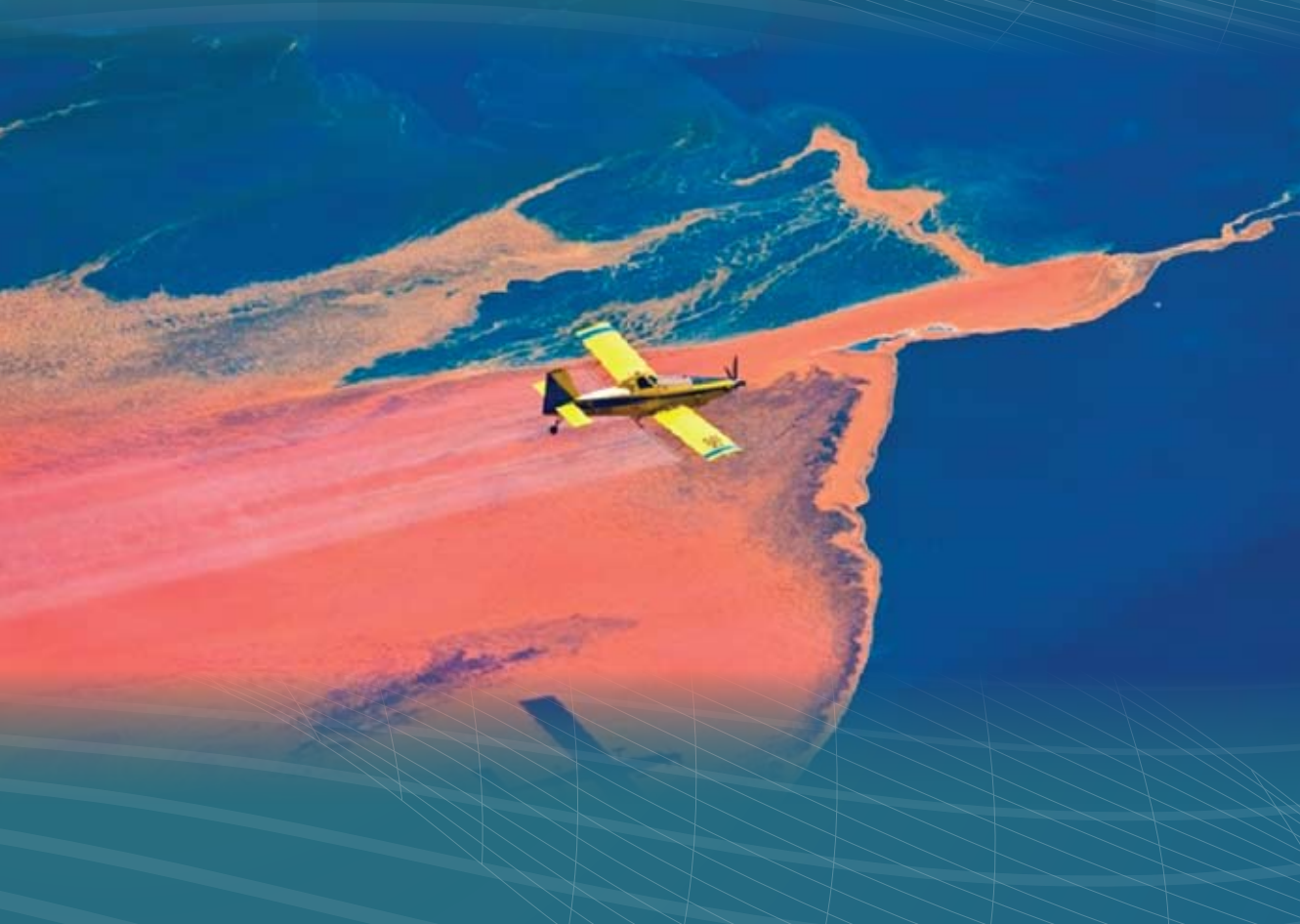


**National Plan to Combat Pollution
of the Sea by Oil and other
Noxious and Hazardous Substances**

ANNUAL REPORT 2009-10



Australian Government

Australian Maritime Safety Authority

National Plan to Combat Pollution
of the Sea by Oil and other
Noxious and Hazardous Substances

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Cover picture: Fixed wing aerial dispersant spraying at the Montara Wellhead Platform incident.

Courtesy: Mark Hamilton Photography

Mission

To maintain a national integrated Government and industry organisational framework capable of effective response to pollution incidents in the marine environment and to manage associated funding, equipment and training programs to support National Plan activities.

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Chair's Foreword

On behalf of the National Plan Management Committee (NPMC), I have much pleasure in presenting the Annual Report of activities of the National Plan to Combat Pollution of the Sea by Oil and other Noxious and Hazardous Substances.

2009-10 was an extraordinary year in the history of Australia's National Plan. The response to the uncontrolled release of crude oil from the Montara Wellhead platform was the greatest challenge faced since the National Plan was established in 1973. The uncontrolled release commenced on 21 August 2009 and continued at an estimated rate of 400 barrels (or approximately 64 tonnes) per day until 3 November 2009, with response operations continuing until 3 December. The amount of oil being released was not able to be confirmed, and statements made during the subsequent Commission of Inquiry indicated the rate may have been as high as 1,500 barrels (or approximately 240 tonnes) per day.

From a purely statistical point of view, the numbers are stark – 105 days of response operations; 247 people directly involved in the response (including 44 members of the National Response team); 140,000 litres of dispersant used, 844,000 litres of product recovered and nine aircraft undertaking more than 130 surveillance flights. In opening the new AMSA head office on 23 February 2010, the Minister for Infrastructure, Transport, Regional Development and Local Government, the Hon. Anthony Albanese MP, referred to the Montara Incident response:

“Your expertise and commitment meant a successful and unique clean up of crude oil so far off-shore with little apparent environmental consequences. This incident is a sobering reminder of the significant effort required to prevent and effectively respond to pollution in our marine environment.”

As with all major incidents, an Incident Analysis Team was established and its report, containing eight strategic recommendations, was released in April 2010. The Incident Analysis Team found that overall the response to the incident was highly effective, although as with any incident there were aspects that might be improved for future responses. In November 2009, a Commission of Inquiry was

also established to report on the incident and subsequent events. The Inquiry included consideration of the adequacy of the response and its report is expected to include recommendations that will be relevant to the National Plan.

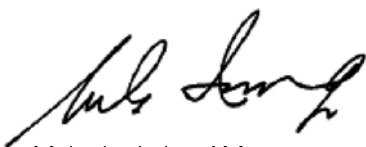
The other major incident during the year involved the grounding of the Chinese registered bulk carrier *Shen Neng 1* at Douglas Shoal, 37 nautical miles east of Great Keppel Island, off the Central Queensland coast, on 3 April 2010. The National Plan was also called upon to respond to several minor spill incidents.

During 2009-10, the National Plan Management Committee (NPMC) continued the development of the National Plan through finalising arrangements for a review of the National Plan to be undertaken during 2011; agreement to further progress the development of a competency based training curriculum for the National Plan; and noting the Plan's 2010-11 budget. The report of the analysis of the *Pacific Adventurer* incident (March – May 2009) was also published.

As the year came to a close, the oil spill in the Gulf of Mexico following the explosion and sinking of the Deepwater Horizon oil rig captured international attention, and is certain to have far reaching implications for spill prevention and response at a global level.

As a consequence of this and other maritime related environmental issues, AMSA established a new Marine Environment Division in March 2010. The new Division is lead by a General Manager and consolidates all of the Authority's environmental activities, including the National Plan.

I look forward to yet another critical year for the National Plan and to actively participating in the proposed Review, and assisting with implementation of any recommendations to improve Australia's response capability.



Malcolm Irving AM
Chair
National Plan Management Committee

Snapshot of the history of the National Plan

- 1973 - National Plan established with \$1 million contribution from Commonwealth.
- 1974 - *Syigna* oil spill, Newcastle NSW (700 tonnes).
- 1981 - *Anro Asia* oil spill, Bribie Island QLD (100 tonnes).
- 1986 - Trajectory modelling introduced (originally On Scene Spill Model - OSSM).
- 1987 - *Nella Dan* oil spill, Macquarie Island, Tas (125 tonnes).
- 1988 - *Korean Star* oil spill, Cape Cuvier WA (600 tonnes).
- 1988 - *Al Qurain* oil spill, Portland VIC (184 tonnes).
- 1991 - Australian Marine Oil Spill Centre (AMOSC) established in Geelong, Victoria as a subsidiary of the Australian Institute of Petroleum (AIP).
- 1991 - *Sanko Harvest* oil spill, Esperance WA (700 tonnes).
- 1991 - *Kirki* oil spill, off WA coast (17,280 tonnes).
- 1992 - *Era* oil spill, Port Bonython SA (300 tonnes).
- 1993 - First National Plan Review, outcomes include purchase of \$5.6m equipment.
- 1995 - Entry into force for Australia of the International Convention on Oil Pollution Preparedness, Response and Cooperation 1990.



- 1995 - *Iron Baron* oil spill, Hebe Reef TAS (325 tonnes).
- 1997 - Fixed Wing Aerial Dispersant Capability introduced, jointly funded by AMSA and AIP.
- 1998 - National Plan extended to deal with hazardous and noxious substances spills.
- 1999 - Mobil Refinery oil spill, Port Stanvac SA (230 tonnes).
- 1999 - Introduction of Oil Spill Response Atlas (OSRA) with \$1 million provided by the Commonwealth as part of the Natural Heritage Trust.
- 1999 - Implementation of the Incident Control System (ICS).
- 1999 - *Laura D'Amato* oil spill, Sydney NSW (250 tonnes).
- 2000 - Second National Plan Review, outcomes include establishment of the National Plan Management Committee.
- 2001 - MOU on the National Plan signed by AMSA and AIP.
- 2002 - Inter-Governmental Agreement signed by State/NT and Commonwealth Ministers of the Australian Transport Council.
- 2006 - *Global Peace* oil spill, Gladstone QLD (25 tonnes).
- 2007 - Entry into force for Australia of the Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances 2000.
- 2008 - Chemical Spill Trajectory Model (CHEMMAP) introduced.
- 2009 - *Pacific Adventurer* oil spill, Cape Moreton QLD (270 tonnes).
- 2009 - Montara Wellhead platform release, Timor Sea (est. 64 tonnes per day).



Iron Baron



Port Stanvac



Laura D'Amato



Global Peace



pacific Adventurer



Montara Wellhead Platform

Administration

The National Plan Management Committee

“The National Plan Management Committee is responsible for the strategic management of the National Plan and reports to the Australian Transport Council through the Australian Maritime Group and the Standing Committee on Transport. Each State/NT member is responsible for the coordination of the local administration and operation of the National Plan in their respective jurisdictions with each State/NT member bringing a whole of Government perspective to NPMC meetings. Industry and other related members of NPMC are identified in the Inter-governmental Agreement which underlies the National Plan and are acknowledged as key stakeholders to the National Plan.”

Chair

Mr Malcolm Irving AM

Executive Officer

Australian Maritime Safety Authority

Mr John Gillies

Australian Maritime Safety Authority

Mr Mick Kinley

Deputy Chief Executive Officer

Commonwealth

Department of Infrastructure, Transport, Regional Development & Local Government

Mr Michael Pahlow

General Manager, Maritime Policy Reform Branch

New South Wales

NSW Maritime

Mr Tony Middleton

Deputy Chief Executive Officer

Queensland

Maritime Safety Queensland

Mr Patrick Quirk

Executive Director

South Australia

Department of Transport and Urban Planning
Mr Brian Hemming
Director, Regulatory Services
Transport Services Agency

Tasmania

Department of Primary Industries, Parks, Water and Environment
Mr Alex Schaap
Director – Environment Protection

Victoria

Department of Transport
Mr. Tony Pearce
Executive Director, Security and Emergency Management

Western Australia

Department of Transport
Mr David Harrod
General Manager, Marine Safety

National Plan 2009-10 Financial Position

Financial statements reporting the cost of the National Plan to Combat Pollution of Sea by Oil and other Noxious and Hazardous Substances (the National Plan) administration and operations have been reviewed by PricewaterhouseCoopers and are included in the Financial Statements on page 53 of this report.

Revenue from the Protection of the Sea Levy provided the main source of funding for National Plan operations. On 1 April 2010 the Protection of the Sea Levy increased from 9.6 to 14.25 cents per net registered ton per quarter to recover costs associated with the *Pacific Adventurer* response.

Total income received during the 2009-10 financial year decreased by \$734,585 compared with the previous financial year. Levy revenue decreased during the reporting period due to a reduction in shipping activity.

National Plan expenditure increased by 186 percent from 2008-09 with total expenses of \$16,728,327, primarily due to major incidents during the period.

Meetings during 2009-10

The National Plan Management Committee met in May 2010, under the chairmanship of Mr Malcolm Irving. The main agenda items being; development of the National Plan budget for the 2010-11 financial year and the draft terms of reference and proposed arrangements for a Review of the National Plan scheduled for 2011.

A National Plan Operations Group (NPOG) meeting was held in March 2010. A range of operational issues were considered including:

- ▶ the Strategic Issues Report, and the Operational and Technical Issues Report from the *Pacific Adventurer* Incident Analysis Team;
- ▶ the Montara oil spill response;
- ▶ recommendations for the National Plan Management Committee and the National Plan Review including a review of the Oil Spill Response Atlas, and a review of the Environment and Scientific Coordinator role; and
- ▶ a number of elements of National Plan training including:
 - review of skill sets and identification of specific training for the National Response Team (NRT);
 - Australian Marine Oil Spill Centre (AMOSOC) strategic direction of competency based training for the oil industry;
 - commitment for a paper to be submitted to the National Plan Management Committee providing firm timelines and deliverables for the future direction of National Plan training; and
 - commitment that the National Exercise would be held in the second half of 2011.

The Oil Operations Working Group (OOWG) met in Brisbane in July 2009 and in Gladstone in February 2010. This group is tasked with considering issues such as the National Contingency Plans, oil spill response equipment and training, fixed wing aerial dispersant spraying and contingency plan audits. At the meetings OOWG reviewed the proposed tender for the National Plan equipment stocktake and assessment. Work also continued on the electronic recording of National Plan equipment that will enable tracking of equipment including maintenance, storage and movement of equipment. As part of the biodiesel fuel project, OOWG provided expertise and assistance in assessing the application methods for biodiesel fuels to aid in the cleanup of oil within mangroves.

During 2009-10, we provided the secretariat for the Environment Working Group (EWG), which examines the means by which Environmental and Scientific Coordinators access technical literature relating to environmental considerations in spill response and decision making. The main focus of EWG was the 18th Environmental and Scientific Coordinators workshop held in August 2009 with the aim to enhance development of the knowledge and skills of the environmental and scientific personnel within the National Plan.

We attended numerous meetings of State and Territory National Plan Committees during the year. Attendance at these committees provided insight into the issues facing individual jurisdictions and provided an opportunity to discuss national and international developments within the pollution response field.

Liability and Compensation

A new Protocol creating a Supplementary Fund that improves the international regime for compensation of victims of oil pollution from oil tankers entered into force for Australia on 13 October 2009. The Supplementary Fund makes available additional compensation to victims in the countries that accede to the Protocol. The total amount of compensation available under the Supplementary Fund is approximately A\$1,500 million. Australian implementing legislation was included in the *Protection of the Sea Legislation Amendment Act 2008*.

In October 2009 we attended several meetings of the government bodies of the London-based International Oil Pollution Compensation Fund. These meetings consider claims arising from major global oil spill incidents and matters relating to administration of the Fund.

Environment and Scientific Coordinators Report

Maximising Technological Advancements to Improve Marine Pollution Response Capabilities

Two projects progressed during the year under the National Plan Research, Development & Technology Strategy. The first was to examine the impact of oil spill dispersants on sea grasses (conducted by the University of Technology, Sydney), with the second being to analyse the effectiveness and net environmental benefit of vegetable-oil based biodiesel as biodegradable cleaning agents for heavy oil spills (conducted by The University of Queensland). We assisted the research teams by providing and facilitating technical advice from EWG and OOWG, and liaising with National Plan stakeholders.

The seagrass project was completed in early 2009, and the outcomes promulgated to National Plan stakeholders in late 2010. The first phase of the biodiesel project, consisting of literature reviews and laboratory trials, was completed in May 2008. The second phase has commenced, involving a net environmental benefit analysis and field trials, with further research work expected to be undertaken between 2010 and 2012. To complement the financial support from the National Plan, the Australian Research Council awarded an Industry Link Grant to The University of Queensland and additional funding has been made available by Queensland Transport. Further detail of these projects is provided in the section on Environmental and Scientific Issues.

Together with our State/NT National Plan stakeholders, we have been using a purpose built resource atlas called the Oil Spill Response Atlas (OSRA) as a means of determining marine and coastal areas of sensitivity that could be impacted in the event of a pollution incident, as well as providing a valuable resource for logistical information for combat authorities. The toolkit was embedded on an operating platform called ArcView 3.3. This platform matured and was no longer supported by the vendor or used within the response community. The OSRA redevelopment project translated the toolkit into a modern, supported and commonly used software platform called ArcGIS.

This redeveloped application has provided the user with two types of greatly improved functionality. Firstly, making OSRA information relevant to current incident(s) available to inexperienced GIS users in a timely manner to assist them with immediate response decisions, including:

- ▶ displaying OSRA information to all stakeholders;
- ▶ enabling basic layers to be added to OSRA by inexperienced GIS users; and
- ▶ sharing GIS data with a high level of security.

Secondly, as the incident occurs and information is collected, it enables databases to be created and analysed by experienced GIS operators in line with response planning cycles, including:

- ▶ adding new environmental information;
- ▶ adding oiling information from aerial observation and field assessments;
- ▶ adding other relevant information; and
- ▶ meeting AMSA and other stakeholders GIS software requirements.

Incident Analysis

On 11 March 2009, the general cargo ship *Pacific Adventurer* lost 31 containers overboard some seven nautical miles east of the northern tip of Moreton Island, Queensland. Damage caused by the containers resulted in the loss of more than 270 tonnes of heavy fuel oil. Maritime Safety Queensland (MSQ) activated the National Plan to respond to the oil pollution. Clean up operations continued for two months, with some 2,500 personnel deployed during the clean-up.

As for all major incidents involving the National Plan, we worked with MSQ to initiate an analysis of the response to the oil spill. An Incident Analysis Team (IAT) was established in April 2009. The IAT was charged with undertaking a comprehensive analysis of the management of the incident from an oil and chemical spill response perspective; to assess the adequacy of the response, and identify any lessons that could be learnt by Australian responders. The report of the IAT was finalised and issued in March 2010.

We also initiated an analysis of the response to the uncontrolled release of oil from the Montara Wellhead platform (August to November 2009). An IAT was established in December. The IAT attended several incident debriefing sessions in Canberra, Perth and Melbourne during December 2009 and January 2010, as well as holding discussions with key officials and stakeholders.

The report of the Montara IAT was released in late April 2010 and includes eight recommendations. Key issues for AMSA include the need to review and update internal procedures for responding to major incidents where AMSA is the combat agency, and to ensure appropriate resources are available for such incidents. Other recommendations will involve AMSA working with the Department of Sustainability, Environment, Water, Population and Communities regarding arrangements for environmental input and the Department of Resources, Energy and Tourism regarding approval of contingency plans and insurance arrangements in the offshore petroleum, exploration and production industry.

Promoting Public Awareness

In conjunction with the Australian Marine Environment Protection Association (AUSMEPA), the “Welcome to Australia” visual production was updated and re-issued. This production is available in six languages on the AMSA and AUSMEPA websites. It is also provided in DVD format, free of charge to all ships visiting Australian ports. The purpose of the



production is to provide awareness and assist seafarers fulfil their responsibilities to the marine environment while in Australia's waters.

The "Waste Reception Facilities in Australian and New Zealand Ports" information has recently been updated and is available on the AMSA website. Several other brochures and fact sheets were updated to provide information on AMSA's environmental role.

Spillcon 2010

The Asia-Pacific's major international Oil Spill Prevention & Preparedness Conference, Spillcon was held in Melbourne, from 12-16 April 2010 with a record number of 479 attendees representing 42 countries. Spillcon operates in cooperation with the International Oil Spill Conference (IOSC) in the United States, and Interspill in Europe, each operating in a three year cycle. Sponsors and organisers of all three conferences consider this alignment enhances regional and global knowledge sharing capabilities and provides greater resources for addressing global oil spill issues facing the industry.

With the theme of *Global, Regional, Local*, Spillcon 2010 was organised by AMSA and the Australian Institute of Petroleum with the support of the Port of Melbourne Corporation, Marine Safety Victoria and the International Maritime Organization (IMO).



The Conference was held over four and a half days and featured presentations covering the topics of:

- ▶ Legislation & Policies;
- ▶ Incidents;
- ▶ Hazardous & Noxious Substances Response;
- ▶ Transport;
- ▶ Preparedness;
- ▶ Technology;
- ▶ The response to the Montara Wellhead platform uncontrolled release;
- ▶ Oil Spill Media Response; and
- ▶ Response and the Environment.

The Keynote address was provided by former Australian test cricketer, Max Walker. An exhibition also formed part of the Spillcon 2010 program with 30 exhibiting organisations in attendance.

The next Spillcon event is planned for 2013 - dates and location will be published on www.spillcon.com in the coming year.

Pollution Incidents

Pollution Database

Accurate statistical data required for spill response strategic planning provides a valuable resource to assist in responding to enquiries from the media, interest groups and the general public. This data also provides valuable input for risk assessment, government projects and can be an indication of the effectiveness of the pollution prevention measures being progressively implemented.

AMSA maintains a marine pollution database, which currently contains over 8,000 records. The following definitions are used in maintaining the database:

‘Oil discharges’ refers to any discharges or suspected operational discharges of oil from a vessel or vessels in excess of the permitted discharge rate under the MARPOL Convention (generally 15 parts per million oil in water).

‘Oil spills’ refers to accidental spills resulting from incidents such as groundings or collisions as well as spills during bunkering resulting from overflow of tanks, burst hoses, etc.

Information is entered from the following sources:

- ▶ oil discharge reports received by AMSA which include reports from aircraft (Coastwatch, RAAF and civilian) as well as from vessels at sea;
- ▶ records of National Plan expenditure in responding to oil spills;
- ▶ incident reports submitted by State/NT authorities; and
- ▶ reports from other sources (e.g. Commonwealth agencies, industry, the public).

Approximately 25 per cent of the reports received by AMSA are not entered into the database. Reasons for not entering a reported pollution sighting include where, after investigation, the sighting is assessed to be one of the following:

- ▶ land sourced, including tank farms, road tanker accidents, drains or road runoff after heavy rain (unless some response activity is required and/or National Plan response costs are incurred);

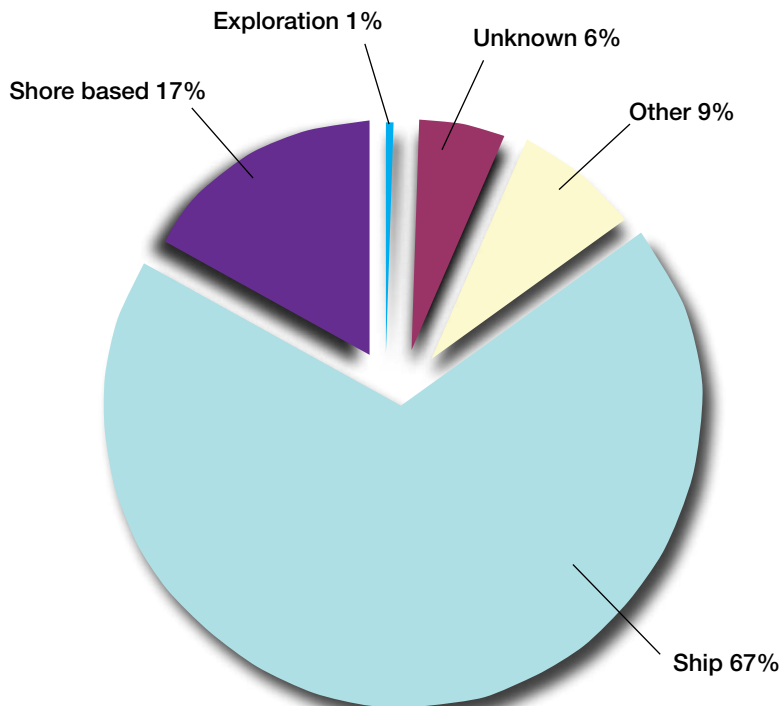
- ▶ coral spawn, marine algae or similar natural occurrence, taking into account the location of the report and the time of the year;
- ▶ discoloured water with no sheen;
- ▶ washings of coal dust from bulk carriers; or
- ▶ discharge from a sewage outfall.

The completeness of the information included in this database cannot be guaranteed, as only those incidents reported to AMSA are included. AMSA does, however, make every effort to ensure the data is as comprehensive as possible.

Oil Pollution Statistics for 2009-10

There were 160 oil discharge sightings and oil spills reported during 2009-10. Some form of National Plan response was required for 66 of these and response ranged from simply advising relevant stakeholders and seeking further information to full mobilisation of personnel and equipment.

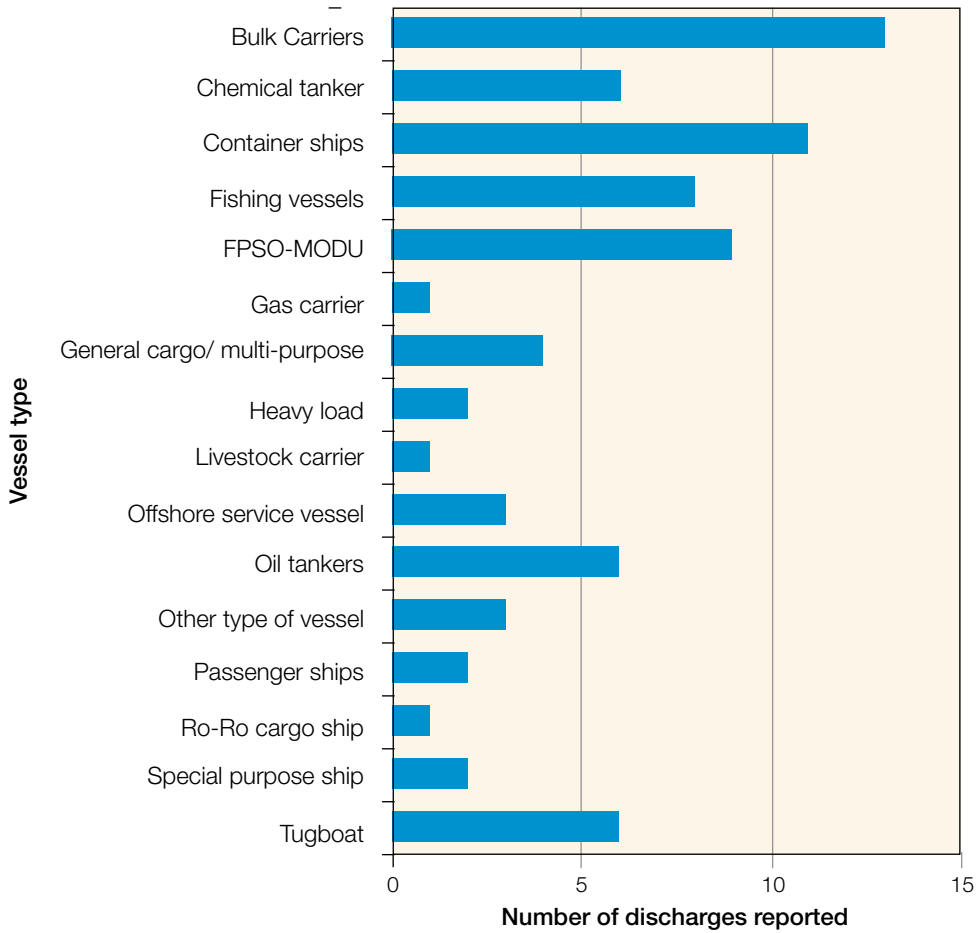
Figure 1 – Sources of reported oil spills during 2009-10



Oil Pollution Sources

Figure 2 indicates the types of vessels from which discharges were reported during 2009-10 where the vessel type was identified.

Figure 2 – Discharge Sources by Vessel Type



Chemical Pollution Statistics for 2009-10

There were no significant ship-sourced chemical spills reported during 2009-10, however, one incident involved a threat of a significant chemical spill. (See below)

Incidents in Australian Waters 2009-10

During 2009-10, we responded to three major oil spills.

Hazardous and Noxious Substance Spill – *Golden Georgia* – August 2009

On 5 August 2009 AMSA were advised that the Panama registered product tanker, *Golden Georgia*, with a cargo of hazardous and noxious liquids, was taking on water in one of its ballast tanks. Nitric acid, which is highly corrosive to steel, had leaked from a tank and corroded through the double hull of the vessel. At the time AMSA were notified, the vessel was 50 nautical miles outside the Great Barrier Reef, north east of Gladstone.

The shipping company instructed the vessel to head 150 nautical miles outside the reef to undertake shipboard operations to transfer the remaining nitric acid to an undamaged tank whilst minimising any environmental risks.

On 9 August the vessel had emptied its ballast tanks of the nitric acid solution and entered Botany Bay. Inspections revealed five x 20mm holes in the double bottom hull. Temporary repairs were completed and once approved by AMSA surveyors the vessel was allowed to depart Australian waters.

Oil Spill – Montara Wellhead Platform – August 2009

On Friday 21 August 2009, at approximately 5:30am West Australian Standard time, the Montara Wellhead platform had an uncontrolled release of hydrocarbons from one of the platform's wells. Located 140 nautical miles offshore from the North West Australian coast, the oil escaped to the surface and gaseous hydrocarbons escaped into the atmosphere.

AMSA immediately activated the National Plan.

PTTEP Australasia (Ashmore Cartier) Pty Ltd, the Well operator, estimated that 64 tonnes (400 barrels) of crude oil was released per day. However, this figure was not able to be confirmed during the incident.

Equipment from the oil industry stockpiles in Singapore and Geelong, as well as AMSA stockpiles in Darwin and other States were used in the clean up operation.

More than 130 surveillance flights were conducted over the duration of the operation to gather oil spill intelligence, environmental data and to direct response efforts to the heaviest concentrations of oil.

The majority of the observed oil remained within 35 kilometres of the platform with patches of sheen and weathered oil reported at various distances in different directions from the platform. Aerial dispersant spraying operations were supported by vessels spraying dispersant. Observations and sampling indicated that the use of dispersant was highly effective in assisting the natural process of degradation and in minimising the risk of oil impacting reefs and shorelines.

The benign sea conditions that were experienced during most of the response facilitated containment and recovery operations to occur offshore.

The response operations took place for 105 days and a total of 247 personnel were involved. Twenty five staff from all four AMSA divisions attended and personnel from each of the States/ Northern Territory, New Zealand and the oil industry were involved.

Overall, the response operations were successful in achieving the objective of preventing oil from impacting on sensitive marine resources, in particular the marine parks of Cartier and Ashmore Reefs, and the North Western coast of Australia.



Montara Wellhead platform

Grounding and Oil Spill – *Shen Neng 1* – April 2010

At 5:10pm on 3 April 2010, the fully laden Chinese registered bulk carrier *Shen Neng 1* ran aground at Douglas Shoal, 37 nautical miles east of Great Keppel Island, off the Central Queensland coast

The ship sustained extensive hull damage during the grounding and whilst most of the fuel oil remained in the vessel, an estimated total of between four and six tons of oil was lost over the course of incident, including the subsequent floating. The combat agency for the oil spill response was Maritime Safety Queensland. AMSA personnel provided assistance with tasks such as aerial surveillance, incident/casualty management and aviation coordination.

Two fixed wing aircraft applied oil dispersant to the oil spill on 4 and 5 of March. We mobilised National Response Team members were mobilised to undertake containment and recovery operations if required.

The *Pacific Responder* and the *Pacific Conquest* deployed boom as a precautionary measure whilst salvors transferred fuel from the vessel.

Shoreline cleanup teams were utilised on 14 and 15 April after the discovery of tar balls on North West, Wilson and Tyron Island shorelines.

The *Shen Neng 1* was successfully refloated on 12 March, nine days after the grounding. The vessel was towed to a safe anchorage for temporary repairs and unloading of cargo, before leaving Australian waters on 31 May 2010. Further details on this incident are provided in the Queensland section of this report.



Shen Neng 1

Equipment and Training

National Plan Equipment Procurement

In 2009-10 AMSA procured new inflatable general purpose boom and towable storage bladders in accordance with three year supply contracts.

Equipment purchased was:

- ▶ 1 x 50T Towable storage bag delivered to the Sydney Stockpile in February 2010
- ▶ 1 x 20T Towable storage bag delivered to the Fremantle Stockpile in June 2010

National Plan Equipment Audits

Audits of National Plan equipment were undertaken at the following locations:

- ▶ Brisbane - July 2009
- ▶ Sydney - August 2009
- ▶ Townsville and Mackay - February 2010
- ▶ Brisbane (Acacia Ridge) - June 2010

Equipment was generally found to be in good condition and ready for immediate use. Some minor faults were identified in Townsville and Mackay and several lengths of boom in Townsville were found to be beyond economical repair.

Audits of Fixed Wing Aerial Dispersant Capability aircraft were undertaken at the following locations:

- ▶ Adelaide - December 2009
- ▶ Ballarat - December 2009
- ▶ Emerald - March 2010
- ▶ Krui - March 2010

One minor noncompliance procedure was detected in Emerald. This has been rectified.

Training

The National Plan Management Committee agreed to further progress the development of a competency based training curriculum for the National Plan at its 13th meeting held in Canberra on 6 May 2010. Work is progressing to ensure sound implementation and a positive move forward with National Plan training.

In August 2009, 30 participants attended the Environmental and Scientific Coordinator Course held in Glenelg, South Australia. This gave considerable opportunity for discussion on topical issues surrounding marine pollution response.

A Hazardous and Noxious Substance (HNS) Marine Spill Management course was held in Brisbane in September 2009 with 13 participants attending.

Two Oil Spill Management courses were hosted during 2010. Australasian Inter-Service Incident Management System (AIIMS) training along with an AIIMS qualification have been incorporated into the courses. The first was held in Canberra with 21 participants and the second in Darwin with 19 participants. Participants have been keen and enthusiastic and show a desire for a wide range of training to be delivered to ensure confidence and familiarity with roles in the event of a pollution incident.

As of March 2010, AMSA has two officers working in a dedicated training team, a Training Coordinator and a Training Projects Officer. This will enhance training progress and benefit to all involved in the National Plan.



Equipment deployment exercise during oil spill response training course in Fiji

From 28 September to 2 October we facilitated an IMO Level 2 Oil Spill Response Course in Fiji. The course was conducted under the auspices of the Secretariate of the Pacific Regional Environment Program (SPREP), with 29 participants from SPREP member governments, local authorities and oil companies. The course included two successful equipment deployments using oil company equipment.

In Melbourne in April 2010 we hosted a seminar on regional cooperation for preparedness and response to maritime pollution incidents, as well as raising awareness of the new Bunkers Convention. The seminar was held under the auspices of the SPREP, with support from the IMO Technical Co-operation Program, and was attended by officials from the Cook Islands, Micronesia (Federated States of), Fiji, Kiribati, Niue, Nauru, Palau, Samoa, Tokelau, Tonga, and Vanuatu. The participants included representatives from port authorities, maritime and environment administrations as well as nationally owned oil companies.

The seminar was carried out by a number of facilitators and presenters from IMO, SPREP, the Australian Marine Oil Spill Centre, International Oil Pollution Compensation Fund, AMSA, Maritime New Zealand and Samoa. The primary objective was to raise awareness of the importance of the Pacific Ocean Pollution Prevention Programme (PACPOL) and the Pacific Marine Spill Contingency Plan (PACPLAN) as the regional framework and mechanism for Tier 3 response, as well as provide up to date information on the international framework under the International Convention on Oil Pollution Preparedness, Response and Cooperation, 1990 (OPRC) and international compensation arrangements.

Table 2 – AMSA training courses

Course	Location	Date	Attendees
Environmental and Scientific Coordinator Course	Glenelg	August 2009	30
Hazardous and Noxious Substance Marine Spill Management Course	Brisbane	September 2009	13
IMO Level 2 oil spill response course	Fiji	September 2009	29
Regional cooperation for preparedness and response to maritime pollution incidents	Melbourne	April 2010	13
Oil Spill Management Course	Canberra	May 2010	21
Oil Spill Management Course	Darwin	June 2010	19
Total			112

Environmental and Scientific Issues

Oil Spill Trajectory Modelling

The Oil Spill Trajectory Model (OSTM) is used by AMSA as a decision support tool to predict the behaviour of various oils in the water column, based on wind and tidal data. It is an important tool used during an oil spill response as well as an integral part of contingency planning, backtracking mystery spills and as supporting evidence for prosecutions. OILMAP and HYDROMAP, the two components of the OSTM, are used in conjunction to model hydrodynamic currents and predict the behaviour and fate of oil plumes.

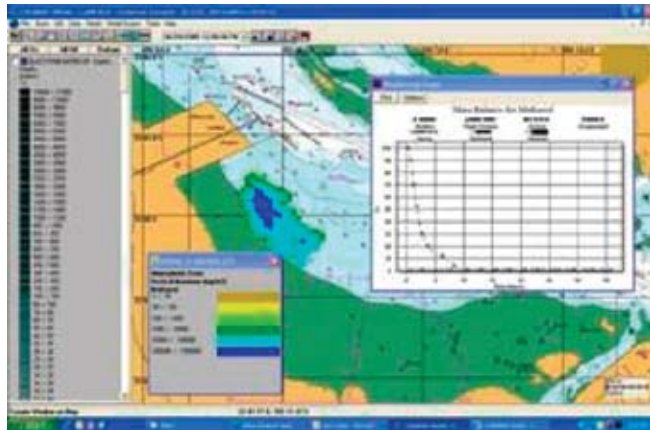
There have been several developments in how we deliver OSTM modelling. Since December 2008, AMSA has contracted Asia-Pacific Applied Science Associates (APASA) to provide a 24 hour/7 day per week trajectory modelling service to AMSA. This service is complementary to AMSA's existing trajectory modelling capability. In addition, AMSA now has access to an Environmental Data Server (EDS) which allows OSTM users to access real-time wind and current data for critical modelling inputs.

OSTM outputs have been produced for a number of incidents (major and minor) during 2009-10, including the Montara Wellhead (Timor Sea), and *Shen Neng 1* (Gladstone, QLD), in addition to providing modelling services for various State exercises.

Chemical Spill Trajectory Modelling

Since 2008, AMSA has also been using CHEMMAP, a computer modelling program designed to model the fate and trajectory of chemical spills in the marine environment.

The design of CHEMMAP is similar to OSTM but with increased functionality, given the relative complexity of chemical behaviour. The model uses physical-chemical properties to predict the fate of chemicals and produces a three-dimensional



model including surface, sub-surface and atmospheric outputs. Arrangements for CHEMMAP modelling are the same as OSTM modelling.

A number of CHEMMAP models were produced for State exercises and as part of National Plan marine chemical spill training courses.

Oil Spill Response Atlas

The Oil Spill Response Atlas (OSRA) is a resource atlas based on an ArcGIS-embedded toolset and spatial database. OSRA is designed to deliver vital OSTM, environmental, biological and logistical information to marine spill responders.

Following an extensive period of inter-agency consultation and an internal review, AMSA has, as from June 2010, updated the OSRA toolset which has been rebuilt for integration into the current ESRI ArcGIS platform. A formal rollout of the toolkit is planned for the end of September, which will include delivery of the new toolkit and a training workshop in the use of the new toolkit. OSRA representatives from each State and the NT have been invited to attend the rollout.



They will be expected to then deliver that same training material to their own staff upon their return to their respective States and NT.

Requests for Tender have been submitted for a purpose-built online web application to enable casual and remote users to access limited sets of OSRA data as part of incident response.

Scheduled 2009-10 OSRA tasks for the States/NT were successfully completed, and included datasets from Western Australia, Tasmania, and Victoria were received New South Wales submitted a request for funding of 2010-11 OSRA tasks and was approved.

The first tender is for rebuilding the OSRA toolset for the current ESRI ArcGIS platform. A second tender is for a purpose-built online web application to enable casual and remote users to access limited sets of OSRA data as part of incident response.

AMSA intends to convene a working group established under the National Plan Operations Group to test versions of both the toolset and the web application when they become available.

Update of Oiled Wildlife Kits

The National Plan Oiled Wildlife Response Kits were utilised during the *Pacific Adventurer* and Montara Wellhead incidents. The Darwin-based kit suffered storage box failure during deployment and was transferred to other boxes available at the time. This kit was audited in December; post Montara deployment to ensure it remains response ready.

The Townsville Oiled Wildlife Response Kit was audited in February and although all items were accounted for, there was a quantity of supplies out of date. The custodian arranged for the replacement of out-dated stock.

Research, Development and Technology Program

Oil and Dispersed Oil Impacts on Temperate Seagrasses

Although Australian-approved oil spill dispersants rate predominantly as “slightly toxic” to “practically non-toxic” by the joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) classification system, there is limited knowledge on the specific effects on seagrasses exposed to dispersants.



The use of dispersants may also increase the exposure of submerged seagrasses to oil as dispersed oil enters the water column.

To address the knowledge gap on the impact on seagrasses exposed to oil spills, AMSA entered into a funding agreement on behalf of the National Plan with the University of Technology, Sydney (UTS). The National Plan Environment Working Group is also providing in-kind support and technical advice to the research team. UTS and the Australian Research Council have provided further funding towards the project.

UTS researchers are using a combination of laboratory and field experiments to compare the toxicity of several oils and dispersant/oil mixtures on seagrasses (Corexit 9500, Ardrex 6120 and Corexit 9527) and oils (Tapis Crude and IFO 380), and to provide advice on the best approach to the use of dispersants on oil spills in the vicinity of seagrasses. An additional aim is the development of a method using microalgae to provide a rapid bioassay of expected impacts on seagrass from oils and oil/dispersant mixtures.

Vegetable oil-based biodiesels as cleaning agents for heavy oil spills: effectiveness, cost and net environmental benefit.

The University of Queensland's (UQ) Marine Pollution Research and Response Unit on behalf of the National Plan is undertaking a project to examine the cost and net environmental benefit of using biodiesel as a cleaning agent for habitats such as

mangroves where access is difficult and physical disturbance by clean-up teams using current methods is potentially more damaging than leaving oil in-situ. The need to address these sensitive habitats was highlighted by the *Global Peace* spill in Gladstone (January 2006). The project examines the potential of using biodiesel to clean mangrove mud, sand, rock, marine-grade concrete, mangrove pneumatophores, fibreglass and aluminium contaminated with heavy fuel oil. The first phase of the project has shown that palm oil biodiesel and coconut oil biodiesel outperform other agents tested (e.g. Cytosol, Biosolve, automotive degreaser) in cleaning a range of substrates.

The final report for Phase One was received in June 2008, and Phase Two, including toxicity testing, net cost and environmental benefit analysis and field trials is currently being scoped. In February 2010, AMSA convened a workshop in Gladstone with participants from UQ, the National Plan Oil Operations Group, the National Plan Environment Working Group, Gladstone Port Corporation and AMSA. Outcomes of the workshop were refinement of experimental methodology to better reflect real-world oil spill response scenarios and identification of National Plan resources that could be deployed to assist with field experiments. Field sites have been identified within the Port of Gladstone and experimental work is expected to commence in late 2010.

Australian Marine Oil Spill Centre

As the oil industry resource in the National Plan infrastructure, the Australian Marine Oil Spill Centre (AMOSC) continues to provide personnel and equipment in support of National Plan activities. This support includes representation on several committees; participation in the delivery of AMSA managed training programs; response operations; and the provision of specialised training programmes to industry, government personnel and other interested parties.

AMOSC has five permanent staff, supported by a core group of 45 highly trained personnel from participating companies.



During the response to the Montara incident, AMOSC mobilised personnel and equipment to support the AMSA-led response.

Twenty personnel worked over 400 days during the main response and participated in the deployment of industry sponsored equipment including;

- ▶ Over 100,000 litres of dispersant.
- ▶ 3 spray systems.
- ▶ 2,000 metres of containment boom.
- ▶ 4 skimming devices.
- ▶ 1 fauna response kit.

AMOSC supported the successful Spillcon 2010 Conference by its management of the organising committee.

AMOSC also developed the framework and content for a series of competency based courses which will deliver training in oil spill operation, management and command and control. These programs are being presented for accreditation nationally and internationally and will be formally delivered in 2011.

Focus of Programme	Number courses	Participants
Operators	2	24
Supervisors	2	40
Incident Controllers	1	10
External Courses	9	214

Activities in States and the Northern Territory

Tasmania



Significant Incidents

The Environment Protection Authority (EPA) and TasPorts responded to 16 minor incidents during the financial year 2009-10.

- ▶ The vessel *Derwent Chief* encountered thick fog and hit rocks near the town of Bicheno on 31 October 2009 resulting in damage to the hull and propeller shaft. The vessel was able to sail to the Gulch wharf but sank on arrival, resulting in a quantity of diesel fuel spilling into the sea. The adjacent shoreline which supports both abalone and sea food enterprises was at risk of contamination. A coordinated agency response was undertaken with Police, Fire Brigade, National Parks, council and the EPA participating. Boom was successfully deployed to contain any diesel which continued to leak from the vessel, whilst the Police vessel utilised prop action to breakup the remainder of the slick. The *Derwent Chief* was successfully refloated and taken to a slipway for repair.
- ▶ Five National Response Team (NRT) members from Tasmania were deployed to the Montara Wellhead incident.
- ▶ Five NRT members were provided to assist in the response to the *Shen Neng 1* grounding incident.



Derwent Chief at Gulch Wharf and Slipway

New or Updated Contingency Plans

Revisions to TasPorts Oil Spill Contingency Plan and the Tasmanian Marine Oil Spill Contingency Plan were undertaken during the year, minor adjustments to both plans should see these reviews completed during 2010-11.

Training

Tasmanian NRT personnel participated in the following training opportunities:

- ▶ The EPA conducted two Equipment Operator courses in November; participants included personal from TasPorts, Police, State Emergency Services (SES) and the EPA.
- ▶ The Department of Primary Industries, Parks, Water and Environment Bio-security unit, provided a two day workshop for planners.
- ▶ The EPA held a familiarisation day for TasPorts personal, utilising Tier 1 equipment.

In addition, officers attended training opportunities offered by AMSA and other states:

- ▶ Sydney Ports / Industry exercise;
- ▶ Victorian Finance and Administration course;
- ▶ Several mini desk-top exercises were conducted to increase awareness of preparedness requirements, establish open links between agencies and to ensure roles and responsibilities are clear and practiced before any large scale exercises are undertaken; and
- ▶ Desktop discussions were held for the State Marine Pollution Committee and the Southern Region Emergency Management Committee.



TasPorts employee supervises the rolling out of the rope mop with assistance from the EPA vessel, Liana.



TasPort and EPA staff receive instruction on boom and skimmer deployment from Chris Priestly of Response Resource Management.

Equipment Acquisitions

National Plan Tier 2 equipment repairs undertaken during the 2009-10 financial year:

- ▶ Replacement of the rope mop rollers on the Petro CS-C62 Rope Mop at Bell Bay.

Prosecutions

MV Cape York: The decision was handed down on 7 July 2009. The charge of discharge oil/oily mixture from a ship into State waters was proved, and a fine of \$7,500 and clean up costs of \$19,000 was imposed. The *MV Cape York* discharged Heavy Fuel Oil (HFO) with ballast water during loading operations at Burnie Port. The oil was contained and cleaned up by Port personnel.

Administrative changes in the State response arrangements

With the addition of new members to the National Plan Response Team, Tasmania now has a full complement of NRT placements.

New South Wales



Significant Incidents

There were no significant incidents during the year; however, several minor incidents occurred mostly from unknown origin within the major trading ports. The Port Corporations responded to these incidents within their respective port areas. There have also been two incidents of drifting/disabled vessels off the coast and one incident of two vessels coming close to the coast during poor weather.

- ▶ October 2009, the *Golden Georgia*; a chemical product tanker had a leak of nitric acid from the No. 4 port tank which had corroded through the No.2 double bottom tank. The double bottom tank was taking on sea water at a slow rate and the level was maintained by ballast pumps. The ship's crew were able to transfer the nitric acid to another tank. The ship was allowed to anchor in Port Botany for assessment and initial repairs prior to unloading the cargo.
- ▶ Under national arrangements, NSW Maritime, Sydney Ports Corporation, Newcastle Port Corporation and Port Kembla Port Corporation provided 27 personnel to assist with the response to the Montara Wellhead incident.
- ▶ Ten personnel were provided to assist in the response to the *Shen Neng 1* grounding in the Great Barrier Reef.

New or Updated Contingency Plans

The following contingency plans were updated during the year:

- ▶ Port Kembla Oil and Chemical Spill contingency Plan.
- ▶ Port of Newcastle Oil and Chemical Spill contingency Plan.

The following contingency plans are currently under review:

- ▶ Port of Eden (Twofold Bay) Oil and Chemical Spill Contingency Plan.
- ▶ Port of Yamba Oil and Chemical Spill Contingency Plan.
- ▶ Lord Howe Island Oil and Chemical Spill Contingency Plan.

Training

NSW Maritime delivered the following training courses during the year:

Training establishment and exercise	Date
Oiled Shoreline Assessment and Cleanup	11-12 August 2009
	21-22 October 2009
	21-22 June 2010
Introduction to Marine Incident Management	7-8 September 2009
Oil spill sampling training course	24 June 2010

Exercises

The following exercises were carried out in NSW:

Training establishment and exercise	Date
NSW Maritime Lord Howe Island exercise and training	22-23 July 2009
Sydney Ports Corporation/Caltex equipment deployment exercise	24 August 2009
NSW Maritime - Yamba annual exercise	25 September 2009
NSW Maritime - Annual State Exercise-Chemical Spill - desktop	16 October 2009
Sydney Ports Corporation/Shell equipment deployment exercise	22 October 2009
	6 November 2009
Newcastle Port Corporation Annual deployment exercise	27-28 October 2009
DECCW - Oiled Shoreline waste management discussion exercise	29 October 2009
Port Kembla - Desktop exercise	16 & 18 February 2010
	24 March 2010
NSW Maritime - Eden oiled shoreline response desktop exercise	25 June 2010

Equipment

NSW Maritime purchased:

- ▶ 2 x decontamination stations.
- ▶ 2 x 5,000 litre Flexidams for Lord Howe Island.
- ▶ 150 metres GP500 boom for Lord Howe Island (replacement boom).

Sydney Ports Corporation purchased:

- ▶ A Komara duplex skimmer.
- ▶ 300 metres of sentinel Boom and associated equipment.
- ▶ 300 metres of Sentinel 1100 boom.
- ▶ Boom reel gear for sentinel deployment/recovery.
- ▶ 1x 10 tonne Star tank and ancillary equipment.
- ▶ 2x Power pack for auxiliary equipment general.
- ▶ A response vessel.

Newcastle Port Corporation purchased:

- ▶ A response vessel.
- ▶ 600 metres of Airmax offshore boom.

State Prosecutions

- ▶ The container ship *MSC Carla* was prosecuted by Sydney Ports Corporation for an alleged offence of discharging oil at Port Botany on 10 January 2006 contrary to Section 8 of the Marine Pollution Act 1987. Pleas of guilty were entered by both the owner and the Master of the *MSC Carla*. A judgment was delivered on 1 September 2009 at the Land and Environment Court of NSW. The Master was discharged without conviction on a two year good behaviour bond. The Court imposed a penalty of \$150,000 on the owner. This included a discount of 20 per cent for the Plea of Guilty given at an early opportunity.
- ▶ The dredging contractor Boskalis was prosecuted by Newcastle Port Corporation for an alleged discharge of 410 litres of hydraulic oil from the dredge *Gunfleet Sands* at Newcastle Port on 11 July 2008 contrary to Section 8 of the *Marine Pollution Act 1987*. The local court fined the owners \$11,000 (the maximum for the local court).
- ▶ A number of minor offences were dealt with via infringement notices.

Oil Spill Response Atlas

The migration of the NSW Oil Spill Response Atlas (OSRA) is occurring as part of a larger project within NSW Maritime to migrate all of the agencies spatial data to a new geo-database. The data sets required for the OSRA have been reviewed and duplicate data within the NSW Maritime database has been removed. Once completed the OSRA will form an integrated part of the NSW Maritime spatial database which will make data maintenance more efficient.

There has been no updating of themes or data in the NSW OSRA during the last year.

Administrative changes in the State Response Arrangements

NSW continues to integrate marine incident response into the State emergency management arrangements. Over the previous twelve months, NSW Maritime has provided a number of briefings to the Mayors and General Managers of Coastal Council Groups and continued to attend the District Emergency Management Committees and the NSW State Emergency Management Committee. The Port Corporations have also continued to attend their relevant District Emergency Management Committees.

Victoria



Significant Incidents

- ▶ 21 August 2009 the vessel *Leyte Spirit* was pushed from its berth at Gellibrand Wharf while discharging crude oil by a sudden gust of wind. As a result of the vessel movement the Chiksan arm was fractured and product was subsequently released. The estimated amount of product released was up to two tonnes, with a significant amount of product captured on the deck of the vessel and some product entering the water. On entry to the water the product solidified and travelled across Port Phillip Bay to impact St Kilda Beach and Brighton Beach. The vessel was boomed in-situ at berth and beach clean-up teams were dispatched to the affected areas. The beach clean-up teams removed tar oil pads from beaches. Once assessed as clean, further beach patrols were undertaken to ensure that additional product did not wash up. All clean up and waste disposal activities were undertaken in close consultation with the Victorian EPA and all waste was disposed of at EPA approved sites.
- ▶ Marine Safety Victoria (MSV) deployed seven staff as NRT members to the Montara Wellhead incident. MSV also took this opportunity to deploy its Training Manager to observe activities in the incident control centre to assist in the development of future courses and training products.

New or Updated Contingency Plans

There have been no changes to the State or regional contingency plans during the reporting period.

Training

The training delivered in 2009-10 was extensive due to additional resources available to the Marine Pollution Response Unit in funding and contract staffing. The annual program included the review of training courses, enhancement of training programs and the development of several new courses. The new courses included:

- ▶ Planning Officer Course.
- ▶ Operations Officer Course.

- ▶ Logistics, Finance and Administration Officer Course, developed with assistance from MSQ.
- ▶ Air Observer Training was attended by the Victorian Regional Control Agencies and representatives from South Australia and Tasmania and was co-facilitated with MSQ.

In addition to the above improvements to the existing training program, the Marine Pollution Response Unit worked on a first strike response project with the Victorian State Emergency Service. Phillip Island was identified as a high environmentally sensitive area and as such MSV piloted a training and exercise strategy with the Victoria State Emergency Service and the Phillip Island Nature Park for first strike shoreline response teams. This pilot project was very successful and has since been implemented to the greater Port Phillip area.

All the training delivered by MSV throughout 2009-10 is outlined in the table below.

Course	Date	Location
Shoreline Clean Up Course	November 2009	Rosebud
Equipment Operator Training	2-3 December 2009	Williamstown
Introduction to Marine Pollution Response for Phillip Island SES	5 December 2009	Phillip Island
Phillip Island SES Shoreline Clean Up	13 - 14 February 2010	Phillip Island
Operations Officers Course	16 February 2010	Pakenham
Gippsland Region - Introduction to Marine Pollution Response	18 February 2010	Lakes Entrance
Intro to Marine Pollution Response SES Metro Upper	20 February 2010	Melbourne
Logistics, Finance and Administration Course	23 - 24 March 2010	Melbourne
Planning Officers	10 - 12 May 2010	Pakenham
Air Observers Course	13 May 2010	Essendon Airport
AIIMS/OSRICS Course	18 - 20 May 2010	Melbourne
Shoreline Cleanup Course	26- 27 May 2010	Gippsland
Introduction to Marine Pollution Response	5 June 2010	SES Frankston
Equipment Operator	8 and 9 June 2010	Williamstown
Introduction to Marine Pollution Response	24th June 2010	Williamstown

Exercises

- ▶ A large oil spill incident control centre exercise was conducted in December 2009. The scenario focused around a collision between a tanker and heavy lift ship in the vicinity of Port Phillip's Hovell Pile Light resulting in 3,500 tonnes of Arabian Light crude oil spilt from the tanker and 250 tonnes of fuel oil spilt from the heavy lift ship. The exercise was attended by approximately 40 people from agencies including:
 - Marine Safety Victoria.
 - Port of Melbourne Corporation.
 - Patricks Ports.
 - Department of Primary Industries and Fisheries.
 - Victorian Regional Channels Authority.
 - Department of Transport.
 - The Oil Response Company of Australia.
- ▶ February 2010 the Gippsland Regional Control Agency conducted a desktop discussion exercise.
- ▶ June 2010 the Oil Response Company of Australia (ORCA) was contracted to develop a scenario and facilitate delivery of an exercise on behalf of the Westernport Regional Control Agency. This exercise was not intended to exercise all incident management team functions; the aim was to exercise operational functions and the operational response capability of the Port.

Summary of exercises conducted during 2009-10

Course	Date	Location
State OSRICs Exercise	16 December	Williamstown
Gippsland Regional Pollution Committee Desktop Exercise	17 February	Traralgon
Westernport Equipment Exercise	16 June	Westernport

Equipment

Work was undertaken throughout 2009-10 to create a cache of National Response Team equipment and turn out kits for nominated members. Part of this project included the purchase of three new laptops to be used on national response deployments and exercises and a comprehensive aerial observer kit with a Global Positioning System (GPS) camera and mapping software.

In addition, MSV has worked closely with the Department of Sustainability and Environment (DSE) to gain funding to enhance the current State equipment for responding to oiled wildlife during incidents. MSV and DSE were successful in securing funding to purchase first strike kits to be placed in the four regions throughout the State. The funding will also allow for the purchase of a day two back up kit that will be placed with the state stockpile in Melbourne to supply vital additional resources to the first strike kits on day two of a response. AMOSC have also been providing expert assistance to DSE and MSV in the development of these first strike kits.

Administrative changes in the State response arrangements

Although there have been no significant changes to the administrative arrangements for Marine Pollution Response in Victoria throughout 2009-10, there have been significant changes to the Marine Pollution Response Unit during this year to enhance the current arrangements within the State and the State's participation at a national level.

The Director MSV reinstated the position of the Manager, Marine Pollution Response and it became a stand alone appointment within the Agency. In addition, the Director approved the six month secondment of two contractors to undertake the role of Emergency Management Officer and Operational Readiness Officer. The enhancement of resources within the unit has allowed MSV to achieve a number of significant milestones throughout the year, the most significant of which is establishing members on the National Response Team and participating in the response to the Montana Wellhead incident.

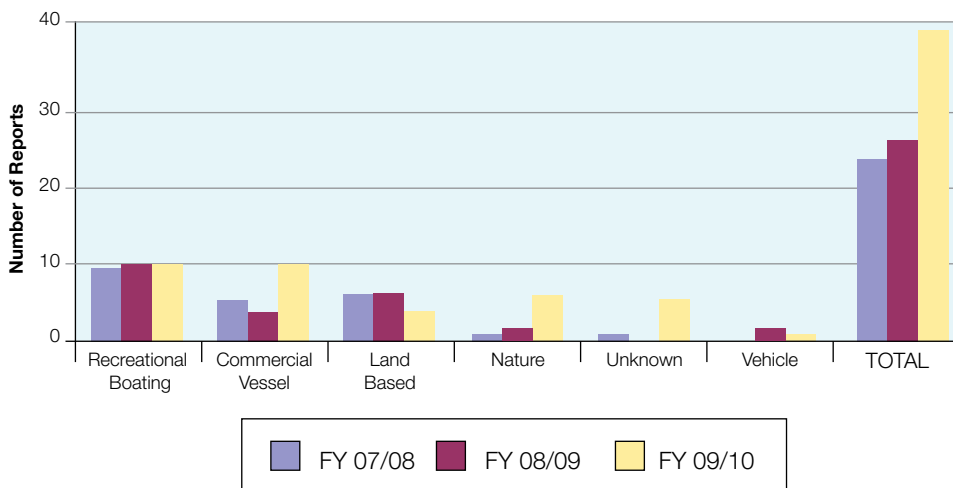
South Australia



Significant Incidents

No significant incidents were recorded although 39 minor incidents were reported between 2009-10. It has been noted that those incidents caused by commercial vessels, natural phenomena and unknown causes has increased while land based causes has declined.

Table 1 - Comparison of Oil Spill Causes



There has been a significant increase in the number of minor spills reported. It is believed this is due to the public being more aware of the phone number in which to report spills and with the recent Australian and United States significant oil rig pollution incidents, the public is becoming more vigilant in reporting.

Seventeen members of the State's Oil Spill Response Team (including NRT members) assisted in responding to the Montara Wellhead incident during the period September - December 2009.

New or Updated Contingency Plans

The South Australian Marine Spill Contingency Action Plan (SAMSCAP) has been updated and ratified by the State Marine Oil Spill Committee and is awaiting cabinet approval.

Training

- Six one day “Introduction to Oil Spill Response in SA” courses were held over seven weeks. Over 200 participants from government agencies, the port, fuel companies, local government and other associated industries attended.
- Two Shoreline Assessment courses were run in regional locations and attended by Department for Transport, Energy and Infrastructure staff and some local council.
- Planned training for Port Lincoln did not occur due to unexpected shipping movements but has been re-scheduled for later in the year.

Exercises

Exercise “Blackwatch” was conducted in November 2009, which looked at the issues of a spill of bitumen. The Department for Transport, Energy and Infrastructure (DTEI) is liaising with Shell (the main supplier of bitumen in South Australia) to address the issues raised.

DTEI also attended Exercise “Smoky Waters” which involved a terrorism exercise on the ferry between Cape Jervis and Penneshaw, Kangaroo Island. While there was no spill scenario planned, DTEI attended so as to provide other marine related advice.

Administrative changes in the State Response Arrangements

Trent Rusby is now the Deputy State Marine Pollution Controller. Joe Rositano is the Incident Controller with Abigail Walters and Ken Rickard as Deputy Incident Controllers. David Rogers has replaced Captain Walter Ferrao as the Planning Officer.

Queensland



Significant Incidents

The most significant incident in Queensland waters during the 2009-10 reporting period was the grounding of the *Shen Neng 1* on Douglas Shoal, east of Rockhampton on 3 April 2010. The Chinese-registered bulk carrier was enroute to China from the Port of Gladstone with 68,000 tonnes of coal on board, when it struck the shoal causing severe damage to the ship's hull plating.

Approximately 6,000 litres of heavy fuel oil spilled from the ship while it was aground on Douglas Shoal.

In response to the incident, the National Plan was activated on the evening of 3 April and officers from the Australian Maritime Safety Authority and National Response Team members from all States and the Northern Territory travelled to Gladstone to assist Maritime Safety Queensland, by filling various operational, planning and logistics roles within the Incident Management Team. Other government organisations actively involved in the response included other divisions of the Department of Transport and Main Roads, the Great Barrier Reef Marine Park Authority, the Queensland Department of Environment and Resource Management and the Rockhampton, Gladstone, Bundaberg and Fraser Coast Regional Councils.

On the evening of 12 April, the *Shen Neng 1* was refloated by Svitzer Salvage and towed to a designated place of refuge near Great Keppel Island where the ship was inspected and prepared for a tow to Gladstone.



Attempts to bring the *Shen Neng 1* into the Port of Gladstone on 5 May were unsuccessful and the ship was subsequently towed to Platypus Bay on the western side of Fraser Island, where 19,000 tonnes of coal was offloaded into the bulk carriers *Johanna C* and *Clipper Mistral*.

The *Shen Neng 1* departed Australia for China under tow by the ocean-going tug *De Da* on 31 May 2010. The State's costs in responding to the grounding are estimated at approximately \$4 million, which will be recovered from the shipowner in cooperation with AMSA.

In addition to the *Shen Neng 1* response operation, Maritime Safety Queensland responded to 34 smaller spills, mostly discharges of diesel fuel and bilge waste from smaller vessels that occurred in ports and boat harbours along the Queensland coast.

A total of 18 personnel from Maritime Safety Queensland also participated in the National Plan response to the Montara Wellhead platform incident.

Contingency Planning

The Queensland Coastal Contingency Action Plan is currently under review following a number of recommendations from reports into the *Pacific Adventurer* oil spill response. The review will also incorporate 'lessons learnt' from the *Shen Neng 1* response.

Training

Maritime Safety Queensland continued to deliver specialised oil spill response training courses for response personnel. A summary of the courses conducted and the number of people trained is shown in the following table:

Course Type	Number of Participants
Administration and Logistics Course	6
Introduction to Oil Spill Response Course	112
Level 3 Oil Spill Responder Course	74
Total	192

Two personnel from Maritime Safety Queensland also attended an Oil Spill Management course in Canberra.

Exercises

A number of small first-strike response exercises were conducted as part of normal training activities while a major discussion exercise, Exercise 'Maheno', was conducted simultaneously in Brisbane and Gladstone in March, to address some specific recommendations borne from the 2009 *Pacific Adventurer* incident.

Administrative changes

In November 2009, Captain John Watkinson handed over the roles of General Manager of Maritime Safety Queensland and State Marine Pollution Controller to Patrick Quirk.

Western Australia



Significant Incidents

- ▶ Twenty nine incidents were reported via our web based pollution report forms (POLREP). The Oil Spill Response Coordination (OSRC) 24hr marine oil pollution reporting number received a total of 61 reports. Of these reports only three required any clean up response and one had the potential to require a significant response. Most of the reported incidents (POLREP) were small spills requiring little or no response including reports of sunken recreational vessels resulting in no spill.
- ▶ Fourteen State Response Team and NRT personnel were deployed to the Montara Wellhead incident for a combined 193 days of response. The Department of Transport (DoT) OSRC played an active role in the response due to the likelihood that any environmentally significant area impacted would be in Western Australian State waters. In addition to planning for a possible shoreline response if necessary DoT OSRC produced daily situation reports to Western Australian Executive Advisory Group and key government agencies.
- ▶ The dredging barge *L'Etoile* lost approximately 2,000 litres of hydraulic oil during operations off the coast of Port Hedland on 22 October. The Port Hedland harbour master conducted two aerial flights and no impact was observed. Oil spill trajectories at the time predicted any persisting oil would have beached in the Port Hedland area.
- ▶ The trawler vessel *Notanda II* ran aground near Cape Cuvier on 28 December with five persons on board. None were injured. The trawler is believed to have lost power and with prevailing winds and ran aground on reef approximately 70 metres from shore. The vessel sustained hull damage and had taken on water via holes in the engine room. 30,000 litres of diesel was onboard contained within double skinned tanks. No significant quantity of oil was lost and the location of the grounding on the high energy reef dissipated any sheen. The vessel remained grounded until favourable weather and tides allowed it to be salvaged.

- ▶ The chemical tanker *New Grace* became disabled in waters off the south west coast of Western Australia on 24 March 2010, approximately 15 nautical miles offshore and drifting towards Point D'Entrecasteux. The tanker anchored in 61 meters of water in a location only seven nautical miles from dangerous reefs to complete repairs. While the tanker managed to complete repairs and journey to Fremantle Port safely, there was significant risk the tanker could have drifted whilst disabled into the nearby reefs resulting in a significant spill of both fuel and chemicals.

OSRA

In 2009-10 the following OSRA datasets were updated:

- ▶ 1.2.5 Flood Tide.
- ▶ 1.2.6 Land subject to inundation.
- ▶ 1.4.3 State Roads.
- ▶ 1.4.4 Local Roads.
- ▶ 5.2.10 Reserves.
- ▶ 7.3.00 High Resolution Aerial Photography.

The focus of the update was sourcing high resolution imagery of the entire Western Australian coastline. This data is being stored centrally by the OSRC and has also been provided to AMSA.

The OSRC has also continued development of a web based OSRA while maintaining the existing desktop system. This web based system utilises the Western Australian Shared Land Information Platform (SLIP) to source the most up to date data available for Emergency Management (EM). DoT's involvement in this project is being facilitated by Fire and Emergency Services Authority (FESA). A Service Level Agreement (SLA) has been developed with FESA for data collection and continued involvement in the SLIP EM project. This includes Geographic Information Systems (GIS) support for incidents and exercises with on call technical support, training and access to extra data held in SLIP. The SLA will be renegotiated on an annual basis.

A SLIP EM training exercise was completed internally by the OSRC in 2009 to test the usefulness and relevance of the program during a response. The exercise was successful with SLIP EM proving its potential as an asset to an

Incident Management Team (IMT). Further training and testing is planned for 2010, with the aim of testing the applications capabilities in the upcoming Geraldton 'Menacing Wind' exercise.

New or updated contingency plans

- ▶ Department of Transport Oil Spill Contingency Plan (OSCP) 2010.
- ▶ Chevron ABU Marine OSCP 2009.
- ▶ Albany Port Authority 2009.
- ▶ Hess WA 390 P 2009.
- ▶ Fleet Base West 2010.
- ▶ Santos Mutineer-Exeter Field Operations Oil Spill Contingency Plan (Revision 6) 2010.
- ▶ ADA Hawkestone Oil Pty Ltd Drilling and Testing Operations 2009.

DoT continues to assist the Ports in the review and update including the addition of the AIIMS structure to their OSCP's.

Training

The Metropolitan State Response Team (SRT) training included marine radio operators' course, AIIMS and practical deployments such as Marco and vessel deployment of 'Expandi' boom.

Over 50 members are registered on the team with representatives from Fremantle Port, Department of Mines and Petroleum, Department of Fisheries, Western Australian Police and Department of Transport staff.

DoT continues to support the Pilbara Regional Response Team with the Port of Dampier taking on the main coordination role.

Training delivered by the Oil Spill Response Coordination team are summarised in the below table, and participants included representatives from DoT, Port Authorities, Department of Environment and Conservation, Fisheries, Department of Mines and Petroleum, Police, FESA, oil and shipping industries along with their support industries.

Course	Month	Location
3 Day Operator Training	July 2009	Broome
3 Day Operator Training	September 2009	Dampier
3 Day Operator Training	November 2009	Fremantle
Shoreline Response Training	November 2009	Esperance
1 Day Operator Training	December 2009	Water Police Fremantle
3 Day Operator Training	March 2010	Fremantle
3 Day Operator Training	May 2010	Exmouth
Chemical Workshop	May 2010	Dampier
1 Day Operator Training	June 2010	Shark Bay
3 Day AIIMS Training	June 2010	Department of Transport
Shoreline Response Training	July 2010	Broome
3 Day Operator Training	July 2010	Dampier

Exercises

DoT conducted two Marine Oil Pollution and Marine Transport emergency desktop exercises during the year.

In July 2010 DoT conducted a one day deployment exercise with Broome Port Authority and played a supporting role in the November Geraldton Port Authority exercise.

Equipment

The following Tier 1 equipment was purchased by DoT:

Exmouth

- ▶ 90m of solid buoyancy general purpose harbour boom.
- ▶ 1 x 10,000lt Fast tank.
- ▶ 1 x Weir skimmer.
- ▶ 1 x Yanmar spate pump.

Metro

1 x Mutli skimmer with hydraulic power pack was set up on a trailer with Intermediate Bulk Containers (IBC) as a mobile response unit. This unit is based in Fremantle and available to travel around the state as needed.

Administrative changes

Staff changes include the appointment of Serkan Yakacikli as an additional Training Officer, Rhys Jones as Environmental Officer and Keith Shadbolt as Operations/ Equipment Officer.

The updated Westplan Marine Oil Pollution was formally approved in June 2010 by the State Emergency Management Committee; the plan has adopted AIIMS in line with other Western Australian Hazard Management Agency's (HMA).

Westplan Marine Transport Emergency (MTE) is expected to be completed by the end 2010.

The final draft for the prescription of DoT as the Hazard Management Agency under the Emergency Management Act 2005 has been completed and will be tabled at the next State Emergency Management Committee meeting in August 2010.

Northern Territory



Significant Incidents

No significant incidents were reported during the reporting period.

There were two small Tier 1 spills and one unknown incident reported to the Department of Lands and Planning (DLP).

- ▶ A crew member of the vessel *Lady Milanda* reported a pollution spill in the water at East Arm Wharf on 26 February 2010, via the Northern Territory Pollution Hot Line. It was reported the spill did not originate from the *Lady Milanda*. Upon investigation, there were five tenders in the area from which the pollution could have originated. It was concluded the spill was diesel and possibly coming from contaminated bilge water. The sheen was dissipated by the action of the current and no further action was required.
- ▶ The vessel *Lady M* incurred a spill of Jet A1 fuel whilst berthed at Fisherman's Wharf on 28 April 2010. The spill of 25 litres occurred when the above deck tank over-flowed during refuelling. The Port Authority was notified and a response team, trailer and a pilot boat were despatched. Upon arrival it was noted that only sheen remained on the surface of the water making the fuel unrecoverable and no further action was required.
- ▶ An unidentified substance was reported on the coast in the vicinity of Wadeye, Port Keats on 4 November 2009. Samples were collected by local rangers and flown back to Darwin for analysis, to determine whether the substance was hydrocarbon or naturally occurring phenomena. AMSA undertook a fly-over, however no substance or vessels in the vicinity were observed. Analysis subsequently confirmed that the substance was not oil based.



Training

Darwin Port Corporation and Department of Lands and Planning (DLP) staff completed an Introduction to Oil Spill Course on 17 July 2010 with 38 participants.

An Oil Spill Sampling Course was held at The Darwin Port Cooperation Building on 29 June 2010 with 11 participants.

AMSA conducted an Oil Spill Management Course in Darwin on 7 – 11 June 2010 with 19 participants.

Exercises

During the third day of the Introduction to Oil Spill Course a training exercise took place in the Port of Darwin on 17 July 2010. The objective was to contain a spill of heavy fuel from a vessel moored at the East Arm Wharf and to collect the oil from the resulting slick. The tides and the eddy systems around the end of the wharf provided participants with practical knowledge of the local environmental conditions.

Equipment

At the National Plan Operations Group (NPOG) Meeting 19, it was decided AMSA and AMOSC meet with the Northern Territory to discuss local equipment and storage requirements, with a view to placing additional oil spill equipment in Darwin, as an interim measure until the National Plan review is completed.

New or Updated Contingency Plan

There have been no changes to the Northern Territory Contingency Plan during the reporting period.

Administrative Changes

There have been no administration changes in the Northern Territory during the reporting period.

Financial Statements

FINANCIAL REPORT

	2008-09 Actual \$	2009-10 Actual \$
RECEIVABLES		
Trade debtors	118,863	120,169
less provision for doubtful debts	-	-
	118,863	120,169
Other debtors	-	-
GST receivable	0	-
	118,863	120,169
INVENTORY		
Oil dispersant stocks	2,826,700	1,781,200
	2,826,700	1,781,200
PROPERTY PLANT & EQUIPMENT		
Plant and equipment:		
fair value	2,286,255	2,540,912
accumulated depreciation	(169,852)	(158,322)
Total plant and equipment	2,116,403	2,382,591
Office and computer equipment:		
fair value	44,500	32,900
accumulated depreciation	(2,160)	(1,942)
Total office and computer equipment	42,340	30,958
Vehicles:		
fair value	22,250	24,900
accumulated depreciation	(1,245)	(2,015)
Total vehicles	21,005	22,885
Vessels and amphibians:		
fair value	1,639,000	1,442,000
accumulated depreciation	(39,943)	(38,753)
Total vessels and amphibians	1,599,057	1,403,247
Capital works in progress	-	-
Total property, plant and equipment	3,778,805	3,839,681
INTANGIBLE ASSETS		
Software		
Externally acquired computer software	249,580	249,580
Accumulated amortisation	(84,218)	(205,973)
Total Intangibles	165,362	43,607
CREDITORS		
Trade creditors	1,653,334	\$253,629
Salaries and wages	23,417	0
Other creditors	-	-
	1,676,751	253,629
COMMITMENTS		
Other Commitments		
Commitments for expenditure in relation to purchase orders that have been made and are payable as follows:		
Within one year	210,097	156,602
Later than one year but not later than five years	-	-
Total Other commitments	210,097	156,602

INCOME STATEMENT

	2008-09 Budget	2008-09 Actual	2009-10 Budget	2009-10 Actual	2009-10 Variance to Budget
	\$	\$	\$	\$	\$
Income					
Protection of the Sea Levy	6,702,000	7,114,685	5,354,849	6,764,385	1,409,536
Other revenue	12,000	384,285			-
Interest	-				-
Sale of assets	-				-
Total Income	6,714,000	7,498,970	5,354,849	6,764,385	1,409,536
Expenses					
Staff costs	596,308	237,882	981,658	948,850	32,808
Travel and transport	485,500	326,577	487,588	247,822	239,765
Materials and services	2,403,618	2,360,380	2,361,256	3,059,495	698,239
Communication expenses	38,700	20,458	48,301	51,287	2,986
Occupancy costs	254,800	282,715	254,000	239,670	14,330
Administrative expenses	21,153	18,829	18,700	18,723	23
Depreciation	952,555	796,164	784,179	1,272,289	488,110
Incident costs	102,000	1,596,782	-	20,681,175	20,681,175
Incident costs recovered	1,000,000	54,697	-	10,701,799	10,701,799
Corporate costs*	508,730	271,879	913,189	910,814	2,375
Total Expenses	4,363,364	5,856,969	5,848,870	16,728,327	10,879,456
Operating Surplus/(Deficit)	2,350,636	1,642,001	(494,021)	(9,963,942)	(9,469,921)

* Corporate costs include insurance, security, software and hardware maintenance, audit costs, communication landlines, service contracts (central), copyright, superannuation administration, office repair and maintenance, rental and depreciation, as well as corporate support fees such as human resources, business services, information systems and finance.

VARIANCE ANALYSIS

Name Revenue or Expense Line	Variance		Explanation of Variance
	> than 10%	> \$50,000	
Protection of the Sea Levy		1,409,536	Increase of PSL Levy to 14.25 cents in April 2010 and higher traffic than anticipated contribute to the variance
Travel and transport		239,765	Travel and transport budgeted activities was not completed due to various incidents occurred in the financial year
Materials and services		698,239	Consultant hired to analyse <i>Pacific Adventurer</i> claim, higher volume of trajectory modelling services and higher volume of repair and maintenance of pollution response equipment due to various incidents in the financial year.
Depreciation		488,110	Significant amount of dispersant used during Montara Incident
Incident costs		20,681,175	Various incident cost <i>Pacific Adventurer</i> , Montara Wellhead and <i>Shen Neng</i>
Incident costs recovered		10,701,799	Recoveries received to date for Montara and <i>Atlantic Eagle</i> incident

