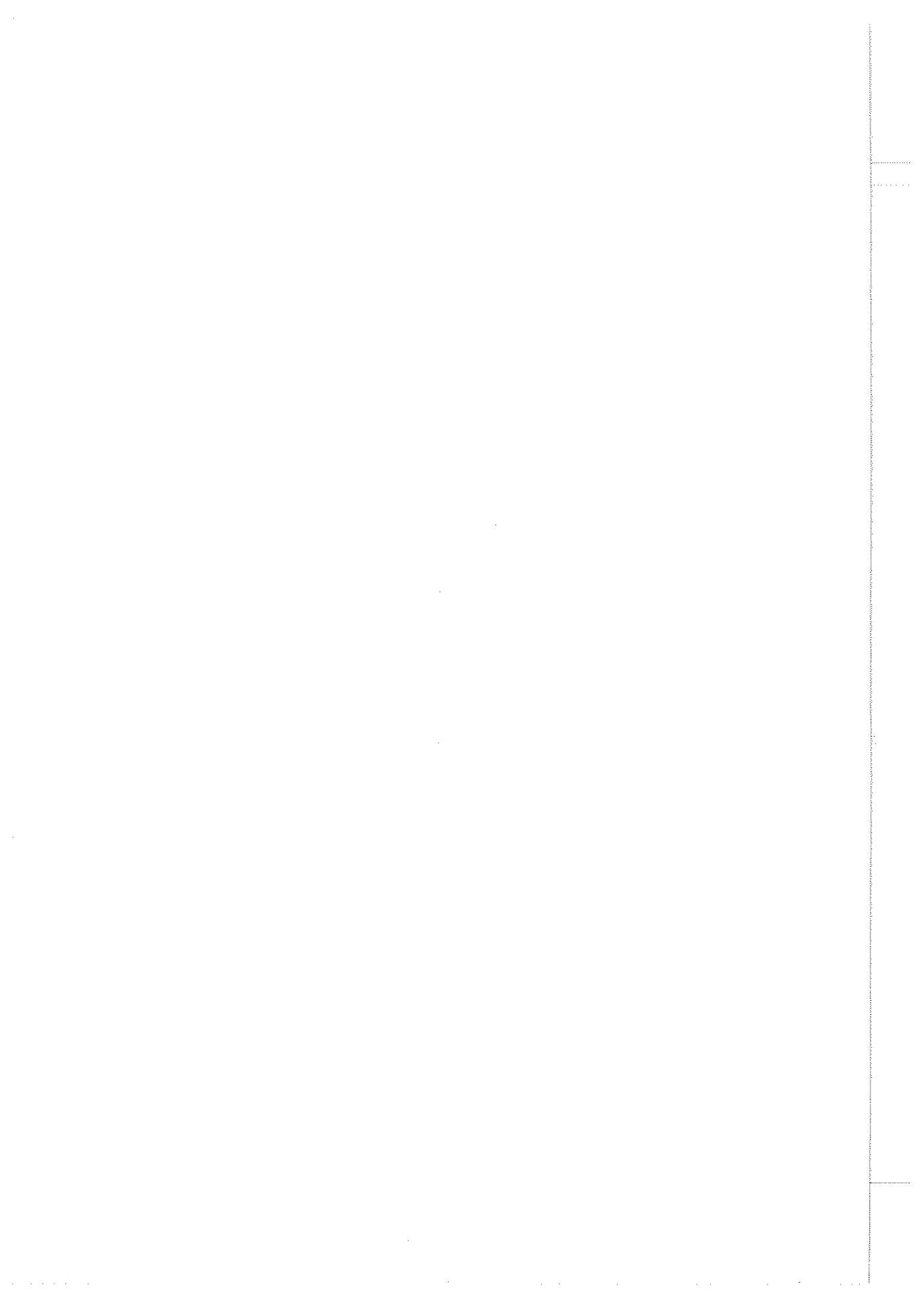
9 (cont)		<ul style="list-style-type: none"> • providing overall leadership and direction through NPAC; • provide secretariat services to NPAC; • administer relevant legislation. <p>NPAC also agreed that the Administrative Arrangements should include a policy that AMSA managed spill responses would be reviewed by a sub committee of NPAC established for the purpose.</p>	<p>Completed 30 March 1995</p> <p>Implemented</p>
10	<p>The ANAO recommends that AMSA consider establishing quality assurance style arrangements with the States, Northern Territory and industry.</p> <p>Agreed. This activity is already an ongoing means of improvement for AMSA and the National Plan Advisory Committee. The recommendation will be introduced to NPAC for formal consideration.</p>	<p>NPAC4 agreed that AMSA will continue ongoing development of QA style arrangements with the States/NT.</p> <p>Following implementation, QA arrangements will be monitored and audited.</p> <p>AMSA to develop QA procedures and programs to implement NPAC agreed projects paying special attention to the NPAC endorsed role of AMSA .</p> <p>NPAC will develop draft QA framework for States/NT to use for NATPLAN purposes.</p>	<p>Completed 30 March 1995</p> <p>Ongoing</p> <p>Ongoing</p> <p>End 1995</p>
11	<p>The ANAO recommends that AMSA consider the formation of a National Response Team to assist on-scene coordinators and oil spill commanders.</p> <p>Agreed. As advised to the ANAO team during the audit, this concept is already in the process of implementation.</p>	<p>AMSA, industry and States/NT have various pollution planning and response training programs. NPAC Training Working Group will develop improvements to current team approach to spill response.</p> <p>NPAC5 endorsed development of a National Response Team.</p> <p>List to be circulated to host agencies (government and industry) in order to seek agreement that the personnel nominated are able to be part of the National Response Team.</p>	<p>Completed 30 March 1995</p> <p>September 1995</p> <p>December 1995</p>

12	<p>The ANAO recommends that AMSA request Governments define over-riding powers for AMSA for all oil spill responses at sea.</p> <p>Not agreed. The State/NT Governments clearly stated their objections to such an arrangement in the course of the National Plan Review. This is a States rights issue which is not likely to be resolved in the NPAC forum.</p>	<p>No proposed action.</p> <p>NPAC4 unanimously endorsed AMSA's response to this recommendation.</p>	<p>Completed 30 March 1995</p>
13	<p>The ANAO recommends that AMSA review the risk of and likely damage to tankers in groundings and collisions under Australian conditions and in light of the IPIECA information and the possible introduction of very large tankers to Westernport, submit for Government and industry endorsement, a more definitive rationale and meaning of the design size for planning purposes.</p> <p>Agreed. NPAC and its Equipment Working Group is responsible for reviewing changes to existing risk and traffic patterns and recommending desirable adjustments as part of its ongoing work.</p> <p>The design spill size for planning purposes was extensively addressed in the National Plan Review and will also be a matter for ongoing review and development.</p> <p>Governments and industry will be requested to endorse any developments in this aspect. It should be noted that as an integral member of NPAC, industry will have detailed involvement in development of planning and response improvements.</p>	<p>AMSA will obtain and critically assess, using in-house naval architect or external consultants, data in relation to risk and damage to tankers in groundings and collisions and likely oil outflow in such incidents. The Equipment Working Group will continue to monitor the risk assessment issue.</p> <p>NPAC4 agreed that the EWG be charged, as part of its functions in determining equipment requirements, to continuously review changing risk patterns associated with traffic, new facility developments and new response technologies.</p> <p>In performing this task, regard shall be had to relevant IPIECA and other authoritative sources.</p> <p>NPAC4 agreed that EWG will review the adequacy of the 10,000 tonne design size and present that review in a way that satisfies the call for a "more definitive rationale and meaning".</p> <p>AMSA will submit findings to governments/industry for endorsement.</p>	<p>December 1995</p> <p>Completed 30 March 1995</p> <p>Sept 1995</p> <p>End 1995</p>

14	<p>The ANAO recommends that AMSA quantify an initial response (first strike) spill size capability for planning purposes.</p> <p>Agreed. This has already been considered in the National Plan Review and led to the recommended \$5.6 million investment in equipment for first strike capability improvement. In addition, this will be one of the ongoing tasks of the National plan Equipment Working Group.</p> <p>Generic quantification of equipment capability, while satisfying ANAO's call for a formula based approach to planning for oil spill response, is regarded by AMSA, States/NT and industry experts to be of questionable value at best.</p>	<p>NPAC4 agreed that the EWG will develop quantification of initial response capability for planning purposes for consideration by NPAC5.</p> <p>This issue will require ongoing monitoring by the EWG.</p>	<p>September 1995</p> <p>Ongoing</p>
15	<p>The ANAO recommends that AMSA introduce for each coastal zone removal capacity planning standards which recognise the most likely sea surface conditions to be encountered during an oil spill.</p> <p>Agreed with reservations. This is another ongoing task which has already been identified for the National Plan Equipment Working Group. AMSA's reservations relate to the difficulties in defining standards for a range of environments, pollutants, sea and weather states etc.</p> <p>AMSA considers that any such standards produced will probably need to be so generic as to be of doubtful value.</p> <p>The National Plan is intended to be prepared and ready to respond to an oil spill incident anywhere in Australia. The capability and resources to make the response should be available on such a basis.</p>	<p>NPAC4 agreed that the EWG will monitor international developments in order to determine to what extent such standards are useful and effective.</p> <p>This issue, which include consideration of such matters as beach cleaning guidelines and procedures and debris disposal, will require ongoing monitoring by the EWG.</p>	<p><u>Implemented</u> March 1995</p> <p>Ongoing</p>

16	<p>The ANAO recommends that AMSA reassess the National Plan equipment planning process by expanding the consideration of risks and response effectiveness, fully documenting the reasons behind the assessment of equipment needs in accordance with local conditions prevailing in each coastal zone and defining minimum equipment requirements and maximum response times for each tier of response.</p> <p>Agreed with reservations. As stated in response to ANAO Recommendations 13 and 15, this is effectively a re-statement of National Plan Review Recommendation 21 which has seen the establishment of an Equipment Working Group to frequently review these matters with a view to constant updating of the equipment allocation.</p>	<p>NPAC4 agreed that the EWG will develop proposed standards for use in National Plan planning for submission to NPAC for endorsement and implementation.</p> <p>This issue will require ongoing monitoring by the EWG.</p>	<p><u>Implemented</u> March 1995</p> <p>Ongoing</p>
17	<p>The ANAO recommends that AMSA re-examine the distribution of the National Plan equipment stockpile.</p> <p>Agreed. The National Plan Review recommended that NPAC subject to constant review the equipment provided and its location to ensure the most efficient and effective response capability.</p> <p>The NPAC Equipment Working Group is tasked with these precise duties and has already initiated this task.</p>	<p>NPAC4 agreed that the EWG will review current arrangements and report to NPAC</p> <p>This issue will require ongoing monitoring by the EWG.</p>	<p><u>Implemented</u> March 1995</p> <p>Ongoing</p>

18	<p>The ANAO recommends that AMSA develop indicative standards for shoreline cleanup.</p> <p>Not agreed. While the concept of shoreline clean up standards appears attractive, it is realistically impossible to develop meaningful standards for the range of circumstances likely to be confronted in a pollution clean up operation. Again, AMSA considers that such standards produced would need to be so generic as to be of doubtful value.</p> <p>AMSA does not lack commitment to either response standards or performance criteria, but questions the development of "standards" and "criteria" that will provide no measurable benefit other than satisfying the call for standards.</p> <p>AMSA is monitoring Canadian and US responses to determine how often and to what degree standards are met in practical spill response. If, based on the experience of these countries, the approach suggested by ANAO is confirmed as having benefits consideration would be given to implementation in Australia.</p>	<p>Not agreed</p> <p>NPAC4 unanimously endorsed AMSA's response to this recommendation.</p> <p>AMSA monitors pollution reports from all overseas countries and maintains networks of contacts in these countries. Where specific incidents involve the use of such standards, AMSA will actively seek detail of implementation, effectiveness and relevance to the Australian scene with a view to implementation if appropriate.</p>	<p>Completed 20 March 1995</p> <p>Ongoing</p>
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Letter from the Victorian Minister for Planning, the Hon Robert Maclellan, MLA, to Dr Brian Cuming, President of the Westernport and Peninsula Protection Council.

Witnesses

1.3 The following witnesses appeared before the sub-committee and were examined:

WITNESSES/ORGANISATION	DATE OF APPEARANCE
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Australian Marine Oil Spills Centre

Mr Donald Blackmore Manager	21 September 1995
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Mr James Starkey Executive Director	21 September 1995
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Australian Maritime Safety Authority

Mr Michael Julian Group Manager	21 September 1995
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Mr Ray Lipscombe Manager Operations	21 September 1995
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Mr Paul McGrath Chief Executive	21 September 1995
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CONDUCT OF THE INQUIRY, EVIDENCE AND WITNESSES

Evidence

1.1 The following submissions were received and authorised for publication:

Number	Name of person/organisation
1	Australian Maritime Safety Authority
2	Australian National Audit Office
3	Corinella Boating and Angling Club Inc
4	Balnarring Beach Ratepayers Association
5	Westernport and Peninsula Protection Council Inc
6	Mornington Peninsula Shire Council
7	Australian National Audit Office
8	Australian Marine Oil Spills Centre
9	Australian Maritime Safety Authority
10	Australian Maritime Safety Authority
11	Australian Maritime Safety Authority
12	Westernport and Peninsula Protection Council
13	Australian Maritime Safety Authority
14	Australian Marine Oil Spills Centre

1.2 The Committee also received the following exhibits:

- 1 Graph showing trends in oil transportation in Westernport Bay, Victoria.

Australian National Audit Office

Mr Warren Cochrane
Acting National Business Director

21 September 1995

Mr David Smith
Senior Director

21 September 1995

Mr Peter White
Executive Director

21 September 1995

Westernport and Peninsula Protection Council

Dr Brian Cuming
President

21 September 1995

1.4 Copies of the transcripts of evidence from the public hearing and the volume of submissions are available from the Committee secretariat and for perusal at the National Library of Australia.

