ANNUAL REPORT

2008 – 2009

AUSTRALIA'S NATIONAL PLAN TO COMBAT POLLUTION OF THE SEA BY OIL AND OTHER NOXIOUS AND HAZARDOUS SUBSTANCES

Australian Government

Australian Maritime Safety Authority

NATIONAL PLAN MANAGING AGENCY

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

ANNUAL REPORT 2008-2009

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.

During 2008-2009, there were two major shipping incidents in Australian waters – the grounding of the *Atlantic Eagle* at Maude Reef, off Albany, Western Australia and the *Pacific Adventurer* incident off south-east Queensland.

The first major incident occurred on 15 July 2008 when the Greek registered bulk carrier, *Atlantic Eagle* grounded at Maude Reef, off Albany, Western Australia, seriously damaging its hull, rudder and steering gear. Fortunately the grounding did not result in any pollution though arrangements were put in place to address concerns arising from the potential spill, the worsening weather and the likelihood of the vessel dragging its anchor.

The second major incident occurred at 3.12 am (Queensland Time) on 11 March 2009, when the 1990 built, 23,737 dwt, Hong Kong China registered general cargo ship *Pacific Adventurer* lost 31 containers of ammonium nitrate overboard some 7 nautical miles east of Cape Moreton while enroute to Brisbane from Newcastle.

The containers punctured a hole on either side of the vessel resulting in the loss of about 270 tonnes of heavy fuel oil. The containers were subsequently located on the seafloor in approximately 125 metres of water by the Royal Australian Navy.

An extensive cleanup along Moreton Island, Bribie Island and the Sunshine Coast was undertaken by a large range of National Plan response personnel as well as a broad contingent of Queensland State and local government personnel and private contractors.

After 100 days the last responder was stood down marking the end of one of Australia's largest and longest spill responses. The spill was successfully cleaned up which is a testament to the ability and dedication of all involved.

Both major incidents saw deployments by members of State and National Response Teams along with AMSA officers.

The National Response Team has recently been restructured to ensure a broad and balanced range of skilled response personnel from a range of maritime, port and industry organisations are available during a response.

The National Plan was also called upon to respond to several minor spill incidents.

During 2008-2009, the NPMC continued the development of the National Plan through preparations for a review of the National Plan to commence during 2009-10 FY; ongoing implementation of the new National Plan Training framework; and noting the Plan's 2009-10 FY budget. The report into the review of the *Pasha Bulker* incident was also published.

On a personal level, the Committee also agreed to my re-appointment as NPMC Chair for 3 years.

Malcolm Irving
Chairman
National Plan Management Committee
11 August 2009

ADMINISTRATION

National Plan 2008-2009 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 21 of this report.

The operating surplus of $1, 642, 000 for the 2008-2009 financial year was in line with the 'break even over time' policy set by government. Revenue from the Protection of the Sea Levy provided the main source of funding for National Plan operations. On 1 January 2008 the Protection of the Sea Levy increased from 7.7 to 9.6 cents per net registered ton per quarter. The increase represents the second phase in the recovery of the full cost of the Australian Government's National Maritime Emergency Response Division Arrangements.

Total income received during the 2008-2009 financial year increased by $1, 807, 738 compared with the previous financial year. Levy revenue increased during the reporting period due to a continued rise in shipping activity.

National Plan expenditure increased by sixteen percent from 2007-2008 with total expenses of $5, 856, 969.

Meetings during 2008-2009

The National Plan Management Committee (NPMC) met in Canberra on 8 April 2009 with the main agenda items being, the review of the National Plan to Combat Pollution of the Sea by oil and Other Noxious and Hazardous Substances and the development of the 2009-2010 budget.

The National Plan Operations Group (NPOG) meetings for the 2008-2009 financial year were held in Canberra in November 2008, and Adelaide in May 2009. A range of operational issues were considered at these meetings including:

- Formulation of the National Plan 2009-2010 budget;
- Commencement of a new (Fixed Wing Aerial Dispersant Capability, FWADC);
- Endorsement of Guidelines for Observer Attendance at Marine Pollution Incidents and Exercises;
- Endorsement of the Pollution Events from Offshore Petroleum Operations – Combat Agency Transfer Operational Protocol;
- Commencement of a National Dispersant Effectiveness Testing Program;
- Development of a Chemical Spill Response Course;
- Analysis of the recommendations arising from the *Pasha Bulker* Incident Analysis Report;
- Progression on preparedness arrangements for bulk liquid chemical incidents in the marine environment, following on from the Risk Analysis of Bulk Chemical Spills in Australian Ports and Waters; and
- Endorsement of a restructured National Response Team (NRT) commencing 1 July 2009.

The NRT will be a trained team, consisting of nine personnel from each State/NT who may be called upon during an oil pollution incident to assist the combat agency respond to an incident. Incident management roles within the NRT include: Planning Officers, Operations Officers, and Logistics Officers. Operational response roles include: Aerial Observers and Response Team Leaders.

Spillcon 2010

Planning has commenced for the 12th International Oil Spill Conference, Spillcon 2010. The Conference will take place at the Grand Hyatt in Melbourne from 12-16 April 2010. AMSA Public Relations are providing the Secretariat for the Spillcon 2010 arrangements, in consultation with an Organising Committee, comprising industry and government representatives.

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 indication of the effectiveness of the pollution prevention measures being progressively implemented.

We maintain a marine pollution database, which currently contains over 7,400 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 (eg 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 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. We do, however, make every effort to ensure the data is as comprehensive as possible.

Oil Pollution Statistics for 2008-2009

There were 140 oil discharge sightings and oil spills reported during 2008-2009. Some form of National Plan response was required for 78 of these and range from simply advising relevant stakeholders and seeking further information to full mobilisation of personnel and equipment.

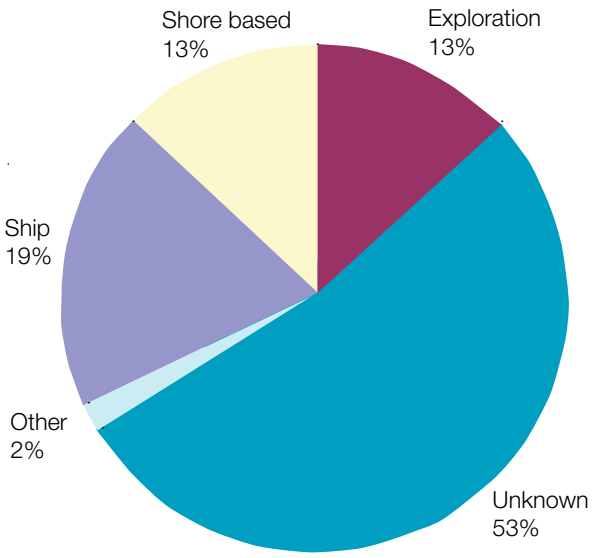


Figure 1 - Sources of reported oil spills during 2008-2009

POLLUTION INCIDENTS

Oil Pollution Sources

Figure 2 indicates the types of vessels from which discharges were reported during 2008-2009 where the vessel type was identified.

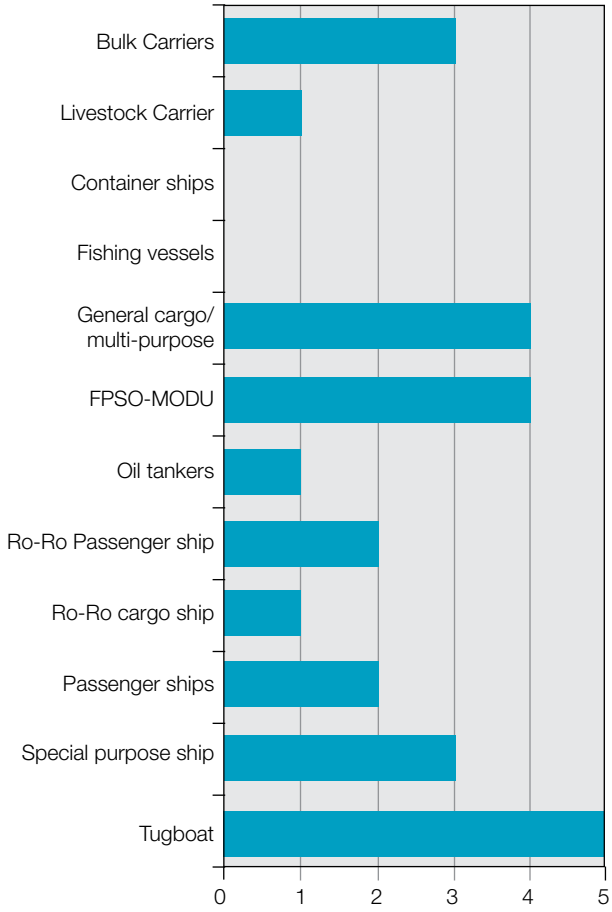


Figure 2 - Discharge Sources by Vessel Type

Chemical Pollution Statistics for 2008-2009

There were three ship-sourced chemical spills reported during 2008-2009.

The first on 11 March 2009, Cargo ship *Pacific Adventurer* lost 31 containers of ammonium nitrate overboard. (Incident described in detail on page 5).

The second was a leaking hazardous container onboard a vessel. National Plan response was required with HAZMAT assuming control with no environmental consequences reported.

The third was a small amount of aqueous film forming foam which leaked from a fire hose whilst combating a fire onboard a vessel.

Incidents in Australian Waters 2008-2009

We have responsibility for managing National Plan. This is achieved primarily through the provision of support and advice to State and Northern Territory authorities for incidents within State and Northern Territory waters, and coordinating responses to incidents within the Commonwealth marine area.

During 2008-09, we responded to one major oil spill and one incident where there was potential for a major oil spill.

Atlantic Eagle

On 15 July 2008, the Greek registered bulk carrier *Atlantic Eagle* grounded at Maude Reef, near Albany in Western Australia, seriously damaging its hull, rudder and steering gear. While the grounding did not result in any pollution, the National Plan was activated following a request from the Western Australian Department of Planning and Infrastructure.

The National Plan was activated to ensure arrangements were in place to respond to any spill that might occur from the damaged vessel while at anchor or while being towed to a place of refuge. Worsening weather with on-shore gale force winds immediately after the initial grounding resulted in the vessel dragging its anchor. This presented a threat of further grounding and the possibility of significant pollution. Pollution response personnel and equipment were prepared for deployment if required.

The fixed wing aerial dispersant aircraft based in Western Australia was deployed, with airbase manager and dispersant loader to Albany.

POLLUTION INCIDENTS

Under the National Maritime Emergency Response Arrangements (NMERA), we assumed overall coordination of the response to the casualty. The owners of the *Atlantic Eagle* contracted Svitzer Salvage who deployed the tug *Wambiri* from Fremantle to tow the vessel to a safe anchorage. The *Wambiri* arrived on the scene on 17 July 2008 and moved the vessel to a place of refuge in the eastern entrance to King George Sound near Albany, at which point Western Australia assumed control of the casualty response. The *Atlantic Eagle* was subsequently moved to an anchorage within the Port of Albany on 22 July 2008 to undergo repairs.

Pacific Adventurer

At 3.12 am (Queensland Time) on 11 March 2009, the Hong Kong/China registered general cargo ship *Pacific Adventurer* lost 31 containers of ammonium nitrate overboard approximately seven nautical miles east of Cape Moreton while enroute from Newcastle to Brisbane. The ship reported that a fuel service tank had been breached near the engine room, and that some oil had been lost before the remainder could be pumped from the damaged tank.

While initial estimates indicated a loss of some 30 tonnes of heavy fuel oil, an independent audit conducted after the ship arrived in Brisbane indicated an actual loss of more than 270 tonnes. The oil impacted significant portions of the south-east Queensland coast, in particular the eastern and northern beaches and headlands of Moreton Island (a National Park), the eastern beaches of Bribie Island, the beaches and foreshores of the Sunshine Coast and small areas of the Brisbane River.

Under National Plan response arrangements, the Queensland Government through Maritime Safety Queensland was responsible for management of the oil spill response. AMSA as manager of the National Plan provided specialist and logistical support with the majority of the oil spill ending up on sandy beaches, clean-up operations were hampered by large amounts of oil buried by sand deposited back on the beaches due to inclement weather and sea conditions. As all areas have high tourism and community amenity value, a high standard of clean-up was required to support the recovery of the tourism industry and restore previous levels of amenity.

Clean-up operations continued for two months. A total of about 2,500 people were deployed from many agencies including Maritime Safety Queensland, the Department of Environment and Resource Management, local regional councils, Emergency

POLLUTION INCIDENTS

Management Queensland, as well as workers from Queensland Rail, Road Tek, skilled and private contractors, the State Emergency Service, Queensland Police Service and the Queensland Fire and Rescue Service. Our personnel as well as 72 members of the National Response Team from all States and the Northern Territory, the oil industry and contractors also provided assistance during the period. At the height of the response operation 400 personnel worked on Moreton Island each day.

Approximately 3,000 tonnes of contaminated sand was removed from Moreton Island.

The work mostly consisted of manual labour using shovels and rakes to fill about 8,000 bags per day. Specialist sand sieving equipment was also used to assist the clean up operations on Bribie and Moreton Islands. The scale of the oil spill resulted in a small number of wildlife being affected. A range of birds, turtles and sea snakes were captured, rehabilitated and released by Queensland Parks and Wildlife Service.

In May 2009, we coordinated an independent incident analysis of the response operation. The report will be released in early 2010.

EQUIPMENT AND TRAINING

National Plan Equipment Procurement

In 2008-2009 AMSA procured new inflatable general purpose boom and towable storage bladders in accordance with its three year supply contracts with Covertex Ltd and StructurFlex Pty Ltd.

Equipment purchased was:

- 500m x General purpose boom was delivered to the Northern Territory stockpile in June 2009.
- 1 x 50T Towable storage bladder was delivered to the Victorian stockpile in June 2009.

National Plan Equipment Audits

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

- Fremantle Stockpile - July 2008.
- Brisbane Stockpile - October 2008.
- Dampier Stockpile - December 2008.
- Cairns Stockpile - March 2009.

Also conducted during the reporting period were audits of Fixed Wing Aerial Dispersant Capability aircraft. These were undertaken at the following locations:

- WA Ballidu - August 2008
- SA Adelaide and Australian Maritime Resources (AMR) - September 2008
- VIC Ballarat - September 2008
- WA Ballidu - June 2009

Training

The National Plan training program for 2008-2009 included the following AMSA-run courses and workshops shown in Table 2

AMSA delivered a pilot Level 1 Hazardous and Noxious Substances (HNS) Response Training Course. Overall the feedback from the participants was good and AMSA is now in the process of finalising training materials for this course.

AMSA also delivered new formats of the HNS Spill Management Course and the Oil Spill Management Course.

The HNS Spill Management Course provided participants with and overview of the management process for a response to a HNS spill in the marine environment. It included participants from most states and also a participant from India.

The Oil Spill Management Course has been redesigned to emphasise skills such as decision making, problem solving and communication and used interactive sessions based around marine spill incidents to achieve this.

Table 2 - AMSA training courses

Course	Location	Date	Attendees
Oil Spill Management	Melbourne	October 2008	22
Pilot Level 1 Chemical Spill Response Course	Sydney	March 2009	10
HNS Spill Management Course	Perth	April/May 2009	16
Oil Spill Management	Sydney	May 2009	23
Total			**71**

ENVIRONMENTAL AND SCIENTIFIC ISSUES

Oil Spill Trajectory Modelling

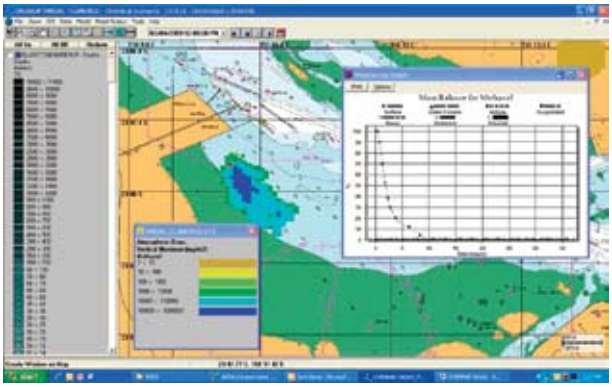
The Oil Spill Trajectory Model (OSTM) is used by AMSA as a decision support tool to predict the behaviour of various oils in the water column based on wind and tidal data. It is an important tool used during an oil spill response as well as an integral part of contingency planning, backtracking mystery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

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

We produced OSTM outputs for a number of incidents (major and minor) during 2008-2009, including the *Atlantic Eagle* (Albany WA), *Mermaid Eagle* (Port Dampier WA) and *Pacific Adventurer* (Moreton Island QLD), as well as providing modeling services for various State exercises.

Chemical Spill Trajectory Modeling

In 2008 we purchased CHEMMAP, a computer modeling 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 modeling are the same as OSTM modeling above.

We provided CHEMMAP modelling for the *Pacific Adventurer* incident in Queensland following the loss of ammonium nitrate containers overboard. We also produced CHEMMAP modeling 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 is calling for two tenders to update OSRA.

The first tender is for the OSRA toolset to be rebuilt 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 by the National Plan Operations Group to test versions of both the toolset and the web application when they become available.

Scheduled 2008-2009 OSRA tasks for the States/NT were successfully completed, and included datasets from Western Australia, Tasmania, New South Wales and South Australia. Submissions were received from Tasmania, Western Australia and Victoria for funding of 2009-2010 OSRA tasks and approved by AMSA.

ENVIRONMENTAL AND SCIENTIFIC ISSUES

Update of Oiled Wildlife Kits

The National Plan Oiled Wildlife Response Kit upgrade project was completed by July 2008. New equipment was added to existing kit storage cases, and additional containers were also purchased by AMSA where required. The Australian Marine Oil Spill Centre (AMOSC) was contracted to construct a new kit for Tasmania, based on the kit content list developed by the Environment Working Group (EWG).

The upgrade, conducted in consultation with wildlife experts, addressed issues of technological advancement, product lifespan, and veterinary best practice. Significant additions to the kits included: 45 collapsible boxes, a new bird field manual, additional microscopy equipment, dressings, surgical equipment and specialised veterinary equipment. Each kit is now well resourced for a wildlife response.

We carried out audits of the Oiled Wildlife Response Kits in Karratha Western Australia (December 2008) and Tasmania (April 2009). Rolling audits of the remaining kits are scheduled over 2009-2010 to ensure they are response-ready.

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 International Maritime Organization 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, Ardrox 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 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 1 was received by AMSA in June 2008, and further work such as toxicity testing, net cost and environmental benefit analysis and field trials is currently being scoped.

AUSTRALIAN MARINE OIL SPILL CENTRE

As the oil industry resource in the National Plan infrastructure, the Australian Marine Oil Spill Centre (AMOSC) continued to provide personnel and equipment to support National Plan activities.

As well as representing industry on several National Plan Committees, AMOSC personnel also participated in the ongoing management and auditing of the Fixed Wing Aerial Dispersant Capability contract. This included the completion of a re-tendering process which had AMR reappointed as the service provider of the FWADC.

Alteration in risk profile and modifications to service provision resulted in the introduction of a new service based in the Northern Territory to supplement the other mainland operations.

AMOSC instigated and is coordinating a location review and sampling of all dispersant stocks in Australia and have put in place arrangements for a Victorian laboratory to provide the analysis and reports.

Planning for Spillcon 2010 in Melbourne is ongoing with AMOSC chairing the conference organising committee.

AMOSC and AMSA shared a stand at the APPEA conference in Darwin where again many delegates visited the display and gained a better understanding of response arrangements in Australia and the strong relationship between industry and government.

In a particularly busy year for training almost 400 personnel either attended workshops at the Geelong Centre or benefited from programs developed specifically for their local operation and conducted on-site.

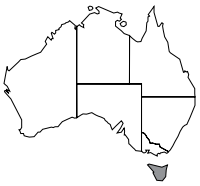
In all training AMOSC continued working with AMSA and often State personnel which greatly assists in promoting the cooperative nature of oil spill arrangements in Australia.

The *Pacific Adventurer* spill in March 2009 saw AMOSC involved throughout the response and clean-up process. No AMOSC equipment was deployed however nine personnel from Australia and two support specialists from Singapore and the UK were provided to assist in the analysis of the environmental impact and developing response strategies.

Course	Number	Participants
Response	4	69
Operator	2	25
Management Overview	1	9
External Programs	14	283

ACTIVITIES IN STATES AND THE NORTHERN TERRITORY

TASMANIA



Significant Incidents

The Department of Primary Industries, Parks, Water and Environment and TasPorts responded to nine minor incidents during the financial year 2008-2009.

The more significant of these included the grounding of a vessel with a significant quantity of fuel on board, and damage to an ISO container containing a hazardous substance in a separate incident.

The *Mathew Flinders* ran aground on King Island on Tuesday 31 March 2009.

Vessel damage was minimal and no fuel (diesel) was spilt and the vessel was refloated. All necessary precautions were in place to manage the incident if a spill had occurred.

An ISO container was damaged on board the *Mersey Searoad* overnight on the 10 June 09. Approximately two tonnes of high viscosity solvent based fuel spilt on to the deck of the vessel. An environment officer oversaw the transfer of the solvent based fuel to an undamaged container once on shore. This operation was conducted in a truck wash bay such that there was no loss to the environment.

New or Updated Contingency Plans

A deed of agreement between the Department of Primary Industry Parks, Water and Environment, Marine and Safety Tasmania and TasPorts regarding the arrangements for responding to marine pollution incidents was completed and is now in force.

Revisions to TasPorts Oil spill contingency plan and the Tasmanian Marine Oil Spill Contingency Plan were undertaken during the year and are nearing completion.

Training

Four staff attended the AMSA Oil Spill Management course.

One staff member attended the AMSA HNS Marine Spill Management Course.

Staff from SES and local council attended a Shoreline Cleanup course held in Burnie in June 2008 by the Department of Primary Industry Parks, Water and Environment.

Equipment Acquisitions

No new equipment purchases were recorded for the financial year.

Prosecutions

No prosecutions were listed for the reporting period.

Administrative changes in the State response arrangements

On the 1st July 2009 The Department of Environment, Parks Heritage and the Arts was dissolved and most its divisions, including the Environment Division, were merged with the former Department of Primary Industries Water and Environment to form the Department of Primary Industries, Parks, Water and Environment. This does not significantly impact on the administrative arrangements for marine pollution response which remains the responsibility of the Environment Division/EPA.

A new Executive Officer has been appointed for the State Marine Pollution Committee; Letitia Lamb took up this role in March 2009.

ACTIVITIES IN STATES AND THE NORTHERN TERRITORY

NEW SOUTH WALES

Significant Incidents

Sydney Ports Corporation responded to an incident at Wylies Bath and Coogee Beach on 10 January 2008 following a release of Heavy Fuel Oil from an unknown source impacting the shoreline. The cleanup of numerous tarballs took three days.

New or Updated Contingency Plans

The NSW State Waters Marine Oil and Chemical Spill Contingency Plan underwent a major review and was endorsed by the State Emergency Management Committee on 5 June 2008. The NSW oil spill response brochure was also updated and reprinted.

Training

NSW Maritime delivered a number of training courses during the year:

Training establishment and exercise	Date
Helicopter Underwater Escape Training (4 personnel)	5 March 2008
Introduction to Marine Incident Management	6-7 May 2008
Introduction to Marine Incident Management	12-13 June 2008
Oiled Shoreline Assessment and Cleanup	23-24 June 2008
Oiled Shoreline Assessment and Cleanup	26-27 June 2008

Newcastle Port Corporation conducted or attended the following training:

Training establishment and exercise	Date
Introduction to oil spill equipment training course for Port users in conjunction with NSW Maritime	16 November 2007
AMOSC's Oil Spill Operators Training (6 NPC personnel)	18 March 2008

Sydney Ports Corporation conducted or attended the following training:

Training establishment and exercise	Date
Roulunds RoBay Boom training (AMSA) Cairns, QLD (4 personnel)	19-21 September 2007
AMSA Equipment Training (5 Personnel)	4-5 January 2008
Helicopter Underwater Escape Training (7 Personnel)	5 March 2008
AMOSC Oil Spill Operators Training (5 Personnel)	18 March 2008
Oil Spill Exercise Hi Sprint training (15 Personnel)	23 March 2008
SPC/ DMS Introduction to Oil spill responses	29 April 2008
Roulunds RoBay Boom training (AMSA) Thursday Islands, QLD (2 personnel)	12 May 2008
Tanker Safety Training- Safeships Pty Ltd	17-20 June 2008

Exercises

The following exercises were carried out in NSW:

Training establishment and exercise	Date
Port Kembla Port Corporation desktop exercise	29 August 2007
Caltex/Sydney Ports Corporation equipment deployment exercise	19 November 2007
Port Kembla Port Corporation equipment deployment exercise	February 2008
NSW Maritime Exercise Oily Carp (State exercise)	12 March 2008
NSW Maritime Eden Oil Spill Exercise	5 April 2008
Caltex/ Sydney Ports Corporation equipment deployment exercise	23 May 2008
NSW Maritime Lord Howe Island equipment deployment exercise	28 May 2008
Newcastle Port Corporation deployment exercise for the dredger David Allan's oil spill equipment	May 2008

ACTIVITIES IN STATES AND THE NORTHERN TERRITORY

Equipment

NSW Maritime purchased a trailer for Eden and Yamba ports for moving oil spill response equipment. Three trailers were also purchased for shoreline response; two will be located on the south coast and one on the north coast.

Two lengths of shoreline boom and a small skimmer were purchased for Lord Howe Island.

Sydney Ports Corporation has purchased the following equipment:

- 1000 metres of GP500 boom
- 1 decontamination shelter
- 1 Delta skimmer
- 1 large Foilex weir skimmer

Port Kembla Port Corporation purchased a diaphragm pump and hoses.

Newcastle Port Corporation purchased an incident response vehicle.

State Prosecutions

NSW Maritime - Seahorse Horizon: The decision was handed down on 23 July 2007. All three defendants were convicted with the owner being fined $35,000, the master $30,000 and the chief engineer $35,000.

Four small oil spill incidents were dealt with by way of Penalty Notice under the Protection of the Environment Operations Act 1997.

Oil Spill Response Atlas

No work was done on updating any of the themes in the NSW Oil Spill Response Atlas (OSRA). Work on migrating the atlas to the ArcGIS(Geographical Information system) platform has been delayed

VICTORIA

Significant Incidents

There were no significant incidents in Victoria during the reporting period (86 minor incidents reported).

New or Updated Contingency Plans

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

Training

Training conducted by the State Maritime Safety Victoria (MSV) focused on producing a training strategy during this period so minimal training was conducted.

Exercises

A regional on-water and Incident Control Centre (ICC) exercise was conducted in the Gippsland Region.

MSV conducted an on-water and ICC exercise in the Port Phillip region.

Port Phillip Port of Melbourne Corporation (POMC) conducted an ICC exercise combined with wildlife exercise in conjunction with MSV and Department of Sustainability & Environment (DSE).

Equipment

No equipment was purchased during the 2008-2009 financial year.

Administrative changes in the State response arrangements

There have been no changes to the State response arrangements during the reporting period.

ACTIVITIES IN STATES AND THE NORTHERN TERRITORY

SOUTH AUSTRALIA

Significant Incidents

No Significant Incidents recorded. 25 minor incidents reported between 08/09. It has been noted that vehicle related spills (vehicles into water) and nature incidents (storm or road run offs) have increased while both commercial and recreational vessel spills have reduced.

It is believed the reduction in commercial/recreational vessel reports is due to an education campaign targeting recreational vessels, encouraging them to properly maintain their vessels and report spills to a central 24/7 number.

Eleven members of the State's Oil Spill Response Team (including NRT members) assisted Queensland in responding to the *Pacific Adventurer* Incident in March and April 09.

New or Updated Contingency Plans

The South Australian Marine Spill Contingency Action Plan (SAMSCAP) has been updated and expected to be ratified by the State Marine Oil Spill Committee in October.

Training

Regular refresher and new equipment handling courses were conducted throughout the State.

Some training was put on hold due to the *Pacific Adventurer* incident.

Exercises

Exercise Rapid Response was held in June 2009 during which a new interactive whiteboard was demonstrated. The board allowed a map of the area to be displayed along with real time tide and weather information, all of which was then able to be captured by computer.

Exercise Lakes was also held in June 2009 allowing participants practice in shoreline boom.

Equipment Acquisition

Two new motors and cleaning of the Murex occurred in the reporting period. An audit of state equipment occurred to facilitate the development of an asset management plan.

New interactive whiteboards and tablets were purchased to facilitate off site/on site communication and planning.

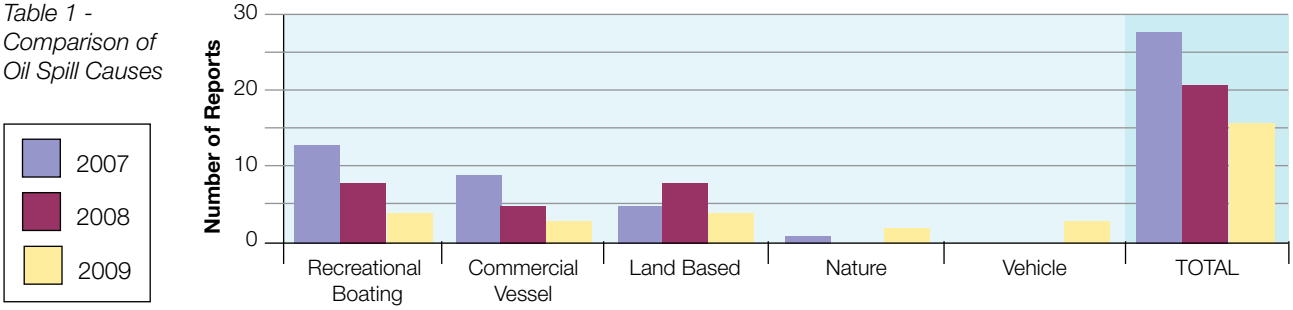
Administrative changes in the State Response Arrangements

New members have been added to the National Response Team.

Michael King from South Australia operating a skimmer vessel in Brisbane March 09

Peter Thomas from South Australia assisting another NRT member deploy boom

Table 1 - Comparison of Oil Spill Causes



ACTIVITIES IN STATES AND THE NORTHERN TERRITORY

QUEENSLAND

Significant Incidents

The largest oil spill in Queensland waters since the oil tanker *Oceanic Grandeur* ran aground in Torres Strait on 3 March 1970 occurred off Cape Moreton, South East Queensland on 11 March 2009. The spill of approximately 270 tonnes of heavy fuel oil happened when one or more of the 31 containers lost from the *Pacific Adventurer* breached two of the ships fuel oil tanks.

Significant quantities of oil were deposited by tide and weather conditions on the coastline south of Cape Moreton. The eight kilometre area south of Cape Moreton was the most heavily affected, with 17 kilometres of beach on the eastern side of Moreton Island also lightly oiled. North of Cape Moreton, the rocky foreshore area between Cape Cliff (Harpers) and North Point was also heavily oiled.

Oil on the eastern beach of Moreton Island

Smaller quantities of oil also impacted the north eastern section of Bribie Island and beaches on the Sunshine Coast from Kawana to Marcoola. In total approximately 56 kilometres of Sunshine Coast beaches were impacted by the oil spill.

On 13 March 2009 the Queensland Government declared the incident a “disaster situation” with Maritime Safety Queensland as the lead agency for what was to become an extended whole-of-government commitment until 19 June 2009.

Good progress was made cleaning up the affected areas through the deployment of significant resources with up to 2500 people employed in various roles over 3 months.

Fortunately, impacts on wildlife were minimal and were managed by well trained oiled wildlife responders from the Queensland Department of Environment and Natural Resources (DERM).

Clean-up crews shovel oil from the eastern beach of Moreton Island

On 20 June 2009 the incident response entered a recovery phase that is being coordinated by DERM. DERM’s main focus during this phase will be the long term monitoring of the effects of the oil spill on the local environment.

The containers lost overboard from the Pacific Adventurer were located by the Royal Australian Navy in productive trawl grounds that are outside of Queensland Coastal Waters, but within Australia’s Territorial Sea.

In addition to the *Pacific Adventurer* response, Maritime Safety Queensland received reports of 48 oil spill incidents that required some type of intervention. All of these incidents were responded to in a timely and effective manner by Maritime Safety Queensland and its response partners.

Contingency Planning

The Queensland Coastal Contingency Action Plan was updated in February 2009 to reflect changes to local government arrangements in Queensland. The revised document is available on Maritime Safety Queensland’s intranet and can be provided on compact disc upon request.

ACTIVITIES IN STATES AND THE NORTHERN TERRITORY

Training

During the year Maritime Safety Queensland continued to deliver specialist oil spill response training courses for response personnel and participate in the ongoing development of the National Plan training curriculum.

Two additional Queensland personnel attended oil spill management training conducted by the AMSA in Melbourne in October 2008.

In a related matter that is indicative of the spirit of cooperation of the National Plan, one officer from Maritime Safety Queensland travelled to New Zealand during August 2008 to assist with acceptance testing of new National Plan equipment.

Course Type	Number of Participants
Administration and Logistics Course	33
Introduction to Oil Spill Response Course	100
Level 3 Oil Spill Responder Course	78
Level 4 Oil Spill Responder Course	0
Total	211

Exercises

A number of small first-strike response exercises were conducted as part of normal training activities whilst major exercises that were scheduled for Townsville and Cairns were cancelled because of the *Pacific Adventurer* oil spill response. Maritime Safety Queensland's exercise program will resume following analysis of recommendations arising from the National Plan Incident Assessment Team's report into the *Pacific Adventurer* oil spill response.

Administrative changes in the State response arrangements

There were no significant changes to response arrangements in Queensland. However Maritime Safety Queensland did increase its focus on fostering inter-agency operability with other emergency services organisations, including the Queensland Fire and Rescue Service and Emergency Management Queensland.

WESTERN AUSTRALIA

Significant Incidents

There were 57 incidents reported in the period 1 July 2008 to 30 June 2009. Many of these reports are of very small spills or near misses. There were several reports of recreational and fishing vessels grounding or sinking all of which reported no loss of oil.

The Atlantic Eagle

At 0710 on 15 July 2008, the Greek registered bulk carrier *Atlantic Eagle* sailed from Albany, Western Australia, partly loaded with a cargo of grain. At 0815, when the ship's position was plotted on the chart, it was just outside port limits and its speed had been increased to 14 knots for the voyage to Fremantle, Western Australia. The master, the second mate and a helmsman were on the bridge.

During the next 10 minutes, the master made two significant course alterations and then set the ship on a heading of 235º, an allowance of five degrees to port of the ship's planned course. He then dismissed the helmsman. The ship's position had not been plotted on the chart since 0815 and no member of the bridge team was monitoring its progress. No account had been taken of the prevailing wind and current or the risk posed by Maude Reef which lay ahead and near the planned track.

At 0835, the master left the bridge, instructing the second mate to keep the ship on the set heading and clear of islands. The instructions were inconsistent with the passage plan and, instead of clarifying them, the second mate maintained the ship on a heading of 235º.

During the next 20 minutes or so, the second mate did not establish the ship's position nor did he monitor the ship's progress and so he had little appreciation of where the ship was or would be with respect to navigational dangers ahead. His poor situational awareness and low workload probably led to boredom and in-attention as the ship moved towards Maude Reef.

ACTIVITIES IN STATES AND THE NORTHERN TERRITORY

At 0856, *Atlantic Eagle* grounded on Maude Reef, seriously damaging its hull, rudder and steering gear. The ship's momentum carried it clear of the reef and the master then anchored the ship nearby. While there was no pollution, Australian authorities rapidly put in place their plan to manage any potential pollution and other risks.

On 17 July, *Atlantic Eagle* was towed to a place of refuge off Albany. Over the next 5 weeks, temporary repairs to the ship were completed.

On 24 August, the ship was towed from Albany bound for Jakarta, Indonesia, to discharge its cargo in preparation for undergoing permanent repairs in Vietnam.

Mermaid Eagle

The *Mermaid Eagle* was moored on a Cyclone mooring at West Lewis Island Dampier.

On the 2nd February Mermaid Marine received a call from Dampier Port Authority (DPA) indicating that the *Mermaid Eagle* was aground on King Point and was carrying 130,000L of diesel when it went aground.

Approximately 10,000L was lost during the first high tide after grounding. DPA deployed containment and absorbent boom around the vessel and was successful in capturing any further diesel. DPA in conjunction with the Salvors transferred the remaining diesel into tanks on a support barge. The vessel was then patched and towed from the rocks to a lifting yard.

Tar Balls

On 29th June 2009 tar balls were reported scattered along some of WA's most iconic beaches in Broome reaching from Riddell Beach to Gantheume Point. The Broome Port Authority controlled the clean up response with the assistance of the Department, other State Agencies, the Shire of Broome and Conservation Volunteers Australia. The weathered oil ranging from pea sized to that of golf balls impacted a total of 24 kilometres of beach highly significant to the tourism of the area. Approximately 500 Kg of waste was recovered in the 5 day response. Samples of the oil were sent for analysis and were found to be a match with a vessel that had reported an oil spill in Commonwealth waters 2 weeks prior to the stranding.

A similar scenario occurred along the Perth metropolitan beaches two weeks later. The tar balls extended more than 20 kilometres along the metropolitan coast from Port Beach at Fremantle to Mullaloo Beach in northern suburbs and including the iconic Cottesloe Beach.

The Department of Transport's Oil Spill Response Coordination (OSRC) and local councils combined efforts in a response to assess the beaches. Following the stranding Perth experienced a week of severe cold fronts and high tides removing the material and avoiding a large scale and costly clean-up.

Samples of the oil were sent for analysis and found to be an unprocessed crude oil from the Indonesian Archipelago.

Both incidents have served to reinforce the Department's role in oil spill response and also build closer relationships, especially with a number of metropolitan councils.

OSRA

The focus for the work on OSRA in WA has been on updating the WA coastline and shoreline type datasets. The following datasets were updated in 2008/09:

1.1.1 Detailed Coast
1.1.2 Reference Coast
1.1.8 Gazetteer
2.1.10 (0.5) Resolution Shoreline Classification
5.2.2 Marine Park
5.2.3 Marine Park Protected Areas (MPAs)
5.2.5 National Park
5.2.7 Port Limits
5.3.1 Aquaculture/Shellfish
5.4.1 Aboriginal Heritage Sites
6.1.2 Ports
6.1.3 MOSES

ACTIVITIES IN STATES AND THE NORTHERN TERRITORY

New or updated contingency plans

The National Plan includes national marine oil and marine chemical spill plans as well as state, port and industry plans. The following contingency plans were revised or developed during 2008-2009:

- BHP Billiton Pyrenees Development Project OSCP 2008.
- ADA Oil Spill Contingency plan Zues 1 well WA 361-P 2008.
- CITC Pacific Mining 2008.
- Shell Browse Basin 2008.
- Exxon Mobil 2008.
- Cape Cuvier Basic Spill Plan 2009.
- Bunbury Port Authority Draft Chemical and Oil Spill Plan 2009.
- CITC Cape Preston Draft OSCP 2009.
- BHP Billiton Pyrenees Operations Draft OSCP 2009.
- Shark Bay Resources OSCP.
- BHP Billiton Pyrenees Operations OSCP 2009.
- Santos Burnside-1 Exploration Drilling Programme OSCP 2009.

DOT continues to assist the ports in a review and update of their OSCPs. Updates not yet finalised

Training

Metro State Response Team

During the year the Metropolitan State Response Team (SRT) was convened on a 4-6 weekly basis to undertake operator training. Over 50 members are registered on the team with representation from Fremantle Port, Department of Mines and Petroleum, Department of Fisheries, WA Police and Department of Transport staff. Training sessions this year have included deployment of equipment, familiarisation of equipment at the Fremantle stockpile, a 2 day shoreline workshop and debriefs of the Queensland *Pacific Responder* incident.

In September 2008 14 SRT members travelled to Port Hedland to be involved in Exercise *Black Jack*, a major oil spill response exercise coordinated by Port Hedland Port Authority. SRT members acted as operational team Leader, members and IMT members.

Four members of SRT were deployed to Albany during the Atlantic Eagle incident in July 2008. They took roles as operational team leaders on site. Other SRT members were involved in logistics, loading and trucking equipment from Fremantle and back again at the conclusion of the event.

In March 2009, twelve SRT members were deployed to Queensland to assist with the *Pacific Responder* incident as part of the NRT. Members acted as Shoreline Team Leaders and in IMT roles. DOT continues to support the Pilbara Regional Response Team.

Training

Training delivered by the Oil Spill Response Coordination team during 2008-09:

Course	Month	Location
3 Day Operator Training	July 2008	Broome
Shoreline Response Training	August 2008	Fremantle
3 Day Operator Training	November 2008	Bunbury
3 Day Operator Training	February 2009	Albany
2.5 Day Operator Training	March 2009	Bunbury
0.5 Day Oil Sampling Training	November 2008	Bunbury
DOT Oil Spill Management Training	May 2009	Perth
Shoreline Response Training	June 2009	Port Hedland

Participants at the training included representatives from DOT, Port Authorities, DEC. Fisheries, Department of Mines and Petroleum, Police, FESA, Oil and Shipping Industries along with their support industries.

Exercises

In addition to sending SRT members to participate in Exercise *Black Jack*, an IMT was established in the DOT Fremantle Office for the duration of the exercise to give support.

ACTIVITIES IN STATES AND THE NORTHERN TERRITORY

Equipment

DOT has purchased additional tier one equipment which was delivered to the ports in February 2009.

Equipment purchased included 300m of solid buoyancy general purpose boom for Broome, 300m of solid buoyancy general purpose boom for Albany and 300m of solid buoyancy general purpose boom for Esperance.

DOT has begun a project to barcode all the Department owned equipment located in the ports. The aim is to improve the methods of equipment auditing and maintenance.

Administrative changes

As of the 1st of July, The Department for Planning and Infrastructure restructured into three new departments with the Oil Spill Response Coordination now falling under the Department of Transport. Staff changes include the appointment of Matt Verney as Team Leader and Amanda Nardi as Research Officer. Rowena Bucklow remains Training Officer while Rebecca Waddington (formally Ince) and Mandy Dearden have left the Department. A second Training Officer, replacement Equipment Officer and replacement Environmental Officer are expected by the end of October 2009.

The updated Westplan Marine Oil Pollution and Westplan Marine transport emergency are expected to be completed by the end of the year. The revised version will contain the move to AIIMS as the primary incident control management system.

NORTHERN TERRITORY

Significant Incidents

Pacific Adventurer - Moreton Island - March 2009

The oil spill occurred on 11 March 2009, when 250 tonnes of oil escaped from the container ship *Pacific Adventurer* and washed up on Sunshine Coast beaches, Bribie Island and Moreton Island.

The Northern Territory was involved in the cleanup and provided members of the NT NRT as team leaders located at Eager Creek, Morton Island.

Perkins Shipping Berth

On the 30 December 2008 a 50 litre diesel spill occurred at Perkins Shipping Berth, Frances Bay Darwin during a refuelling operation. The spill was contained and contingency plans were enacted consistent with Perkins Shipping Contingency Plan.

Ramingining Ramp at Milingimbi

On the 3 March 2009 approximately 50 litres of diesel was spilt overboard from the Perkins vessel MV *Fourcroy* due to a fuel overflow, and 25 litres spilt on the ramp. The cause was reported as the inaccurate sounding of the fuel tank. Fuel operations were suspended immediately, containment procedures were followed, and relevant agencies were notified.

Jolly Rodger - Groote Eylandt

On the 16 April a Collision between the bulk carrier (*F&K Hong Kong*) and a fishing vessel (*Jolly Rodger*) 5nm West off Groote Eylandt.

The vessel was safely towed from Connexion Island to the Groote Eylandt Port. A diesel sheen appeared in the water approximately 1.6km long and 50m wide. BHP Billiton had deployed a boom around the vessel to contain any further diesel spillage. NT Police monitored the vessel while at the mooring.

The Australian Transport Safety Bureau and the Australian Maritime Safety Authority have investigated the collision. Results of the investigations have not been provided to the Department.

The Department of Natural Resources, Environment and the Arts anticipated that the diesel spilled in this incident would dissipate and evaporate quickly, causing minimal environmental impact. Furthermore, there was no anticipated environmental impact arising from the security and maintenance being carried out on the vessel at the port.

FSPO Front Puffin

On the 13 June 2009 during pressure testing of a cargo line the FSPO *Front Puffin* experienced a

ACTIVITIES IN STATES AND THE NORTHERN TERRITORY

clamp on the cargo line failing causing a spill of approximately 50 litres of Puffin crude overboard. The tanker was operating approximately 70 Nm East of Ashmore reef. Due to rough weather conditions the oil dissipated quickly. A full cleanup of the facility was undertaken, the cargo line was repaired and relevant agencies were notified.

Fishing vessel Proteus

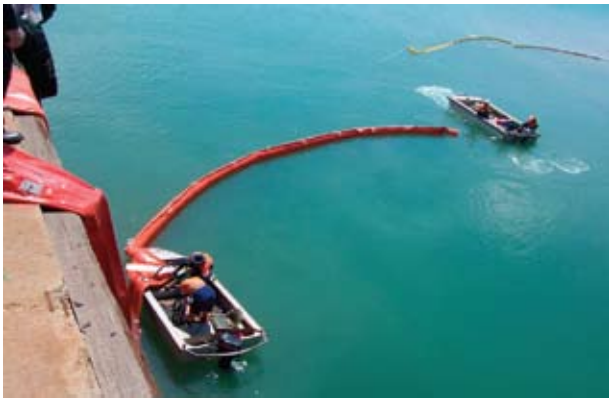
On the 19 May 2009 the fishing vessel *Proteus* ran aground near Maria Island at the mouth of the Roper River. There was no oil leak, damage to the vessel or any injuries. The *Proteus* was refloated on the 20 May after it was sealed and trawl booms and anchors were put in place. No leaks were found, damage consisted of a crack in the starboard top down stay lug which was welded and the vessel headed home.

New or Updated Contingency Plan

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

Training

Darwin Port Corporation and Perkins Shipping carried out boom deployments. Perkins Shipping is considering options for spill containment, including having boom stored at the end of a jetty ready for deployment.



Exercises

A training exercise took place in the Port of Darwin

Equipment

Review of NT based equipment is recommended.

All equipment recently serviced by ORCA through AMSA.

Some dispersant spray used for the Montara incident and as yet not replaced.

Administrative Changes

Albert Simonato has replaced Matthew Philips as the Planning Officer for incidents at the local level.

The Department of Planning and Infrastructure has had a name change and is now the Department of Lands and Planning

FINANCIAL STATEMENTS

INCOME STATEMENT

	2007-08 Budget $	2007-08 Actual $	2008-09 Budget $	2008-09 Actual $	2008-09 Variance to Budget $
Income					
Protection of the Sea Levy	5,300,777	**5,291,200**	6,702,000	**7,114,685**	412,685
Other revenue	332,868	**288,032**	12,000	**384,285**	372,285
Interest	146,263	-	-		-
Sale of assets	-	**112,000**	-		-
Total Income	**5,779,908**	**5,691,232**	**6,714,000**	**7,498,970**	**784,970**
Expenses					
Staff costs	864,123	**417,428**	596,308	**237,882**	(358,426)
Travel and Transport	383,904	**317,938**	485,500	**326,577**	(158,923)
Materials and Services	1,490,985	**1,635,152**	2,403,618	**2,360,380**	(43,238)
Communication expenses	81,951	**33,640**	38,700	**20,458**	(18,242)
Occupancy costs	352,269	**317,687**	254,800	**282,715**	27,915
Administrative expenses	58,768	**72,729**	21,153	**18,829**	(2,324)
Depreciation	1,149,915	**965,873**	952,555	**796,164**	(156,391)
Incident costs	-	**1,252,501**	102,000	**1,596,782**	1,494,782
Incident costs recovered	-	**(162,928)**	(1,000,000)	**(54,697)**	945,303
Corporate costs	754,566	**210,238**	508,730	**271,879**	(236,851)
Total Expenses	**5,136,481**	**5,060,258**	**4,363,364**	**5,856,969**	**1,493,605**
Operating Surplus/(Deficit)	**643,427**	**630,974**	**2,350,636**	**1,642,001**	**(708,635)**

FINANCIAL STATEMENTS

VARIANCE ANALYSIS

Name Revenue or Expense Line	Variance > than 10%	Variance > $50,000	Explanation of Variance
Staff costs		358,426	Significant staff turnover.
Travel and Transport		158,923	Lower staff levels reduced travel costs.
Communication expenses	18,242		Communication costs lower due to reduced staffing.
Occupancy costs	(27,915)		Underestimated storage costs.
Depreciation		156,391	Due to revaluation of National Plan equipment.
Incident costs		1,494,782	*Pacific Adventurer* incident costs.
Incident costs recovered		945,303	Income from *Pasha Bulka* incident cost recovery.
Corporate costs		236,851	Budgeted amount covered all of the Environment Protection responsibility centre, not just National Plan component.

FINANCIAL STATEMENTS

FINANCIAL REPORT

	2007-2008 Actual $	2008-2009 Actual $
RECEIVABLES		
Trade debtors	219,086	**118,863**
less Provision for doubtful debts	-	-
	219,086	**118,863**
Other debtors	-	-
GST receivable	29,231	
	248,317	**118,863**
INVENTORY		
Oil dispersant stocks	2,826,700	**2,826,700**
	2,826,700	**2,826,700**
PROPERTY PLANT & EQUIPMENT		
Plant and equipment:		
fair value	10,523,640	**2,286,255**
Accumulated depreciation	**(8,234,922)**	**(169,852)**
Total plant and equipment	2,288,718	**2,116,403**
Office and computer equipment:		
fair value	156,066	**44,500**
Accumulated depreciation	(36,952)	**(2.160)**
Total office and computer equipment	119,114	**42,340**
Vehicles:		
fair value	30,900	**22,250**
Accumulated depreciation	-	**(1,245)**
Total vehicles	30,900	**21,005**
Vessels and amphibians:		
fair value	1,123,525	**1,639,000**
Accumulated depreciation	(5,389)	**(39,943)**
Total vessels and amphibians	1,118,136	**1,599,057**
Capital works in progress		
Total property, plant and equipment	3,556,868	**3,778,805**
INTANGIBLE ASSETS		
Software		
Externally Acquired Computer software	128,080	**249,580**
Accumulated amortisation	(117,981)	**(84,218)**
Total Intangibles	10,099	**165,362**
CREDITORS		
Trade creditors	321,545	**1,653,334**
Salaries and wages	19,187	**23,417**
Other creditors	-	-
	340,732	**1,676,751**
COMMITMENTS		
Other Commitments		
Commitments for expenditure in relation to purchase orders that have been made and are payable as follows:		
Within one year	160,531	**210,097**
Later than one year but not later than five years		
Total Other commitments	160,531	**210,097**