NSW State Waters
Marine Oil and Chemical
Spill Contingency Plan

This is a sub-plan to the

NSW State Emergency
Management Plan (EMPLAN)

and the

National Plan for
Maritime Environmental Emergencies

December 2016
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Authorisation
The NSW State Waters Marine Oil and Chemical Spill Contingency Plan has been prepared in support of the New South Wales State Emergency Plan (EMPLAN) and the National Plan for Maritime Environmental Emergencies (National Plan) to outline arrangements for dealing with marine oil or chemical spills and maritime incidents such as groundings, collisions, disabled vessel or fire on a vessel that could result in an oil or chemical spill into State waters of NSW. This plan is a sub-plan to EMPLAN.

The plan was produced following extensive stakeholder consultation. It has been endorsed by the State Emergency Management Committee.

Amendments
This plan will be subject to regular review and updating. It is essential however, that all agencies listed in this plan report any relevant alterations and changes regarding their agency’s structure or functions. Suggested amendments or additions to the contents of this plan should be forwarded in writing to:

Manager, Marine Pollution Response
NSW Maritime
Roads and Maritime Services
Locked Bag 5100
CAMPERDOWN NSW 1450

Amendments promulgated are shown in the table below.

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| Five | December 2012 - Reflects new Integrated Transport Agency changes  
Adoption of the Commonwealth Place of Refuge Guidelines.  
Update of agency names.  
Inclusion of Oiled wildlife response summary.  
Addition of appendices covering Fire on a Vessel Guidelines and Media Guidelines.  
Notification update  
Minor clarifications and edits |
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<td>Six</td>
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Definitions
For the purposes of this plan, except where the context otherwise indicates, the following definitions apply.

Agriculture - the production and primary processing of foods, fibres and by-products from plants and animals. Agriculture involves the cultivation of crops including horticultural products, the raising of livestock or aquatic species and the planting of trees for wood products. For the purposes of this plan fishing is included.

AIIMS - is the Australasian Inter-service Incident Management System

AMOSPlan – is the cooperative arrangements for response to oil spills by Australian oil companies and associated industries. (Source: National Plan)
* A copy of AMOSPLAN is available online at www.amosc.com.au/amosplan/

Animal - All animals including livestock, companion animals and wildlife.

Assessment – in relation to an incident/emergency includes the confirmation of a spill, an initial assessment of the extent of the spill and reporting the finding to the appropriate organisation/individual.

Combat agency – the agency identified in this plan as the agency responsible for controlling the response to a particular incident/emergency.

Command – means the direction of members and resources of an agency/organisation in the performance of the agency/organisation's roles and tasks. Authority to command is established by legislation or by agreement with the agency/organisation. Command relates to agencies/organisations only, and operates vertically within the agency/organisation.

Control – means the overall direction of the activities, agencies or individuals concerned. Control operates horizontally across all agencies/organisations, functions and individuals. Situations are controlled. (Source: SERM Act 1989)

Coordination – means the bringing together of agencies and individuals to ensure effective emergency or rescue management, but does not include the control of agencies and individuals by direction. (Source: SERM Act 1989).

EMPLAN – the NSW State Emergency Management Plan. The object of EMPLAN is to ensure the coordinated response to emergencies by all agencies having responsibilities and functions in emergencies. (Source: SERM Act 1989)
Emergency – means an emergency due to the actual or imminent occurrence (such as fire, flood, storm, earthquake, explosion, terrorist act, accident, epidemic or warlike action) which:

a) endangers, or threatens to endanger, the safety or health of persons or animals in the State; or

b) destroys or damages, or threatens to destroy or damage, any property in the State, being an emergency which requires a significant and co-ordinated response.

For the purposes of the definition of emergency, property in the State includes any part of the environment of the State. Accordingly, a reference in this Act to:

a) threats or danger to property includes a reference to threats or danger to the environment, and

b) the protection of property includes a reference to the protection of the environment.

(Source: SERM Act 1989).

Emergency Operations Centre - a centre established by the EOCON at local, district or state level to coordinate support to the Combat Agency. Functional areas may also open their own operations centres to coordinate their resources.

Emergency Operations Controller (EOCON) – the member of the NSW Police at a local, District or State level appointed as an Emergency Operations Controller.

Finance and Administration Section – the functional group under the Oil Spill Response Incident Control System responsible for the provision of finance and administrative services and for the collation of costs and all records related to an incident/emergency response.

Functional Area – a category of services involved in prevention, preparedness, response and recovery for an emergency, including the following:

(a) Agriculture and Animal Services
(b) Communication Services
(c) Energy and Utility Services
(d) Engineering Services
(e) Environmental Services
(f) Health Services
(g) Public Information Services
(h) Transport Services and
(i) Welfare Services.

(Source: EMPLAN)

Hazardous Material – means anything that, when produced, stored, moved, used or otherwise dealt with without adequate safeguards to prevent it from escaping, may cause injury or death or damage to property. (Source: Fire Brigades Act, 1989) and includes chemical, biological and radiological agents.
IGA – Inter-governmental Agreement (of the National Plan for Maritime Environmental Emergencies). The IGA ensures that the national approach to preparedness and response to oil and chemical spills in the marine environment is continued and strengthened. It provides a mechanism to ensure decision making under the National Plan is co-operative and that the obligations of all parties are met.

Incident – any discharge or escape, or potential discharge or escape, of any oil or chemical substance into State waters during its handling, transport or storage.

Incident Control Centre – the centre established by the Combat Agency to control and coordinate the response to an incident/emergency. There is only one incident control centre for an incident/emergency response. (Also see Emergency Operations Centre).

Incident Controller – the individual responsible for controlling all operational activity in response to an incident/emergency.

Liaison Officer – is a person, nominated or appointed by an organisation or Functional Area, to represent that agency or Functional Area at the incident control centre, emergency operations centre or forward command point. A liaison officer maintains communications with and conveys directions/requests to their agency or Functional Area, and provides advice on the status, capabilities, actions and requirements of their agency or Functional Area. (See section 3.3.2.4)

Logistics Section – the functional group under the Oil Spill Response Incident Control System responsible for the supply of services and resources to support and sustain the response to an incident/emergency.

Marine Pollution Controller – is responsible for coordinating the overall State response to an actual or potential oil or chemical spill into State waters and take responsibility for liaison with the relevant Ministers, SEOCON, industry representatives, ship owner, salvor and media as required in consultation with the Combat Agency. This allows the Incident Controller to focus on managing the operational aspects of the response.

Maritime Casualty – means a collision of ships, grounding or other incident of navigation or other occurrence on board a ship or external to it resulting in material damage or imminent threat of material damage to a ship or cargo as defined in the international convention relating to intervention on the high seas in cases of oil pollution casualties.

Maritime Casualty Officer – is a qualified surveyor, with extensive knowledge of ship structures and stability and experience in salvage operations, and is placed on board a vessel during an incident/emergency by the Combat Agency or AMSA to provide independent and objective advice. The Maritime Casualty Officer provides advice to the Incident Controller and MERCOM about on-board actions and procedures either proposed or undertaken by the Master or the salvor.
**Maritime Emergency Response Commander** – means the Maritime Emergency Response Commander (MERCOM) appointed by AMSA who is the national decision maker responsible for control of responses to maritime casualties, with intervention powers to take such measures as may be necessary to prevent, mitigate, or eliminate a risk of significant pollution, including the power to direct a port to release a tug or designate a place of refuge for a ship in emergency situations that present a risk of significant pollution. See Section 2.5.1 for details.

**National Maritime Emergency Response Arrangements** – the National Maritime Emergency Response Arrangement (NMERA) was established to protect the marine environment from actual or potential ship-sourced pollution. This is done by enhancing current response arrangements under the National Plan through ensuring the continuing provision of an appropriate level of maritime emergency towage capability around the Australian coastline and the enhancement of the emergency response management framework, which includes the appointment of a single national decision maker to coordinate a response to a maritime casualty. (See Maritime Emergency Response Commander).

All states/NT have agreed to the NMERA.

**National Plan** – means the National Plan for Maritime Environmental Emergencies. A plan agreed to by the Commonwealth and state/NT governments and the oil, shipping and exploration industries to provide a response capability to the threat posed to the coastal environment by marine oil and chemical spills.

**Naval Waters** – those waters defined in section 3B of the Control of Naval Waters Act 1918, as amended, and are as marked on Australian navigational charts.

**Oil Spill Response Incident Control System (OSRICS)** – is the system used to manage a marine oil or chemical spill response. It is based on the AIIMS incident control system and has been modified to take into account the emphasis placed on record keeping and cost recovery from the polluter.

**Operations Section** – the functional group under the Oil Spill Response Incident Control System responsible for implementing the operational requirements of the incident action plan and providing operational input into the planning process.

**Participating Organisation** – in this plan means the government departments, statutory authorities, volunteer organisations and other agencies who have either given formal notice to agency controllers or Functional Area Coordinators, or have acknowledged to the State Emergency Management Committee, that they are willing to participate in emergency management response and recovery operations under the direction of the Controller of a Combat Agency, or coordinator of a Functional Area, with the levels of resources or support as appropriate to the emergency operation. (Source: EMPLAN)

**Place of Refuge** – is a place where a ship in need of assistance can find favourable conditions enabling it to take action to stabilise its condition, protect human life and reduce the hazards to navigation and to the environment. (Source: National Maritime Place of Refuge Risk Assessment Guidelines) A place of refuge may include ports, however, it is not confined to ports.
Planning Section – the functional group under the Oil Spill Response Incident Control System responsible for the provision of information on all aspects of an incident/emergency and the development of an incident action plan as directed by the Incident Management Team.

Port Safety Operating Licence – The Newcastle Port Authority trading as the Port Authority of NSW is issued with a Port Safety Operating Licence, under the Ports and Maritime Administration Act (1995), which sets out the Government’s regulatory functions that the Port Authority is to carry out on behalf of the State government. The licence also sets the standards that have to be met in carrying out the regulatory functions. One of the functions is emergency response to shipping incidents including oil and chemical spills from ships and commercial vessels.

Recovery - The process of returning affected communities to their proper level of functioning after an emergency. This involves the reconstruction of the physical infrastructure and the restoration of emotional, social, economic and physical wellbeing. (State Emergency and Rescue Management Act 1989, Section 5 (d))

Rescue Coordination Centre – is the national centre for the notification of maritime incidents and the coordination of sea search and rescue. The centre is located within the Australian Maritime Safety Authority, Canberra.

Salvor – a person or organisation who salvages a ship and or cargo.

State Emergency Operations Centre - The SEOC is the established centre from which the SEOCON either controls an emergency operation, or coordinates support to the Combat Agency or Functional Area. It has the necessary communications facilities and staff (including liaison officers from the, Functional Areas and other Organisations) for these purposes.

State of Emergency – means a state of emergency declared by the Premier under section 33(1) of the SERM Act 1989 (as amended).

State waters – as defined in the Marine Pollution Act, 2012 See section 1.6.3 of this Plan.

Statutory Agency – is a definition used in the National Plan and means the State/NT or Commonwealth agency having legislative responsibility for marine pollution matters in their area of jurisdiction. (Source: National Plan Intergovernmental Agreement).

In NSW the Statutory Agency is NSW Maritime (Roads and Maritime Services).

Supporting Organisation – in this plan means the government departments, statutory authorities, volunteer organisations and other specialist agencies who have indicated a willingness to participate and provide specialist support resources to a Combat Agency controller or Functional Area Coordinator during emergency operations. (Source: EMPLAN)
Abbreviations
AASFAC – Agriculture and Animal Services Functional Area Coordinator
AIIMS - Australasian Inter-service Incident Management System
AIP – Australian Institute of Petroleum
AMOSC – Australian Marine Oil Spill Centre
AMOSSP – Australian Marine Oil Spill Plan
AMSA – Australian Maritime Safety Authority
ARA – Appropriate Regulatory Authority
CBR – chemical, biological, radiological
DISRD - Department of Industry, Skills, Regional Development
DPI - Department of Primary Industries
EMPLAN – NSW State Emergency Plan
Enviroplan – Environmental Services Functional Area Supporting Plan
EnvSFA – Environmental Services Functional Area
EnvSFAC – Environmental Services Functional Area Coordinator
EOC - Emergency Operations Centre
EOCON - Emergency Operations Controller
EPA – Environment Protection Authority
ESFAC – Engineering Services Functional Area Coordinator
ETV – Emergency Towage Vessel
FRNSW - Fire & Rescue NSW
FWADC – Fixed Wing Aerial Dispersant Capability
Hazmat/CBR Plan – Hazardous Materials/Chemical, Biological, Radiological
HSFAC – Health Services Functional Area Coordinator
IAP – incident action plan
ICC – incident control centre
IGA – (National Plan) Inter-governmental Agreement
IMDG – International Maritime Dangerous Goods
IMO – International Maritime Organization
LEOCON – Local Emergency Operations Controller
MAICT - Multi Agency Incident Control Team
MERCOM - Maritime Emergency Response Commander
MLO - Media Liaison Officer
MPC – Marine Pollution Controller
NMERA – National Maritime Emergency Response Arrangements
NPEC – NSW National Plan Executive Committee
OEH – Office of Environment and Heritage
OPRC – The International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990
OSRA – Oil Spill Response Atlas
OSRICS – Oil Spill Response Incident Control System
OSTM – Oil Spill Trajectory Model
P&I Club – Protection and Indemnity Club
PIFAC – Public Information Functional Area Coordinator
POLREP – Pollution Report
PSOL – Port Safety Operating Licence
RAN – Royal Australian Navy
RCC – Rescue Coordination Centre
SEMC – State Emergency Management Committee
SEOC - State Emergency Operations Centre
SEOCON – State Emergency Operations Controller
SERCON – State Emergency Recovery Controller
SERM Act 1989 – State Emergency and Rescue Management Act, 1989
SITREP – Situation Report
TSFAC – Transport Services Functional Area Coordinator
TWG – Technical Working Group
Part 1 Introduction

1 Introduction

NSW has well established emergency management arrangements that follow the ‘all-agencies all-hazards approach’ to emergency management. An effective response to a major shipping incident/emergency or marine oil or chemical spill (maritime incident) will require a well coordinated response from a number of State and Commonwealth agencies. The National Plan for Maritime Environmental Emergencies (National Plan) represents the combined efforts of the Commonwealth, State and Northern Territory Governments, with the assistance of the oil industry, to respond to the threat posed to the coastal environment of Australia by oil spills from ships.

1.1 Aim of the Plan

The aim of this Plan is to outline the arrangements to deal with marine oil or chemical spills and maritime incidents such as groundings, collisions, disabled vessel or fire on a vessel that could result in an oil or chemical spill into State waters of NSW.

In this Plan a reference to an oil or chemical spill includes a reference to any maritime incident/emergency that has the potential to result in an oil or chemical spill.

1.2 Scope of the Plan

This Plan applies to:

1. pollution of oil and chemicals from trading ships and commercial vessels as defined in the Marine Pollution Act 2012 and Marine Pollution Regulation 2014.
2. pollution from vessels (commercial and recreational) as defined in section 86 of the Protection of the Environment Operations (General) Regulation 2009.

This Plan is part of the NSW emergency management arrangements and the expertise and resources of other State agencies are an integral part of this Plan that includes procedures to:

- provide an effective system for reporting, assessing and responding to an actual or potential maritime incident;
- ensure that the NSW Government’s resources are integrated with the National Plan and effectively mobilised in the event of a maritime incident in or adjacent to NSW State waters;
- define the division of responsibilities for responding to maritime incident;
- institute procedures to minimise the impact on the natural and socio-economic environment of the area impacted by a maritime incident;
- establish a response structure using the Oil Spill Response Incident Control System (OSRICS) to manage the maritime incident response; and
- obtain assistance from other Functional Areas and agencies under the NSW EMPLAN arrangements.

The arrangements in this plan deal with the three levels of response as set out in section 3.1.
1.3 **Relationship to EMPLAN**
This Plan is a sub plan to the NSW State Emergency Plan (EMPLAN) and should be read in conjunction with that plan.

1.4 **Relationship to the National Plan**
The National Plan operates under an Inter-governmental Agreement (IGA) between the Commonwealth and State/NT Governments. NSW is a signatory to the IGA. The IGA is available on the AMSA website: http://www.amsa.gov.au/Marine_Environment_Protection/National_plan/Inter_Governmental_Agreement.asp

This Plan supports the National Plan and draws on resources available under the National Plan arrangements when necessary.

1.5 **Related Plans and Documents**
This plan is supported by the following Commonwealth documents:
- National Plan for Maritime Environmental Emergencies
- National Maritime Place of Refuge Risk Assessment Guidelines; and
- Intergovernmental Agreement (IGA) between the Commonwealth and the States/NT.

This plan is supported by the following State documents:
- NSW EMPLAN;
- district level disaster plans;
- regional and local marine oil and chemical spill contingency plans;
- port contingency plans;
- relevant Functional Area supporting plans;
- MOU between Fire & Rescue NSW, and maritime combat agencies; and
- NSW Cost Recovery Guidelines.

**Appendix 14** lists other documents and guidelines that support this sub plan.

1.6 **Legislative Authority**

1.6.1 **Commonwealth Legislation**
The Australian Maritime Safety Authority, established under the *Australian Maritime Safety Authority Act 1990*, has a designated function for combating pollution in the marine environment. The Act also directs the authority to perform its functions “in a manner consistent with the obligations of Australia, under any agreement between Australia and another country”.

Australia has been a member of the International Maritime Organization (IMO) since its inception, and is a party to the relevant IMO Conventions that specifically address pollution from ships. These conventions are implemented in Australia by the "Protection of the Sea" package of legislation listed below.
The “Pollution of the Sea” Acts are:

- Protection of the Sea (Civil Liability) Act, 1981;
- Protection of the Sea (Powers of Intervention) Act 1981;¹
- Protection of the Sea (Prevention of Pollution from Ships) Act 1983;
- Protection of the Sea (Shipping Levy) Act 1981;
- Protection of the Sea (Shipping Levy Collection) Act 1981;
- Protection of the Sea (Oil Pollution Compensation Fund) Act 1993;
- Protection of the Sea (Oil Pollution Compensation Fund - Customs) Act 1993;
- Protection of the Sea (Oil Pollution Compensation Fund - Excise) Act 1993; and
- Protection of the Sea (Oil Pollution Compensation Fund - General) Act 1993.
- Protection of the Sea (Civil Liability for Bunker Oil Pollution Damage) Act 2008

The Protection of the Sea (Powers of Intervention) Act 1981 provides powers to support the National Maritime Emergency Response Arrangements (NMERA) (Appendix 15) including the appointment of a Maritime Emergency Response Commander (MERCOM) (section 2.5.1).

### 1.6.2 State Legislation

**Marine Pollution Act 2012**

The Marine Pollution Act 2012 provides the portfolio Minister with powers of intervention in regard to the detention or direction of commercial and trading vessels and for preventing, combating and cleaning up of oil and chemical spills in State waters. The Minister has delegated functions under the Marine Pollution Act 2012 to NSW Maritime (Roads and Maritime Services) and the Port Authority of New South Wales².

The Marine Pollution Act 2012 provides the power to respond to oil and chemicals listed within MARPOL.

**Fire Brigades Act 1989**

Section 20A of the Fire Brigades Act 1989 allows the Commissioner of Fire & Rescue NSW to permit any members of a fire brigade to attend the site of an oil or chemical spill in State waters and support the Combat Agency. The Hazmat/CBR Plan deals with hazardous materials emergencies occurring on lands or in inland waterways.

**Note**

a) The State Emergency Operations Controller (SEOCON) would control the incident/emergency if a shipping incident involved an explosive device or other terrorist weaponry and would be NSW Maritime, the Port Authority of NSW and FRNSW.

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¹ This Act provides for the Commonwealth to intervene on Australian Territorial waters (outside 3 nautical miles State limit) to prevent, mitigate or eliminate pollution or the potential for pollution damage. These measures may include moving the ship, removing cargo, taking control of the ship or the destruction of the ship.

² The Newcastle Port Corporation trading as the Port Authority of New South Wales
1.6.3 State Waters

NSW State waters are defined in Section 3 of the *Marine Pollution Act 2012*.

“State waters” means:
(a) coastal waters of the State (within the meaning of Part 10 of the *Interpretation Act 1987*), and
(b) other waters within the limits of the State prescribed by the regulations for the purposes of this definition.

**Note.** The coastal waters of the State is the area extending from the low water mark, or other baseline, on the coast of the State to an imaginary line 3 nautical miles seaward of that mark or other baseline.

In this Plan, State waters consist of the territorial sea from the low water mark seaward for three nautical miles as well as those waters prescribed by the *Marine Pollution Regulation 2014*, being:
- Port of Yamba (part of the Clarence River);
- Coffs Harbour
- Port Macquarie (part of the Hastings River);
- Port Stephens (eastern section of Port Stephens)
- Port of Newcastle (part of the Hunter River);
- Sydney Harbour (all of Sydney Harbour and Middle Harbour, Parramatta River and Lane Cove River up to the tidal limits.);
- Port Botany (all of Botany Bay);
- Port Kembla;
- Jervis Bay (except Commonwealth waters)
- Port of Eden (Twofold Bay).

See Figure 5 in **Appendix 1** for locations of the ports along the NSW coast. Individual port boundaries, as described in the *Ports and Maritime Administration Regulation 2012* and are shown in Figures 6 to 10 in **Appendix 1**.

1.6.4 Powers of Inspectors

The *Marine Pollution Act 2012* provides for the appointment of inspectors for the purpose of obtaining evidence relating to an illegal discharge or a suspected illegal discharge of oil or chemicals. An inspector has the power to board a ship, inspect records, take samples of any substances on board the ship and investigate the suspected discharge. Inspectors are appointed in all NSW trading ports by the Port Authority of NSW and NSW Maritime. AMSA inspectors may also be available to assist with sample collection and investigations.
Agencies appointed as an Appropriate Regulatory Authority (ARA) under the *Protection of the Environment Operations Act 1997* (POEO) have the powers to carry out inspections and gather evidence relating to pollution from non-pilotage vessels.

### 1.6.5 Ports and Maritime Administration Act 1995

Part 10 of the Act describes the functions of the Port Authority\(^3\) as being, in part:

(2) to exercise the port safety functions for which it is licensed in accordance with its operating licence.

The Act further describes the port safety functions in section 11: Meaning of “Port Safety Functions” as including:

11 (b) the function of providing or arranging for the provision of emergency environment protection services for dealing with pollution incidents in relevant waters; and

11 (c) the function of carrying out investigations into marine accidents or incidents.

Section 9 of the Port Safety Operating Licence (PSOL) sets out the emergency response requirements in the following terms:

*The Licensee must respond to incidents as required by the NSW State Waters Marine Oil and Chemical Spill Contingency Plan or the relevant NSW emergency management plans, in the area of operations set out in Appendices 2. (of the PSOL).*

*The licensee must respond to port related emergencies, in accordance with the Licensee’s role in the relevant NSW emergency management plans, within the area of operations set out in Appendix 1 (of the PSOL).*


Section 92 (2) of the POEO Act allows a public authority to take voluntary clean-up action if it reasonably suspect that a pollution incident has occurred or is occurring. NSW Maritime is an ARA under section 86 of the *Protection of the Environment Operations (General) Regulation 2009* for activities involving a non-pilotage vessel in navigable waters, except in marine park waters. These sections of the *POEO Act* and its regulation provides NSW Maritime the necessary powers to respond to oil spills from recreational vessels in State and inland waters.

### 1.6.7 State Emergency and Rescue Management Act 1989 (as amended)

This plan also meets the requirements of the *State Emergency and Rescue Management Act 1989*, as amended, and is endorsed by the State Emergency Management Committee.

\(^3\) Newcastle Port Corporation trading as the Port Authority of New South Wales
1.7 Activation
This plan, the NSW EMPLAN and other NSW emergency response plans do not require formal activation, they are active at all times. The National Plan does not require a formal activation as such, however, a pollution report (POLREP) is required to provide initial advice of an actual or threatened pollution incident/emergency (Section 4.4). Also see section 4.2, for details of who should be informed of an incident/emergency.

1.8 Concept of Operations
1.8.1 Division of Responsibility
Because a maritime incident can occur anywhere in our ports or the seas around Australia both state/NT and commonwealth jurisdictions may have to respond. On a national level the National Plan IGA sets out the divisions of responsibility between the Commonwealth and states/NT. At the state level, this Plan and the PSOL issued by the portfolio Minister to the Port Authority of NSW sets out the requirements for responding to maritime incidents and emergencies. The divisions of responsibility are summarised in Table 1.

Table 1. Division of responsibility for combating oil and chemical spills.

<table>
<thead>
<tr>
<th>NSW State waters: Maritime incidents&lt;sup&gt;4&lt;/sup&gt;</th>
<th>Location</th>
<th>Combat Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qld border to Fingal Head (Port Stephens) excluding the Port of Yamba;</td>
<td></td>
<td>NSW Maritime</td>
</tr>
<tr>
<td>Port of Yamba (Port Waters)</td>
<td></td>
<td>Port Authority of NSW (Newcastle) as Port Manager</td>
</tr>
<tr>
<td>Fingal Head to Catherine Hill Bay and including the Port of Newcastle;</td>
<td></td>
<td>Port Authority of NSW (Newcastle)</td>
</tr>
<tr>
<td>Catherine Hill Bay to Garie Beach including Sydney Harbour and Port Botany;</td>
<td></td>
<td>Port Authority of NSW (Sydney)</td>
</tr>
<tr>
<td>Garie Beach to Gerroa including the Port of Port Kembla; and</td>
<td></td>
<td>Port Authority of NSW (Port Kembla)</td>
</tr>
<tr>
<td>Gerroa to the Victorian border excluding the Port of Eden</td>
<td></td>
<td>NSW Maritime</td>
</tr>
<tr>
<td>Port of Eden</td>
<td></td>
<td>Port Authority of NSW (Port Kembla) as Port Manager</td>
</tr>
<tr>
<td>Inland waters</td>
<td></td>
<td>Fire &amp; Rescue NSW</td>
</tr>
<tr>
<td>Australian Territorial Sea and High Sea (outside 3 nautical miles State limit)</td>
<td></td>
<td>Australian Maritime Safety Authority</td>
</tr>
<tr>
<td>Declared naval waters</td>
<td></td>
<td>Royal Australian Navy</td>
</tr>
</tbody>
</table>

<sup>4</sup> In the case of a place of refuge request NSW Maritime will assume the combat agency role until a place of refuge is granted. At that time control of the incident may be handed to the Port Authority of NSW as the designated maritime incident combat agency. (Section 4.9).
Under the National Plan arrangements, NSW Maritime is the Statutory Agency for NSW and as such is responsible for:

- ensuring that NSW is prepared for, and can respond appropriately to a maritime incident in State waters;
- representing the maritime sector at the State Emergency Management Committee (SEMC); and
- liaising with the State Emergency Operations Controller (SEOCON) as required during a significant incident/emergency.

NSW State waters have been divided into areas (Table 1 and Figure 1) and each area assigned to NSW Maritime or the Port Authority of NSW. The PSOL requires the Port Authority of NSW to respond to maritime incidents in the major and regional ports and assigned area of State waters on behalf of the NSW government. Additionally the Port Authority of NSW as the manager of the regional ports of Eden and Yamba also has responsibility for responding to maritime incidents in those Port waters.

In cases where oil or chemical pollutants also impact on an adjoining area of State waters or the shoreline the agency which took on the initial Combat Agency role will remain as the Combat Agency for the entire incident/emergency unless there is a mutual agreement to hand over the role.

### 1.8.2 Incidents Originating in Commonwealth Waters

Where an incident/emergency occurs outside of the three nautical mile limit but is likely to enter State waters (and impact the shoreline), AMSA will request, via the Marine Pollution Controller (MPC), that NSW assume responsibility for responding to the maritime incident. In these instances the MPC (or Delegate), in consultation with the Port Authority of NSW will determine which agency takes on the Combat Agency role.

Where an oil spill originating from offshore petroleum exploration or production operations enters NSW State waters, NSW will assume responsibility for responding to the incident under arrangements detailed in this Plan. The operator (Title Holder) and relevant Commonwealth Agency will be consulted and advised of the Combat Agency arrangements.

Regardless of where the maritime incident occurs, other agencies shall assist in accordance with this plan, the NSW EMPLAN and National Plan arrangements.

### 1.8.3 Overview of Maritime incident Response

The aim of responding to maritime incidents is to minimise damage to the environmental and socio-economic resources and reduce the time required for the recovery. Every maritime incident /emergency is different and this plan must be flexible in its implementation so as to respond to the incident/emergency is the most effective and timely manner.
As part of the National Plan arrangements, all combat agencies for maritime incidents have agreed to use a version of the AIIMS incident control system, titled the Oil Spill Response Incident Control System (OSRICS) (see section 3.3), to control and manage maritime incident/emergency response. This system can be scaled up or down depending on the size and complexity of the response required to effectively control the incident/emergency. The OSRICS enables an incident/emergency to be assessed and responded to appropriately.

Once a maritime incident occurs the typical sequence of responding is as follows:

- notification of agencies of the maritime incident (section 4.2);
- initial assessment of the situation and distribution of the information to relevant agencies (section 4.3 and 4.4.4);
- establishment of an incident control centre (ICC) and incident management team (IMT) using OSRICS (section 3.3);
- depending on the type of maritime incident some or all of the following may be required (sections 4.11 and 4.12):
  - ensure the safety of ship’s crew and responders;
  - stabilise the ship in order to prevent an oil spill and protect cargo. This is usually the responsibility of a salvage company engaged by the ship owner (section 3.3.5);
  - stop or minimise the amount of pollutant being spilt and/or cargo being lost. This usually the responsibility of a salvage company;
- monitor the movement of the pollutant and let it disperse naturally (sections 4.11.1 and 4.12.1);
- containment and recovery of the pollutant as close to the source as reasonable possible (section 4.11.2);
- disperse the pollutant using approved dispersants (sections 4.11.4 and 4.11.5)
- protection of sensitive resources (section 4.11.3);
- shoreline clean-up (section 4.13);
- responding to affected wildlife; and
- waste management and disposal.
- termination of the response (section 4.17).

No matter what the type of maritime incident the following must also be managed:
- safety of responders and the public (section 4.1);
- media liaison; and
- community liaison.

These aspects are managed within the OSRICS (section 3.3).

1.8.4 Financial Policy

Ships generally have insurance to cover costs of oil and chemical spill clean-up and pollution damage. The amounts of compensation and types of claim that can be made against the insurance are set out in international conventions. The conventions provide a mechanism whereby the costs of clean-up measures and pollution damage can be recovered on a strict liability (‘no fault’) basis from the ship owner’s Protection and Indemnity (P&I) Club.

Clean-up measures have to be reasonable for the particular circumstances and supported by accurate documentation and evidence of expenditure and cost of any pollution damage.

Where a polluter cannot be identified or the costs recovered there are provisions under the National Plan IGA to recover costs from the National Plan up to certain limits.

All agencies involved in a maritime incident response should ensure that detailed records are kept of all requests made, decisions taken and financial expenditure incurred and the reasons for the expenditure. This requirement is of particular importance as P&I Clubs assess all claims very methodically to ensure they are reasonable and are supported by satisfactory documentation.

Agencies should familiarise themselves with the NSW Cost Recovery Guidelines for Maritime Incident Response which is available from NSW Maritime. The OSRICS forms developed in consultation with the Port Authority of NSW assists Combat Agencies in the tracking of costs and response resources.
Part 2 Roles and Responsibilities

2 Roles and Responsibilities

State, Commonwealth and local agencies which may be involved in the response to and recovery from a maritime incident are listed below, together with their associated responsibilities.

2.1 NSW Maritime

NSW Maritime has a number of roles and responsibilities depending on where a maritime incident occurs and the size/complexity of the maritime incident.

NSW Maritime as the Statutory Agency under the National Plan arrangements is to:

- assist the incident controller in the coordination of resources from the NSW Maritime, the Port Authority of NSW and AMSA if requested to do so;
- provide and support the MPC when monitoring or supporting the response to a maritime incident/emergency; and
- keep the SEOCON briefed.

NSW Maritime in its capacity as Combat Agency are to:

- provide an Incident Controller;
- provide trained emergency response staff to fill OSRICS positions to control the incident/emergency response;
- make available emergency response equipment under its control;
- provide trained equipment operators;
- notify the appropriate agencies and higher level control within the agency; and
- establish an incident control centre from which the incident/emergency will be controlled.

NSW Maritime, when supporting the Combat Agency is to:

- provide trained emergency response staff;
- make available emergency response equipment under its control; and
- provide a liaison officer.

In cases where a land based oil or chemical spill enters State waters NSW Maritime will assist Fire & Rescue NSW in responding to the spill in accordance with the Hazmat/CBR Plan and the MOU.

2.2 Port Authority of NSW

The Port Authority of NSW in its capacity as Combat Agency is to:

- notify the appropriate agencies and higher level control within the agency of an incident/emergency;
- provide an Incident Controller;
- provide trained emergency response staff to fill OSRICS positions to control the incident/emergency response;
- provide trained equipment operators;
- make available emergency response equipment under its control; and
- establish an incident control centre from which the incident/emergency will be controlled.
The Port Authority of NSW when supporting the Combat Agency are to:

- provide trained emergency response staff;
- make available emergency response equipment under its control; and
- provide a liaison officer.

In cases where a land based oil or chemical spill enters State waters the Port Authority of NSW will assist Fire & Rescue NSW in responding to the spill in accordance with the Hazmat/CBR Plan and the MOU.

2.3 Fire & Rescue NSW

FRNSW is the designated Combat Agency for inland waters and land based hazardous materials incidents and emergencies within New South Wales and is also a supporting agency for marine oil and chemical spills and may be called upon to provide advice and support to the Combat Agency as follows:

- protecting and saving life and property endangered by chemical spill incidents;
- provision and coordination of the supply of specialist FRNSW resources for oil and chemical spills;
- rendering the site of an incident/emergency safe; and
- provide a liaison officer on request.

2.4 NSW Police

NSW Police is the agency responsible for law enforcement, search and rescue and as necessary the control and coordination of evacuation of victims from the area affected by an incident/emergency. The NSW Police may be called upon to provide support to the Combat Agency as follows:

- traffic control, and crowd control;
- access and egress route security and control; and
- on advice from the FRNSW, evacuate an area at risk of being severely impacted by a maritime incident.

2.4.1 Emergency Operations Controller (EOCON) Local, District and/or State

The EOCON at local, district and/or state level may be called upon to support the Combat Agency as follows:

- monitor the response;
- coordinate support resources at the appropriate level if requested to do so by the Combat Agency.

2.5 Australian Maritime Safety Authority

Under the National Plan IGA AMSA will, when requested:

- provide advice, on combat and clean-up options, to the Incident Controller and the MPC;
- provide expert advice on the management of a casualty;
- coordinate the supply of additional National Plan equipment from other states/NT;
- mobilise the National Response Team;
- liaise with industry and international stockpile holders for the supply of oil and chemical spill response equipment and personnel;
- activate the Fixed Wing Aerial Dispersant Capability;
- provide oil and chemical spill trajectory modelling;
- provide suitably qualified personnel to fill specialist OSRICS positions; and
- provide a liaison officer.

2.5.1 Marine Emergency Response Commander

AMSA has appointed a Marine Emergency Response Commander (MERCOM) to act on behalf of AMSA to control a maritime casualty in Commonwealth waters. The MERCOM has appropriate statutory powers under the Protection of the Sea (Powers of Intervention) Act 1981, as amended, to enable effective decision-making consistent with the aim of the National Maritime Emergency Response Arrangements (NMERA) see Appendix 15 for details.

These powers include intervention powers to take any measures necessary to prevent, mitigate or eliminate a risk of significant pollution. The type of instruction that the MERCOM may give include directing a port to release a tug to provide emergency assistance to a vessel at risk or designating a place of refuge for a ship in emergency situations and directing the ship to that place of refuge which could include a port. MERCOM’s powers override that of State authorities during a response to a maritime casualty and will prevail over the directions of any other person when a conflict exists between directions, although every effort will be made to reach a consensus on the appropriate directions.

To the maximum extent possible, consistent with the public interest in protection of the marine environment, resolution of maritime incidents will be left to the ship owner and salvors/towage providers to address on a commercial basis, with advice or assistance from emergency response agencies provided as appropriate.

Incidents requiring the intervention of the MERCOM will occur randomly and infrequently and will be in response to actual or potentially serious emergencies. The MERCOM’s intervention will therefore be for incidents where there is a threat of significant pollution posed by a ship, but do not extend to any actual pollution response. The MERCOM will endeavour to consider all relevant legal, practical, environmental, socioeconomic and operational issues in deciding whether and how to respond to a maritime causality, as dictated by the circumstances of each particular maritime casualty.

The MPC has intervention powers under the Marine Pollution Act 1987 to deal with threats of pollution or other environmental damage within State waters. The MERCOM will not normally become involved in these incidents/emergencies, but he/she is available to assist and provide advice to the Combat Agency if requested to do so. The MERCOM’s powers enable him/her to step in and exercise his/her intervention powers and direct resources if, in the MERCOM’s opinion, such action is needed to fully address the threat in question.

2.5.2 Notification of Incidents Managed by AMSA

The arrangements for notification of maritime incident as described in section 4.2 are also used to notify NSW agencies of a maritime incident that is being controlled by AMSA and may impact on State waters or NSW ports.
2.5.3 Liaison and Coordination with NSW
Where the MERCOM considers it necessary to direct a ship to a place of refuge that is within a State jurisdiction, the MERCOM will consult with the effected jurisdiction. The point of contact for liaison and coordination is the MPC (or Delegate). The MPC will be responsible for communications and coordination with other state agencies and the NSW Government. Depending on the type of maritime incident and the risk of pollution the MPC, in consultation with NSW Maritime and/or the Port Authority of NSW, may establish an ICC to coordinate support for AMSA or prepare to respond to a possible oil or chemical spill. The ICC should be established at an appropriate location and could be at an existing Port Authority of NSW facility.

2.6 Functional Areas
Under the NSW EMPLAN arrangements, Functional Areas are a category of government agency, utility services and private sector organisations involved in the provision of support and resources for emergency response and initial recovery operations. Each Functional Area is coordinated by the appropriate government agency and will support the Incident Controller as listed below.

2.6.1 Environmental Services Functional Area (EnvSFA)
The Environment Protection Authority (EPA) is the coordinating agency for the EnvSFA.

The EnvSFA is to:
- provide one or more advisors whose responsibility is to give expert scientific advice regarding environment protection to the MPC and Incident Controller (The advisors provide advice only within their area of expertise and do not provide regulatory or policy advice on behalf of the EPA);
- provide any necessary scientific/technical, environmental personnel to support to the response including:
  - assistance in determining environmental impacts;
  - assistance with the identification and assessment of the hazardous materials;
  - identification and provision/sourcing of appropriate environmental monitoring equipment;
  - provision of technical and regulatory advice regarding options for cleanup, waste transport, temporary storage, treatment and disposal of recovered oil, chemicals and contaminated debris;
  - advise other Functional Areas or agencies involved in the emergency on environmental issues; and
  - provide a Liaison Officer on request.

2.6.2 Agriculture and Animal Services Functional Area (AASFA)
The Department of Primary Industries (DPI) within the Department of Industry, Skills and Regional Development (DISRSD) is the coordinating agency for the AASFA.

The AASFA is to:
- activate the Agriculture and Animal Services Plan utilising the assistance of the Participating and Supporting agencies. Activation of the Plan may include:
- assessment of agriculture (including fisheries and aquaculture) and animals at risk and notifying key stakeholders appropriately to mitigate risk;
- ensuring animal welfare through:
  - rescue, evacuation and emergency care;
  - assessment, humane destruction and disposal; and
  - treatment and rehabilitation.
- provision of a Liaison Officer on request.

2.6.3 NSW Food Authority (NSWFA)
NSWFA is a participating agency within the AASFA, but it has its own Food Industry Committee, and industry emergency arrangements under the Food Industry Emergency Sub Plan. In the event of a major oil or chemical spill the NSWFA is to:
- assess health risks posed by the contamination of water supplies or foodstuffs including seafood;
- assess food safety risks and determine appropriate response action;
- issue prohibition orders on implicated businesses to stop manufacturing or supplying food;
- seize unsafe food and supervise disposal in a manner that is safe and environmentally acceptable;
- initiate a recall of contaminated food; and
- provide a liaison officer on request.

2.6.4 Engineering Services Functional Area (ESFA)
The NSW Public Works within the Department of Finance, Services and Innovation (DFSI) is the coordinating agency for the ESFA.

The ESFA is to:
- provide the engineering services support in accordance with the Engineering Services Functional Area Supporting Plan;
- provide appropriate personnel as requested; and
- provide a liaison officer on request.

2.6.5 Health Services Functional Area (HSFA)
Department of Health is the coordinating agency for the HSFA.

The HSFA is to:
- appoint a Health Commander, Ambulance, and a Medical Commander if necessary;
- coordinate and manage the mobilisation of health resources, including medical, mental health and environmental health in accordance with the arrangements detailed in NSW HEALTHPLAN;
- Ambulance Service of NSW will provide pre-hospital care and transport of injured casualties;
- undertake environmental health protection including:
• assess long term health risks to any persons or populations that may be exposed;
• make recommendations to Incident Controller regarding appropriate actions to prevent significant long term health risks;
• advise on the risks of exposure to people/populations and recommend appropriate actions;
• in the event of evacuations monitor temporary accommodations and recommend measure to maintain satisfactory public health standards, including food-water and waste disposal;
• provide appropriate personnel as requested; and
• provide a liaison officer on request.

2.6.6 Public Information Functional Area (PIFA)
The NSW Police Force is the coordinating agency for PIFA.

The PIFA is to:
• provide support, in accordance with the Public Information Plan, to the incident Media liaison officer;
• provide appropriate personnel as requested; and
• provide a liaison officer on request.

2.6.7 Transport Services Functional Area (TSFA)
Transport for NSW is the coordinating agency for TSFA.

The TSFA is to:
• provide transport services support in accordance with the Transport Services Functional Area Supporting Plan;
• provide appropriate personnel as requested; and
• provide a liaison officer on request.

2.6.8 Welfare Services Functional Area (WSFA)
The Office of Emergency Management, Department of Justice, is the coordinating agency for the WSFA.

The WSFA is to:
• support the response by providing welfare services to victims of incident/emergency in accordance with the Welfare Services Functional Area Support Plan; and
• provide a liaison officer on request.

2.7 Other Organisations
2.7.1 Local Government
Local Governments has a significant role in providing local knowledge and linkages to communities that may be impacted by a maritime incident. Local Government involvement is via the district and local emergency management committees. NSW Maritime and the Port Authority of NSW representatives are members of the coastal
District Emergency Management Committees and the ports’ are members of relevant Local Emergency Management Committees. Local Councils may be asked to provide a liaison officer and other personnel and resources to assist in the response.

**2.7.2 Petroleum Industry**

The petroleum terminal, exploration or production facility operator is responsible for the control of incidents within its terminal area (or Commonwealth Waters). If the spillage enters adjacent State waters NSW Maritime or the Port Authority of NSW will assume the Combat Agency role. The petroleum industry will provide operational assistance where required. The petroleum industry, through its arrangements with the National Plan and as detailed in related approvals and Plans, will:

- provide industry advice and assistance, as requested, to the Incident Controller and/or the MPC;
- provide industry owned response equipment; and
- provide a liaison officer on request.

**2.7.3 Defence Forces**

**Royal Australian Navy**

The Royal Australian Navy (RAN) has accepted responsibility for dealing with oil spills within naval waters. The RAN is able to deal with minor spills using its own combat resources. More significant spills will require the assistance from the relevant Port Authority of NSW and/or NSW Maritime.

The RAN can provide support when requested to help in combating spills outside Naval Waters as follows:

- Make available oil spill equipment and resources immediately in Sydney Harbour on request. Requests should be directed to the Duty Fleet Operations Officer;
- provide RAN personnel on request; and
- provide a liaison officer on request.

**Other Defence Force Assistance**

Defence force assistance may be available once all commercial resources have been exhausted, or where time frames are such that it is impractical to use normal commercial resources.

Requests for defence force assistance, including the use of military transport can be directed through AMSA or via State arrangements through the SEOCON. If requests have been made to the defence force via AMSA, the SEOCON must be informed and vice versa by the Incident Controller.

Costs associated with the engagement of Defence Force resources, will be charged against the incident/emergency and recovered from the polluter as provided for in section 1.8.4. These costs are determined by the Defence Force, in accordance with government cost recovery directions and, therefore, may exceed normal commercial rates.
3 Control and Coordination

3.1 Levels of Response

In Australia, oil and chemical spills and the responses they require are categorised into ‘levels’. The National Plan has adopted the concept of three (3) Levels which links the credible spill scenarios to attainable scales of response and, by linking joint arrangements, enables escalation from one level response to another, should the need arise. It is a practical method of planning a spill response in terms of impacts and thus required resources.

The quantity of oil or chemical discharged does not automatically determine the response but is used as a guide to determine the most appropriate scale of response. The scale of response depends upon the type of oil or chemical, magnitude of the spill, its potential and immediate threat to human health and the environment as well as the available resources.

The National Plan’s three levels of response are described in Table 2.

3.2 State of Emergency

A ‘State of Emergency’ would not normally be declared in response to an oil or chemical spill unless the Premier is satisfied that it constitutes a significant and widespread danger to life and property in NSW and the declaration would make additional resources available. In the event that a ‘State of Emergency’ is declared, the SEOCON would not normally assume control of the incident/emergency response from the MPC unless the situation can no longer be contained and a change of control is likely to improve matters.

A change of control at State level would only occur with the concurrence of the MPC or at the direction of the Minister for Emergency Services.

The relevant provisions of EMPLAN have effect in the event of an emergency, whether or not a State of Emergency has been declared, and are applied by the SEOCON to provide any support requested by the MPC.
### Table 2. Level of Response Used in the National Plan.

<table>
<thead>
<tr>
<th>Level</th>
<th>Levels of Response</th>
</tr>
</thead>
</table>
| 1     | Potential Emergency Condition - small spill/incident  
       | An incident that only requires response within the boundaries of the berth, vessel or small geographical area.  
       | No public health and/or environmental impact or problems are anticipated outside the operations area  
       | The Combat Agency will generally be able to respond to and clean up a spill utilising local resources. In cases where additional resources are required, these will generally be available from the local port authority, HAZMAT or industry resources under mutual aid arrangements. |
| 2     | Limited Emergency Condition - a medium or significant spill/incident  
       | A significant incident/emergency that can be responded to within the boundaries of the berth, vessel or geographical area, but which may have a serious impact on public health and/or the environment.  
       | The Combat Agency will initiate a response with support being provided by other agencies, including and the MPC where necessary.  
       | Local and regional resources may need to be supplemented by other intra-state or interstate resources.  
       | AMSA will facilitate provision of interstate resources upon request from the MPC. |
| 3     | Full Emergency Condition - a major spill/incident  
       | An incident/emergency that will pose a very serious impact on human life and/or affect the environment significantly.  
       | It requires the activation of support resources up to national or international level.  
       | The Combat Agency with the assistance of the MPC would require local, district and national assistance. For catastrophic spills, resources from overseas may also be required. These can be sought by the MPC through AMSA, and, in the case of incidents involving chemical tankers, in consultation with industry.  
       | A spill of this magnitude may require additional coordination via the SEOCON. |
Table 3. Organisational Response Levels.

<table>
<thead>
<tr>
<th></th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Combat agency</strong></td>
<td>Port Authority of NSW or NSW Maritime</td>
<td>Port Authority of NSW or NSW Maritime</td>
<td>Port Authority of NSW or NSW Maritime</td>
</tr>
<tr>
<td><strong>Incident controller</strong></td>
<td>Port Authority of NSW or NSW Maritime</td>
<td>Port Authority of NSW or NSW Maritime</td>
<td>Port Authority of NSW or NSW Maritime</td>
</tr>
</tbody>
</table>
| **Support coordination** | Not normally required but functional areas should be notified of event so can undertake risk-based assessment based on type, volume and location of spill | ▪ NSW State Waters Marine Oil and Chemical Spill Contingency Plan (if required)  
▪ District Emergency Management Plan  
▪ Functional Area Plans | ▪ NSW State Waters Marine Oil and Chemical Spill Contingency Plan  
▪ District Emergency Management Plan  
▪ Functional Area Plans  
▪ NPEC  
▪ National Plan |
| **High level coordination** | Not required                                                          | MPC                                                                     | MPC/SEOCON, see section 4.8)                                           |
| **Response resources** | Local (Port Authority, NSW Maritime or oil or chemical company)         | Local District  
State  
National                                                               | Local District  
State  
National                                                               |

3.3 Oil Spill Response Incident Control System

Most State based response agencies and the National Plan have adopted the Incident Control System principles for incident/emergency management. The National Plan has developed the Oil Spill Response Incident Control System (OSRICS) for managing the response to maritime incident s/emergencies. The system allows for efficient scaling up and down of a response structure in line with the requirements of the situation so that the incident/emergency can be managed at the lowest appropriate level. The OSRICS organisational chart is shown in Appendix 2. The structure provides four main functions: planning, operations, logistics and finance /administration. The tasks required to be undertaken during a response to a marine pollution incident/emergency have been grouped into one of these functions and each have specific roles and responsibilities which are described in Appendix 2. NSW maritime incident Combat Agencies have developed procedures to implement OSRICS in response to an incident/emergency.

Agencies with key roles and specialist skills may be asked to provide personnel to fill some of the OSRICS positions as well as provide a liaison officer.
3.3.1 Marine Pollution Controller
The portfolio Minister has appointed the Executive Director NSW Maritime as the MPC who is responsible for coordinating the overall State response to an actual or potential oil or chemical spill into State waters.

The MPC supports the combat agency in responding to a maritime incident and will take responsibility for liaison with the relevant Ministers, industry representatives, vessel owner, salvor and media as required in consultation with the Port Authority. This will allow the Incident Controller to focus on managing the operational aspects of the response.

At times when the MPC is not available a delegated alternate will act as the MPC.

3.3.1.1 Emergency Operations Centre
The MPC when required will work from an EOC established at the NSW Maritime office, James Crag Road, Rozelle. MPC support personnel work to an OSRICS type structure which is detailed in the NSW Maritime “Maritime Incident Operations Manual”.

3.3.2 Incident Controller and Support Staff
Response to an oil or chemical spill in State waters is controlled by the Incident Controller who is appointed by the Port Authority or NSW Maritime in consultation with MPC (or Delegate) when appropriate.

The Incident Controller is responsible for the control of a response and overall operational decision making. The Port Authority and NSW Maritime have pre-designated Incident Controllers and support staff for spills within their assigned areas. The Incident Controller will use the OSRICS structure to manage the response and may call on other agencies to assist with filling key OSRICS positions including members of the State Response Team. Information about positions within the OSRICS structure is summarized in Appendix 2.

Functional areas may also be requested to provide support. This may be via their liaison officer or on occasions the Functional Area may be asked to provide personnel to work within the OSRICS structure. For example the Environmental Services Functional Area may be asked to provide an Environment Coordinator and Waste Management Coordinator if these are areas that need considerable coordination and expert advice.

3.3.2.1 Multi Agency Incident Control Team
For maritime incidents where Fire & Rescue NSW has a large commitment of personnel and or equipment (usually fire on a vessel or significant chemical spill) the maritime combat agencies have agreed to use a Multi Agency Incident Control Team (MAICT) approach to managing a maritime incident. These arrangements are described in more detail in the Fire on a Vessel Guidelines at Appendix 17.

3.3.2.2 Media Officer
The Combat Agency appoints a media officer to work with the Incident Controller and is responsible for managing media requests and providing the media with regular accurate updates on the incident response.
For significant incidents where the MPC is activated a Media Officer will be appointed by the MPC. The role of this person is to provide overall coordination of the media requests and information distribution and to assist the Ministerial Media Officer with media requests. Guidelines for dealing with the media are in Appendix 16.

3.3.2.3 Environment and Scientific Coordinator
The Environment and Scientific Coordinator (ESC) is a specialist advisor position and reports to the MPC and/or the Incident Controller depending on the type and complexity of a response. The role of the position is to provide timely, accurate and effective high level scientific and environmental advice to the MPC and/or Incident controller. The ESC should be activated for all incidents, no matter their size, where significant environmental impacts could occur.

The ESC works with and calls upon the expertise and resources available through the EnvSFA.

3.3.2.4 Liaison Officers
Each agency/Functional Area involved in a response may be asked to provide a Liaison Officer to Combat Agency’s ICC and if appropriate the MPC. A person may not always be available or appropriate to deploy to the Combat Agency ICC as a Liaison Officer. Where appropriate liaison may be via telephone or scheduled meetings.

Effective liaison is required to maintain communications with and convey directions/requests to supporting agencies and Functional Areas, and provide advice on the status, capabilities, actions and requirements of their agency or Functional Area.

3.3.3 Incident Control Centre (ICC)
In order to maintain proper control during a maritime incident response there must be only one ICC for controlling the response. The Incident Controller works from this centre. Other agencies or Functional Areas may open operation centres to support the Combat Agency.

The location of the ICC will vary depending upon the location of the spill. For spills within or close to the major port areas the Port Authority will use their pre-designated ICC. For spills remote from a port, the Incident Controller will select the most appropriate location for the ICC. If a forward command location is required when a maritime incident is remote from the ICC, there should be strong communication links between the forward command location and the ICC.

If the MPC is activated he will be initially based at an EOC located at the NSW Maritime office, James Craig Road, Rozelle.

3.3.4 Maritime Emergency Response Commander (MERCOM)
The MERCOM is an AMSA appointment (Section 2.5.1) and manages AMSA’s responsibilities for the National Maritime Emergency Response Arrangement (NMERA) (see Appendix 15).
3.3.5 Co ordination with Salvage

In the event of a maritime incident involving a damaged or disabled vessel, it is important that the salvage industry be involved in the response as soon as possible. Salvage activities may need to be arranged for taking the vessel in tow, refloating a grounded vessel, or reducing or stopping a discharge of pollutant to minimise environmental damage. A salvage contractor will normally be appointed by the owner of the vessel.

However, in cases where this does not occur, for whatever reasons, the MPC may use the powers of intervention under section 183 of the Marine Pollution Act 2012 to issue a direction or take control of the vessel (in State waters) and take appropriate action. Alternatively the MERCOM may intervene to take control of the casualty in Commonwealth waters.

The MERCOM may also activate towage vessels under the NMERA (see Appendix 15).

If a salvor is involved in the response it is important for good communications to be established and maintained between the Incident Controller (State or AMSA jurisdiction) and the salvor. If the situation requires, the Incident Controller may appoint a person with appropriate marine qualifications as the Maritime Casualty Officer. The role of this person is to remain on board the casualty/ship (provided it is safe to do so) and provide the Incident Controller and/or MPC with the best available information regarding the salvage operation and actions being taken by the salvor.

During incidents involving a complex casualty situation, the possibility may arise for the need for the Incident Controller, MPC or MERCOM to have access to independent salvage advice. AMSA has identified a number of suitable companies, which can provide independent advice on the salvage operation, including whether the proposed salvage operations are appropriate or feasible.
Part 4 Response

4 Response

4.1 Work Health and Safety

The health and safety of emergency responders and the general public is of paramount importance in any response operation. The NSW Work Health and Safety Act 2011 places a duty on all persons conducting a business or undertaking (PCBU), for example a Combat Agency or a Functional Area agency, to ensure the health and safety, so far as is reasonably practicable, of all "workers". "Workers" include persons who carry out work in any capacity for a PCBU including work as an employee, a contractor and its employees, a subcontractor and its employees, labour hire workers and volunteers.

The OSRICS structure (page 49) provides for the appointment of an Incident Safety Officer. This appointment should be made as early as possible in a response. The Incident Safety Officer reports directly to the Incident Controller. The Incident Safety Officer is responsible for developing and maintaining an incident work health and safety (WHS) plan. It is important that all risks be evaluated prior to any personnel entering the incident/emergency area. Operations must be suspended or terminated if any unsafe conditions arise during a response. Issues including the management of volunteers and the management of fatigue should be considered in a response.

All response personnel must understand that their safety, the safety of other responders and that of the community is paramount. Consequently, all personnel engaged in clean-up activities must be instructed in the WHS risks in their area of activity and how to perform tasks safely. All personnel must be provided with personal protective equipment including clothing, appropriate to the activity being undertaken, to protect them from injury. Where necessary, personal flotation devices should be worn in the proper manner.

The limitations of available equipment and vessels should be identified and managed throughout all phases of the operation. Responders should be made aware that many chemicals can be destructive to equipment and fresh crude oil and many petroleum products emit flammable gases. The risk of fire or explosion should always be considered, particularly when fresh oil is confined by booms or under harbour/wharf structures (for example, in a confined space), etc. The risk of fire must also be considered in shoreline disposal operations. The degree of risk will depend on the type of oil, its location and the extent of weathering.

Equipment deployed in close proximity to fresh oil and chemicals must be safe. Operators of vessels used in clean-up operations should be made aware of the dangers that exist through:

- the use of internal combustion engines and electric motors;
- concentrations of flammable gases entering the air intakes of diesel engines, causing the machinery to race;
- personnel smoking; and
- exposure and contact with wildlife.
Materials which may assist a Combat Agency or Functional Area Agency to manage WHS issues in response to an incident include:

- a generic WHS Plan that can be used as the basis for the preparation of a detailed site specific WHS plan (contact NSW Maritime for copy);
- the Volunteer Management Policy for Marine Incident Response in NSW; and
- the Fatigue Management Guidelines for Marine Incident Response in NSW.
  (Contact NSW Maritime for copy)

4.2 Notification

4.2.1 Notification of the Combat Agency and Statutory Agency

NSW Maritime as the Statutory Agency must be notified of all shipping and commercial vessel incidents/emergencies and maritime oil and chemical spills in State waters and in Commonwealth waters adjacent to NSW State waters.

The Port Authority of NSW maintains communication centres, which are operational 24 hours a day and NSW Maritime maintains a 24 hour duty officer telephone number. These form the prime NSW contact points for notification of all maritime incidents. This includes actual oil and chemical spills and vessel incidents such as groundings, loss of propulsion, fire, etc that if not responded to effectively could lead to an oil or chemical spill.

All maritime incidents must be reported to the nearest Port Authority of NSW communications centre or to for the NSW Maritime Incident Duty Officer as soon as possible.

NSW Maritime and the Port Authority of NSW are to pass on any reports to the relevant Combat Agency when the maritime incident is not in the agency's allocated area of responsibility. This includes any incidents in inland waters which must be passed to Fire & Rescue NSW (see Figure 2 for areas of responsibility).

<table>
<thead>
<tr>
<th>Agency</th>
<th>24 Hour Contact Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW Maritime</td>
<td>24 Hour Pager</td>
</tr>
<tr>
<td>Port Authority of NSW - Sydney</td>
<td>(02) 9296 4001</td>
</tr>
<tr>
<td>Port Authority of NSW - Newcastle</td>
<td>(02) 4985 8301</td>
</tr>
<tr>
<td>Port Authority of NSW - Port Kembla</td>
<td>(02) 4274 4571</td>
</tr>
<tr>
<td>Fire &amp; Rescue NSW</td>
<td>(02) 9319-7000</td>
</tr>
</tbody>
</table>
4.2.2 Notification of Supporting Agencies

The Combat Agency (Incident Controller) will make a decision as to what level of notification and callout is initially required for a maritime incident/emergency using the following guidelines:

Small incidents (Level 1) within port areas without significant environmental impact.
- Small incidents can usually be dealt with by the Combat Agency using their internal resources.
- The Combat Agency should notify local representatives from key supporting agencies, if the response is expected to last longer than one day and there may be media interest in the incident. The contact points are usually the agency representative on the Local Emergency Management Committee.

Small incidents (Level 1) where there could be significant environmental impact.
- These incidents usually require the assistance from supporting agencies.
- The Combat Agency should notify local representatives from key supporting agencies.
- The ESC should be notified via the EPA Duty Hazmat Advice Coordinator.
- The NSW Maritime Incident 24 hour Duty Officer must be notified and requested to notify supporting agencies via SMS notification arrangements.

Significant incidents/emergencies (Level 2 and 3)
- The NSW Maritime Incident 24 hour Duty Officer must be notified of the incident.
- The Combat Agency should notify local representatives from key supporting agencies.
- NSW Maritime will notify combat and supporting agencies via the SMS notification arrangements.
- The ESC must be notified via the EPA Duty Hazmat Advice Coordinator.
- Agencies will be called out to respond.

Shipping incidents offshore
- Shipping incidents less than 20 nautical miles offshore should be treated as a potentially significant incident.
- The NSW Maritime Incident 24 hour Duty Officer must be notified of the incident.
- NSW Maritime will notify combat and supporting agencies via the SMS notification arrangements.
- The ESC must be notified via the EPA Duty Hazmat Advice Coordinator.
- Agencies will be either put on standby or called out to respond.
The following agencies must be included in the notification process.

- The NSW Maritime Incident 24 hour Duty Officer (who will notify the MPC if required);
- Portfolio Minister (via NSW Maritime);
- Port Authority of NSW;
- EPA (via the Duty Hazmat Advice Coordinator);
- AAFSA; and
- AMSA (Via the RCC);
- State Emergency Operations Centre (SEOC);
- The relevant District Emergency Management Officer (via the SEOC)
- Other supporting agencies depending on the type and impacts of the incident/emergency.

NSW Maritime has agreements with the supporting agencies regarding notification of individual officers and this is reflected in the SMS notification system. The SEOC can also assist with the notification of other agencies.

4.2.3 Notification of Agencies Responsible for Important Infrastructure

There are a number of agencies that are responsible for managing important infrastructure and will need notification of major oil and chemical incidents as detailed in Figure 2 (over page). The Port Authority of NSW and NSW Maritime maintain contact details of the relevant agencies in its area of responsibility and will notify the agencies as soon as reasonably possible of any maritime incidents that could impact on the operation of the infrastructure.

4.3 Initial Assessment

The agency for the assigned area in which the incident/emergency occurs is responsible for obtaining the initial assessment, which is to be carried out by the closest available, suitably trained, personnel. These may be personnel from NSW Maritime or the Port Authority of NSW. An uncontrolled release of chemicals may pose many hazards to personnel in the locality at the time or to those who may be required to respond. Expert advice must be obtained from the Fire & Rescue NSW, before any initial assessment is carried out.

In the event of an incident/emergency off the coast the initial assessment may need to be carried out by aerial reconnaissance. Where the incident/emergency occurs in Commonwealth waters (greater than 3 nautical miles offshore) AMSA is the initial Combat Agency and is responsible for any reconnaissance flights and the costs of such flights. AMSA may request that NSW Maritime arrange for State personnel to conduct the reconnaissance. An estimate of the amount of oil spilled should be made during the initial assessment if possible. The table in Appendix 3 provides a guide for estimating the amount of oil on water.
4.4 Pollution Report (POLREP)
After initial notification and assessment of the incident/emergency has been made, the Combat Agency should issue a POLREP to relevant agencies. The agreed National Plan POLREP is in Appendix 4.

4.5 Situation Reports (SITREPS)
During a maritime incident it is essential that all relevant agencies be kept advised of significant developments. The Incident Controller is responsible for ensuring that periodic SITREPS are issued and distributed. The NSW SITREP is in Appendix 5.

4.6 Spill Reconnaissance
Information concerning the movement of spilt oil and floating chemicals is of vital importance when choosing response options. Visual observations from aircraft should be used to confirm the location, extent and if possible to estimate the volume of pollutant (see Appendix 3). The Oil Spill Trajectory Model (see Appendix 11) can also be used to provide predictions of the pollutant movement but should always be verified by visual observations where possible.

Aerial reconnaissance will allow rapid assessment of the extent to which the oil has spread, prevailing local conditions, resources that may be threatened by the
approaching oil where vessels and aircraft should commence recovery or dispersant spraying operations and in which direction they should proceed.

Expert advice must be obtained from Fire & Rescue NSW, before any reconnaissance is carried out near a chemical spill. The majority of chemicals are colourless which renders them difficult to monitor by visual means using surveillance aircraft or ships at sea. Remote ultra-violet, infra-red, temperature variations or other remote sensing techniques may be useful in the monitoring of chemical spills. This depends primarily on the chemical properties.

In water surface pollution and floating chemical incidents, monitoring of the plume will enable the shoreline impact zone to be established so that equipment and personnel can be deployed to protect sensitive ecological areas, similar to that provided in oil spill trajectory tracking.

A number of chemical spill decision support computer models and risk analysis tools have been acquired by AMSA to support state/NT agencies under the National Plan and can be accessed by contacting AMSA’s duty officer.

4.7 Initial Response

Initial response will depend on the size and location of the maritime incident that may lead to a spill.

**Level one spills the relevant Combat Agency is to:**
- determine the closest available personnel and requests an initial assessment;
- advise the NSW Maritime Incident Duty Officer of the incident/emergency via the NSW Maritime Incident 24 hour telephone number;
- assign Incident Controller to coordinate spill clean-up, if necessary, using local resources;
- advise AMSA through the RCC if the incident/emergency involves a trading ship or commercial vessel;
- advise the LEOCON of the incident/emergency and request local support if required; and
- mobilise local resources to respond to the incident/emergency.

**Level two/three spills the relevant Combat Agency is to:**
- determine the closest available personnel and requests an initial assessment;
- advise the NSW Maritime Incident, Duty Officer of the incident/emergency via the NSW Maritime Incident 24 hour telephone number;
- advise AMSA through the RCC of the maritime incident;
- assign initial Incident Controller for first strike response and mobilise local resources;
- Advise the REMO of the incident/emergency and request local support;
- notify other NSW supporting agencies as per section 4 and place them on standby or mobilise;
- Place the State Response Team on standby or deploy selected members; and
- liaise with MPC regarding possible mobilisation of the National Response Team and equipment.
4.8 Escalation of a Response

The response to a maritime incident should be conducted at the lowest effective level. If resources at this level are inadequate, the response is to be escalated to a higher (district) level and, where appropriate, the state or even national level. The OSRICS structure can also be easily scaled up as the response escalates.

The spill size or potential spill size should be estimated using all appropriate techniques and the estimated figures communicated to all interested parties. Any revised figures should be immediately relayed to the MPC and Incident Controller who, in consultation, will decide the level of response required to respond to the incident/emergency. As the combat phase proceeds the OSRICS structure and equipment requirements will be constantly re-evaluated.

Initially oil and chemical spill response equipment will be mobilised from the stockpiles held by the Port Authority of NSW and NSW Maritime. If additional equipment is required AMSA will be requested to arrange for the release and transport of appropriate equipment from its stockpiles and if necessary, the petroleum industry’s stockpile at Geelong, Victoria. If necessary, international stockpiles can also be mobilised to assist with the response.

4.9 Place of Refuge Request

From time to time, vessels at sea could be involved in emergencies such as an explosion, fire, flooding, collision, structural failure, grounding or power failure. In such a situation, the Master of a vessel may seek permission for the vessel to enter a port or sheltered waters to protect lives and property on board or carry out repairs. Such a request could also come from the vessel’s agent, operator or owner. A request of this nature is a request for a place of refuge.

NSW has endorsed the National Maritime Place of Refuge Risk Assessment Guidelines for use in NSW. In accordance with procedures in Section 1.8.1 NSW Maritime will take the Combat Agency role, no matter where the vessel is located in State waters, until such time as a place of refuge is determined. At that time control of the incident may be handed to the Port Authority of NSW or retained by NSW Maritime (Section 1.8.1). The National guidelines are available on the AMSA website.

4.10 Overall Protection Priorities

Protection priorities to be employed during a response to a maritime incident, in order of descending priority:

- human safety and health;
- habitat and cultural resources;
- rare and/or endangered flora and fauna;
- commercial resources, such as oyster farms; then
- amenities, such as beaches.

In assessing protection priorities, a balanced view needs to be maintained on the likely success of protection strategies. This is of particular importance when it is unlikely that such strategies will be successful in protecting a higher sensitive resource, but could be successful in the protection of other less sensitive resources.
4.11 Response Options for Oil Spills

Every maritime incident has its own unique characteristics and dangers to which response personnel may be exposed. The protection, health and safety of the public and response personnel should always be of prime importance in the decision making. Any response should be carried out in accordance with expert advice regarding the health and safety of personnel and the public. It is important that all risks are evaluated prior to personnel entering the incident/emergency area. Operations must be suspended or terminated if an unsafe condition arises during a response operation.

A number of response options exist for the treatment of oil which has been released into the marine environment and protection of sensitive resources. All may be effective to a degree, according to the prevailing conditions and the sensitivity of the environment under threat.

The advantages and disadvantages of different response options need to be compared with each other and with natural recovery. This process is called Net Environmental Benefit Analysis. The process takes into account the circumstances of the spill, practicalities of response, relative impacts of the response methods, a judgement on the relative importance of social, economic and environmental factors and overall likely environmental impact.

The ESC must be activated for significant maritime incidents to provide advice to the Incident Controller/MPC and to ensure that the appropriate Net Environmental Benefit Analysis is conducted for the various response options.

A generalised guide to the behaviour of oil types when discharged into the sea is shown in Appendix 6. The following options should be considered based on a Net Environmental Benefit Analysis:

- if possible, control or stop the discharge of oil or chemical at the source;
- if coastal or sensitive marine environments are not threatened or likely to be threatened, monitor the movement and behaviour of the discharge;
- if coastal and sensitive marine environments are threatened, where practicable, activate response operations, to protect sensitive environments and may involve:
  - the application of dispersants;
  - containment and recovery of the oil; and/or
  - physical protection of sensitive resources.
- if response at sea is not feasible or protection of sensitive environments is not feasible due to weather and sea conditions, or these have already been affected, determine appropriate clean-up priorities and initiate a shoreline clean-up.

4.11.1 Monitor

Depending on the type of oil/chemical and location of the spill, if there are no threats to environmentally sensitive areas or it is not likely that the oil will come ashore, biological and physical processes will naturally disperse most of the oil over a period
of time. In these circumstances the best action may be to do nothing other than monitor the movement of the oil. Leaving the oil to disperse and degrade naturally creates the least disturbance to the marine environment, however, the ‘monitor only’ option requires the support of, and sound advice to the media to clearly explain why no other action, apart from monitoring the pollutant, has been taken.

4.11.2 Containment and Recovery of Oil
The traditional response to an oil spill is the containment and recovery of the oil. The decision to contain and recover the oil will be greatly influenced by prevailing sea and weather conditions. Oil may be recovered from the surface of the water using booms and skimmers. This method is generally only effective:

- in relatively smooth waters with a minimum influence of wind, tide or currents;
- an adequate supply of storage facilities are available for recovered oil and debris; and
- access to the area is possible without causing additional damage to the environment.

4.11.3 Protection of Sensitive Resources
It may be possible to deploy booms to protect sensitive resources, usually in enclosed waters, by guiding or deflecting oil into less sensitive areas. Booms need to be regularly checked and adjusted in order to provide ongoing protection. Multiple layers of boom may be required to provide adequate protection of sensitive resources. Net Environmental Benefit Analysis should be used to determine which sensitive resources should be protected. In some instances it may not be possible or practicable to protect a very sensitive resource but protection of a less sensitive resource may be effective.

4.11.4 Application of Dispersants to Oil Spills
The use of oil dispersant to accelerate the dispersal of the oil slick can be an effective response option. Dispersants reduce the surface tension of the oil, allowing the formation of very small droplets, which become suspended in the water column, where they can be rapidly dispersed, thus increasing the rate of natural biodegradation. Where a sensitive environment is under threat, the use of dispersants will be considered as an early response option. It should be recognised that the decision to use dispersants needs to be made as early as possible in the assessment of response options as there is a limited “window of opportunity” during which dispersant use can be successful before weathering of the oil commences.

The use of dispersant should be done in conjunction with expert environmental advice from the ESC who will undertake a Net Environmental Benefit Analysis. Only those dispersants that have been tested and approved in accordance with ‘National Plan Guidelines for Acceptance’ will be considered for use in NSW State waters. In determining whether or not to use dispersants there are a number of criteria that need to be considered including:

- is the oil of a type amenable to dispersion?
- does the area have active water exchange?
- is there an adequate depth of water? and
- resources available to undertake the operation.
The Incident Controller will maintain close consultation with the planning section to ensure that all environmental considerations are taken into account including the nature of the resource under threat and the distance between the resource and the spill. The ESC has access to a dispersant test kit and should deploy the kit if dispersant spraying is being considered.

4.11.5 Fixed Wing Aircraft for Dispersant Spraying

AMSA in conjunction with the Australian Institute of Petroleum through its Australian Marine Oil Spill Centre (AMOSC) have put in place a Fixed Wing Aerial Dispersant Capability (FWADC) for the application of oil spill dispersants.

Based on the concept of utilising large agricultural aircraft, the FWADC is designed to complement informal dispersant spraying arrangements using helicopters, which are confined to close inshore work. The aircraft have a dispersant capability of between 1,890 – 3,100 litres, depending on aircraft type and model.

The contractor, is required to provide aircraft every day, including one located in NSW. Aircraft activation is on a basis of a four hour response time, i.e. available to fly within four hours of being requested to respond to an incident/emergency.

Activation of the FWADC is through the AMSA duty officer who will make an assessment of the requirement and then contact the Contractor, who within 30 minutes will advise AMSA of the nominated aircraft and estimated time of arrival.

As the FWADC Contract does not include a stand-by arrangement, it is important to note that a decision to activate the FWADC incurs a substantial daily charge. The daily charge is in addition to charges for actual flying time. Notwithstanding the absence of a stand-by arrangement, AMSA will advise the Contractor, for planning purposes (not an activation), of significant incidents where dispersant application may be considered as a major response option.

It should be noted that only National Plan approved dispersants are to be used in response to any incident/emergency involving dispersant use. Full details of approved dispersant can be obtained from AMSA or AMSA’s web site: http://www.amsa.gov.au/Marine_Environment_Protection/National_Plan/Environment_and_Scientific_Coordinators_Toolbox/.

4.12 Response Options for Chemical Spills

The response options for chemicals spills are limited in number due to the range of behaviours of chemicals in the marine environment and generally not tested due to the infrequency of such spills. It is paramount that when a chemical spill does occur specialist advice is sought from Fire & Rescue NSW, EPA and the chemical industry.

Once a chemical has been identified and grouped according to its physical/chemical behaviour and hazard classification, a response method can be considered. The 12 behaviour groups for chemicals spilled into the marine environment, can be summarised depending upon the media effected ie. air, water surface, water column, bottom sediments as shown in Appendix 7. Summary information regarding the properties and behaviour of chemicals in the marine environment and their threat to human health is contained in Appendix 8 and 9.
The appropriate method of response to a chemical spill may depend on the quantities spilled or released, chemical reactivity, concentrations in air and water and the environmental conditions at the location of the spill. The magnitude of the release is also important in determining the feasibility of response, particularly with gases and vapours.

4.12.1 Monitor
Depending on the location and type of chemical spilt the only viable option may be to monitor the dispersion of the chemical within the water column and/or the gas plume. Leaving a chemical to disperse and degrade naturally creates the least disturbance to the marine environment, however, the ‘do nothing’ option requires the support of, and sound advice to the media to clearly explain why no other action, apart from monitoring the pollutant, has been taken.

Some chemical spill situations involving noxious gases, vapours or dissolving chemicals may require the evacuation of the public or advice to commercial and private fishing vessels to avoid contaminated areas.

4.12.2 Response to Releases of Gases and Vapours
With the release of gases and vapours the nature and toxicity of the chemical is important. For example hydrogen is highly flammable and a very light gas that would rise quickly from the source of release. But chlorine is toxic and a heavier gas that would drift along the water surface with the wind.

In such events plume dispersion monitoring is very important with the on-site meteorological monitoring of wind speed and direction to determine regions for possible evacuation in populated areas or zones for action to reduce ignition sources in the path of the plume of explosive gases.

The measurement of pollutant concentrations in the air is important to determine when the hazard or impact zones can be declared safe. Natural dispersion and dilution will determine the levels of remaining pollutants and visual confirmation is often impossible with most vapours and gases, therefore chemical sampling and monitoring is vitally important.

The response actions must be tailored for the substances’ physical and chemical properties, and the need for on-site chemical expertise is extremely important. Essential portable equipment for response teams at most spill incidents will be air monitoring/sampling instruments with at least confined space testing and explosimeter monitoring. All equipment used in explosive environments should be intrinsically safe (Zone 1 certified).

4.12.3 Response to Chemicals that Dissolve
The dilution action of seawater is often the only mechanism for the reduction of hazard of chemicals that dissolve. Neutralisation of concentrated plumes of chemicals may be possible, for example, by the addition of caustic to neutralise acid spills. But this must be carefully controlled so that one chemical pollution problem is not replaced with another.
Some chemicals are invisible to the human eye when spilled at sea, the identification of chemical spill areas or plume trajectories may require water sampling and testing by personnel in boats or by floating water monitoring equipment. There are numerous in-field water test kits, pH, conductivity, dissolved oxygen, and other chemical specific meters available. The need for on-site chemical expertise is again emphasised is the case of chemical spills.

4.12.4 Response to Chemicals that Evaporate
Chemicals such as benzene and hexane evaporate quickly when exposed to the air at ambient temperatures. Limited action is possible in such situations, but if the chemical is flammable a foam blanket may be applied to the spill site to limit evaporation until all ignition sources are removed. This is only a temporary response action as recovery of volatile chemicals is difficult and evaporation and natural dispersion may be the only removal mechanism. Warnings to the public down wind, the monitoring of wind direction and plume dispersion may be required in populated areas.

4.12.5 Response to Chemicals that Float
Chemicals that float can be free flowing or viscous fluids, semi solids, solids, gels with properties that may change with time. Like crude oils chemical substances that float may be able to be contained by floating booms, mechanically recovered by skimmers, and possibly by sorbent materials.

The compatibility of response equipment is important. For example chemical reactions with the materials of construction may occur with acid attack on metals, solvent attack on plastics and paints, ignition sources or hot friction surfaces of mechanical equipment may be a problem when flammable chemicals are being collected. Some chemicals polymerise with time and may foul suction devices, reactions can occur with organic and inorganic sorbent materials. To contain and recover floating chemicals it may be possible to use any of the following response actions:

- exclusion booming;
- diversion booming;
- dynamic skimming;
- near shore trapping;
- passive collection;
- use of dispersants;
- congealing agents;
- organic/inorganic absorbing agents;
- neutralisation;
- coagulation agents;
- flocculation agents;
- suction/pumping devices; and
- air entrainment (bubbler) barrier for floating chemicals etc.
Therefore some devices designed to contain and recover oil could be used for floating substances other than oil, provided the aspect of chemical/equipment compatibility and safety considerations are addressed.

4.12.6 Response to Chemicals that Sink

In shallow waters mechanical dredgers and pump/vacuum devices may be used (sometimes with the aid of divers). Sand quarrying equipment has also been used in some cases. In deep waters the recovery of sunken chemicals is extremely difficult.

The use of submersibles and remotely controlled underwater cameras have been used successfully to identify the locations of chemicals on the seabed and assisting recovery operations.

4.13 Shoreline Clean-up

Weather and other circumstances permitting, every effort should be made to either disperse or contain and recover oil or chemicals (if safe to do so) as close as possible to the source of the spill. However, it is inevitable that some oil or chemicals may come ashore. Where oil or chemicals do come ashore, the extent of clean-up is to be carefully planned with the view of minimising further environmental damage which may result from the clean-up operation.

Sometimes, oil or chemicals on shorelines may best be left to weather and degrade naturally. This option must be considered where oil or chemical impacts a sensitive area such as mangroves, salt marshes, mud flats or remote areas. In these areas the clean-up operations can result in more environmental damage than the oil or chemical itself due to physical disturbance and substrate erosion.

The Shoreline Response Handbook\(^5\) should be used when assessing shorelines and determining the most appropriate oil clean-up methods.

Selection of shoreline clean-up techniques depends on many different factors, including:
- type of substrate;
- characteristics of oil (tar balls, pooled, thin coating, etc) or type of chemical (degree of danger to personnel);
- amount of oil or chemical on the shoreline;
- depth of oil or chemical in the sediments;
- presence of wildlife and/or environmental or culturally significant sites;
- prevailing oceanographic and meteorological conditions; and
- access for personnel and equipment.

Shoreline clean-up methods may consist of one or more of the following methods, depending on the extent of the pollution and the shoreline environment:
- removal of floating or pooled oil or chemical;
- use of sorbent materials;
- mechanical collection and removal of contaminated material and vegetation;

- low pressure flushing;
- high pressure flushing;
- manual collection and removal of oiled material and vegetation;
- use of bioremediation agents; and
- dispersant application.

4.14 Animal Response

In accordance with the Agriculture and Animal Services Functional Area Supporting Plan and associated policies and procedures the animal response will assess agriculture (including fisheries and aquaculture) and animals (livestock, companion and wildlife) at risk and coordinate appropriate response and recovery measures to minimise harm to agriculture and animals and ensure the welfare of animals through:

- rescue, evacuation and emergency care;
- assessment, humane destruction and disposal; and
- treatment and rehabilitation.

4.15 Bioremediation

Bioremediation is the artificial enhancement of hydrocarbon degrading organisms to consume and break down oil. Bioremediation aims to increase the rate of degradation, by either stimulating micro-organisms existing naturally in the area, or by seeding more micro-organisms into the affected area. However, the immediate environment is quickly depleted of available nutrients, especially nitrogen, which is necessary to support this increased bacterial population. Thus, most uses of bioremediation will require the application of fertiliser to the affected area. Whilst bioremediation is not a primary response strategy to an oil spill, it may assist an area to recover from the effects of an oil spill. There is a lack of detailed information regarding the effectiveness and side effects of bioremediation and expert advice should be obtained before using this method.

4.16 Disposal of Oil and Chemical Wastes

Oil and chemical clean-up operations can generate different types of and large amounts of contaminated materials. It is therefore crucial that management strategies and disposal methods be addressed as early as possible by the Incident Controller and relevant authorities. It is important that the different type of waste products be kept separated and a management strategy developed for each of the different waste streams.

Oil recovered from the surface of the sea could be emulsified thus increasing the volume for disposal. Oil and chemicals may also be contaminated with a variety of solids such as seaweed, wood, plastic materials of various types, dead birds and animals which complicate handling and disposal. Appropriate collection and disposal techniques have to be selected for the particular circumstances. Oil and chemical recovered from the shoreline may also contain sand and gravel, pebbles, rocks, seaweed and beach debris.
When removing sand or structural material from a beach it should be carried out in a manner that removes a minimum volume so that the integrity of the beach is maintained and to also minimise the volume of waste requiring disposal.

Disposable safety equipment and other products such as sorbent materials, rags etc can also generate large amounts of waste that need a collection, management and disposal strategy.

It has been estimated that for an oil spill at sea the volume of waste requiring disposal will the collected oil multiplied by a factor of five to take into account the entrained water content. For shore based clean-up, the volume of collected oil should be multiplied by a factor of ten.

The collected mass of oil and chemical spill debris must be properly stored, transported and disposed of to minimise the potential for further adverse environmental impacts.

4.17 Termination of an Oil or Chemical Spill Response

During the clean-up operation for oil and chemical spills an assessment will be made to determine when there is minimal benefit in continuing and whether the benefit is outweighed by the cost. The Incident Controller, in consultation with the Environment and Scientific Coordinator, will determine when further effort and expenditure in clean-up becomes unreasonable and will advise the MPC accordingly.

The Incident Controller should stand down individual participating and supporting agencies when satisfied that the incident/emergency has been satisfactorily controlled and the pollutant cleaned up or when their input is no longer required. Guidelines have been developed for determining how clean shorelines should be based on their environmental and human usage. A summary of the guidelines are provided in Appendix 10.

Each agency when stood down should conduct an internal debrief to analyse its involvement in the response. Once the major operational phase of the response is completed the MPC (or Delegate) should organise an ‘all agency’ debrief of the incident/emergency response and follow it up with a formal report on the incident/emergency response.

4.18 Resource Availability

Oil spill response equipment is broadly categorised according to the Level of response that it is designed for. Generally the smaller equipment is designed for Level 1 spills in enclosed waters and the larger Level 2/3 equipment is designed to respond to larger spills off shore. However they are interchangeable.

4.18.1 Level One Response Equipment

NSW Maritime and the Port Authority maintain Level One stockpiles of equipment at the major port, regional ports of Eden and Yamba and as well as Lord Howe Island, Port Macquarie and Nowra.
4.18.2 Level Two/Three Response Equipment

In addition to the Level One stockpiles discussed above, the Port Authority of NSW maintains its own stockpile of Level Two/Three equipment which is stored at its Level One equipment locations in Sydney and Newcastle. Oil companies also own a quantity of oil spill response equipment which is stored on their individual premises.

NSW Maritime also owns a purpose built Wildlife Wash Facility that is available for deployment to anywhere in the state. Incorporated into a 20’ Shipping Container the facility can be transported to a site to enable immediate setup wildlife treatment and washing pending development of a larger capability which is maintained by the Port Authority of NSW at Glebe.

The Australian Institute of Petroleum, on behalf of the petroleum industry, owns and maintains an equipment stockpile located at the Australian Marine Oil Spill Centre (AMOSC) in Geelong, Victoria.

Some port authorities in other states/NT also own response equipment and this is also available for use.

4.18.3 National Plan Stockpile

AMSA provides National Plan stockpiles of oil pollution response equipment at nine locations throughout Australia. These stockpiles are available to all states/NT to combat oil spills. National Plan Level Two/Three stockpile for NSW is maintained under a contract arrangements with the equipment located at Kurnell.

4.18.4 National Equipment Database

Details about the equipment available for hire in the National Stockpile and stockpiles owned by other agencies and organisations are contained in a national database maintained by AMSA. Requests for equipment from these stockpiles should be made via the MPC to AMSA. Once approved, AMSA can arrange for interstate equipment to be delivered to the response location. In the event of a Level Two/Three spill, a National Response Team member may be available to work within the OSRICS structure, to assist in the co-ordination of equipment transfers.

4.18.5 Return of Equipment

Upon completion of a response operation, the Incident Controller should arrange for the recovery and cleaning of all equipment, and unused materials and their prompt return to the appropriate resource centre by the quickest means available, at reasonable cost.

Upon its return to the resource centre all equipment shall be thoroughly serviced in accordance with equipment maintenance schedules prior to being stored. The Combat Agency shall ensure that all costs incurred in returning equipment to the resource centre, including cleaning and servicing are included in the overall schedule list of costs submitted for reimbursement by the polluter.
4.18.6 Specialist Hazardous Materials Equipment Distribution
All Fire & Rescue NSW units carry an amount of specialised resources for oil and chemical incident/emergency response. Specialised appliances and specialist-trained personnel are located in Newcastle, Sydney and Wollongong. Fire & Rescue NSW will coordinate the supply of their internal resources and, when requested by the Combat Agency, will coordinate the supply of external specialist resources.

4.18.7 Overseas Assistance
Overseas assistance would not normally be necessary, however, if needed assistance may be sought from overseas in accordance with the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC 1990). Commonwealth Customs and Immigration Departments can expedite the temporary import of equipment and experienced personnel should the need arise on a request from AMSA.

4.18.8 Other Resources
In addition to oil spill response equipment that is described above there are also a number of resources available to support an incident/emergency response, these are described in Appendices 11 to 14.

4.19 Recovery
Under the State Emergency and Rescue Management Act 1989 (SERM Act) the Minister for Police and Emergency Services is responsible for appointing a State Emergency Recovery Controller (SERCON) and Deputy State Emergency Recovery Controller (DSERCON) who have responsibility for the overall coordination of recovery operations in NSW.

The NSW State Recovery Plan provides the overarching framework for recovery in NSW. It details the strategic intent, responsibilities, authorities and mechanisms for community recovery. A suite of recovery guidelines and state and commonwealth financial arrangements allows for tailored recovery planning following emergency incidents and disasters.

In the event a formal recovery is required following activation of the NSW State Waters Marine Oil and Chemical Spill Contingency Plan, recovery planning arrangements will defer to the NSW State Recovery Plan.
Part 5 Administration and Training

5 Administration and Training

5.1 Exercises and Plan Review
This plan is to be reviewed annually and after any Level Two/Three response and exercised annually unless there is a Level Two/Three response in which case the actual response will replace the need to exercise this plan. Additionally the Port Authority of NSW is required to exercise each if the port emergency response plans including an equipment deployment exercise once a year.

5.2 Training
Regular training programs are provided by NSW Maritime at a state level with the Port Authority and AMSA also providing training. NSW Maritime monitors the staff training with the objective of ensuring that NSW have adequate staff trained in the various aspects of spill response and shoreline clean up.

NSW Maritime and the Port Authority of NSW each provides a range of training to deal with oil spills for both their own personnel and officers of relevant agencies. This training covers the implementation of the OSRICS, management of an incident control centre, the deployment and operation of oil spill response equipment and oiled foreshore assessment and clean up.

NSW Maritime will develop and provide training where specific needs are identified by the NSW National Plan Technical Working Group (TWG).
Appendices
Appendix 1  State Waters - Location and Boundary Maps

Figure 3  Location of bays and rivers defined as State waters.
Figure 4. State Waters / Port Boundaries for the Clarence River (Yamba).

Figure 5. Coffs Harbour - Prescribed State waters / Port Boundaries.
Figure 6. Port boundaries for Newcastle Harbour (Hunter River).
Figure 7. Port boundaries for Sydney Harbour and Botany Bay.
Figure 7. Port boundaries for Port Kembla
Figure 8. Port boundaries for Eden (Twofold Bay).
Appendix 2  Oil Spill Response Incident Control System

Marine Pollution Controller

ESC, Advisers & Support

Incident Controller

ESC, Advisers & National Response Team

Media Liaison Officer

Incident Safety Officer

Planning Section (Planning Officer)

- Situation Unit (Situation Coordinator)
- Resource Unit (Resource Coordinator)
- Environment Unit (Environment Coordinator)
- Consultation Unit (Consultation Coordinator)
- Response Planning Unit (Response Planning Coordinator)

Operations Section (Operations Officer)

- Marine Unit (Marine Coordinator)
- Aviation Unit (Aviation Coordinator)
- Shoreline Unit (Shoreline Coordinator)
- Wildlife Unit (Wildlife Coordinator)
- OH&S Unit (OH&S Coordinator)
- Waste Management Unit (Waste Management Coordinator)

Logistics Section (Logistics Officer)

- Procurement Unit (Procurement Coordinator)
- Services Unit (Services Coordinator)
- Transport Unit (Transport Coordinator)
- Communications Unit (Communications Coordinator)
- Medical Unit (Medical Manager)
- Staging Area Unit (Staging Area Manager)

Finance & Administration Section (F & A Officer)

- Administration Unit (Administration Coordinator)
- Records Unit (Records Coordinator)
- Finance Unit (Finance Coordinator)
- Incident Control Centre Management Unit (ICC Manager)
Incident Controller

The Incident Controller is responsible for incident activities including the development and implementation of strategic decisions and for approving the ordering and releasing of resources.

- Assume control;
- Assess the incident/emergency;
- Conduct initial briefing;
- Advise NSW Maritime and AMSA;
- Activate elements of the Oil Spill Response Incident Control System and appoint staff;
- Ensure planning meetings are conducted;
- Set clear objectives;
- Approve and authorise implementation of incident action plan;
- Co-ordinate staff effectively;
- Control overall incident/emergency operations and review the incident action plan;
- Approve requests for additional resources and requests for release;
- Authorise release of information to news media;
- Regularly report to the Functional Areas and supporting agencies;
- Approve plan for demobilisation;
- Ensure safety and welfare of all personnel and the preparation of site specific WHS plans;
- Maintain a log of activities; and
- Conduct handover briefings.

Incident Safety Officer

The Incident Safety Officer is responsible for the overall safety of the incident response including the safety of the public that may be affected by the incident or the response to the incident.

- Obtain briefings from the Incident Controller;
- Attend IMT meetings as required;
- Develop and maintain the overall incident Health and Safety Plan;
- Ensure risk assessment of operations and equipment are being undertaken;
- Liaise closely with the WHS Unit Coordinator;
- Monitor and ensure that the Health and Safety Plan is being implemented;
- Provide safety advice to the Incident Controller;
- Ensure safety and welfare of all personnel;
- Maintain a log of activities; and
- Conduct handover briefings.
Planning Section

Planning Section (Planning Officer)

Responsible for the collection, evaluation and dissemination of information and the development of the Incident Action Plan

Situation Unit (Situation Coordinator)

- Responsible for the collection, processing and organisation of information about the incident
- Obtain and interpret weather, tide and current predictions
- Obtain and interpret pollution fate and behaviour predictions
- Provide mapping and photographic services
- Maintain incident status boards and other incident summary services

Resource Unit (Resource Coordinator)

- Responsible for information on the deployment of resources
- Maintain information summaries on the types and location of resources deployed in the response
- Maintain status information of resources (eg deployed, available, en-route, unserviceable)
- Prepare and maintain the incident organisation chart
- Develop rosters for all response personnel

Environment Unit (Environment Coordinator)

- Responsible for the collection and collation of environment data and advice
- Collect and collate environment and socio-economic resource information
- Prioritise environmental and socio-economic resources for protection and clean-up
- Provide advice on the environmental implications of proposed response and clean-up measures
- Provide advice on temporary and permanent waste management strategies
- Coordinate shoreline assessment programs
- Coordinate post spill monitoring and resource rehabilitation programs
- Coordinate advice from environmental specialists
- Provide advice on the protection, capture and rehabilitation of oiled wildlife

Consultation Unit (Consultation Coordinator)

- Responsible for the coordination and development of consultation programs for identified community and commercial groups
- Identify community and commercial groups, which may be affected by the incident
- Develop and implement consultation programs specific to the affected community or commercial group
- Input information developed within the consultation process into response planning

Response Planning Unit (Response Plan Coordinator)

- Responsible for the coordination, development and review of incident action planning
- Coordinate the preparation of the incident action plan and sub-plans (eg dispersants, marine operations, Wildlife, waste disposal and WHS)
- Coordinate and prepare Incident Management Team meetings
- Maintain minutes and records of Incident Management Team meetings
- Ensure the documentation of all response decisions
Operations Section

Operations Section (Operations Officer)

Responsible for the implementation of response operations in accordance with the Incident Action Plan

Marine Unit (Marine Coordinator)
- Responsible for the coordination of marine operations in accordance with the Incident Action Plan
- Coordinate marine transport requirements
- Coordinate the deployment of oil spill response equipment
- Coordinate vessel based dispersant operations

Aviation Unit (Aviation Coordinator)
- Responsible for the coordination of aviation operations in accordance with the Incident Action Plan
- Coordinate aerial transport operations
- Coordinate aerial surveillance operations
- Coordinate aerial dispersant operations

Shoreline Unit (Shoreline Coordinator)
- Responsible for the coordination of shoreline clean-up operations in accordance with the Incident action plan
- Coordinate shoreline clean-up
- Coordinate land transport requirements for shoreline clean-up and assessment teams
- Coordinate shoreline assessment teams

Wildlife Unit (Wildlife Coordinator)
- Responsible for the coordination of wildlife operations in accordance with Incident Action Plan
- Coordinate capture of affected wildlife
- Coordinate cleaning/decontamination and rehabilitation of affected wildlife
- Coordinate wildlife exclusion programs

WHS Unit (OH&S Coordinator)
- Responsible for the implementation and oversight of WHS requirements in accordance with the Incident Action Plan
- Implement WHS induction process for all operations personnel
- Ensure that proper WHS procedures have been implemented for the response
- Rectify any practices, which breach the WHS protocols implemented for the response

Waste Management Unit (Waste Management Coordinator)
- Responsible for the management of pollutant and oiled debris generated by the response
- Coordinate the temporary disposal of collected pollutant
- Coordinate the transport of pollutant and debris to permanent disposal sites
- Manage the permanent disposal sites
Logistics Section

Logistics Section (Logistics Officer)

- Responsible for the supply of resources and services to support and sustain the operational response

Procurement Unit (Procurement Coordinator)
- Responsible for acquisition of personnel and equipment for the operational response
- Procure personnel and equipment to implement the Incident Action Plan
- Provide adequate storage for equipment
- Delivery of resources

Services Unit (Services Coordinator)
- Responsible for the acquisition of services and facilities to support the operational response
- Provide shelters and amenities for response personnel
- Provide accommodation for all response personnel
- Provide catering services
- Provide decontamination facilities for personnel and equipment
- Provide security for all areas of the response

Transport Unit (Transport Coordinator)
- Responsible for the provision of aviation, land and sea transport services
- Arrange for the supply of fuel
- Arrange for supply of transport to meet operational requirements
- Arrange for the maintenance of all forms of transport

Communications Unit (Communications Coordinator)
- Responsible for the provision of communications services and support
- Provide appropriate communications equipment to meet operational requirements
- Ensure appropriate communications and support facilities as required to meet operational requirements
- Provide technical support for all response communications

Medical Unit (Medical Manager)
- Responsible for the provision of medical services
- Provide first aid services
- Provide ambulance services

Staging Area Unit (Staging Area Manager)
- Responsible for the implementation and management of assembly and staging areas
- Provide check in/out procedures for personnel
- Provide check in/out procedures for equipment
- Refurbish equipment for return or redeployment
Finance and Administration Section

(Finance and Administration Officer)

Responsible for the provision of administrative and financial services.

Administration Unit (Administration Coordinator)

- Responsible for administrative services
- Provide administrative services
- Provide staff to operate facilities, including telephones, facsimiles, computers, radios and runners

Finance Unit (Finance Coordinator)

- Responsible for the provision of financial services
- Ensure sufficient cash flow to meet immediate response needs
- Administer contracting services
- Pay all accounts and costs associated with the incident/emergency
- Collate expenditure records for cost recovery

Records Unit (Records Coordinator)

- Responsible for the collation of records
- Collate response personnel time sheets
- Collate equipment usage records
- Collate personal records of personnel
- Implement a records management system for the response

Incident Control Centre Management Unit (ICC Manager)

- Responsible for the management of the incident control centre (ICC)
- Ensure effective operation of the ICC
- Manage information flow within the ICC
- Administer ICC security
Appendix 3  Effect of Oil on the Appearance of Water

<table>
<thead>
<tr>
<th>Oil Type</th>
<th>Appearance</th>
<th>Approximate thickness (mm)</th>
<th>Approx Volume (M^3/km^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheen</td>
<td>Silvery</td>
<td>0.0001</td>
<td>0.1</td>
</tr>
<tr>
<td>Sheen</td>
<td>Iridescent (Rainbow)</td>
<td>0.0003</td>
<td>0.3</td>
</tr>
<tr>
<td>Slick</td>
<td>Yellow / Brown</td>
<td>0.01</td>
<td>10</td>
</tr>
<tr>
<td>Crude/Fuel Oil</td>
<td>Black / Brown</td>
<td>0.1</td>
<td>100</td>
</tr>
<tr>
<td>Mousse</td>
<td>Brown / Orange</td>
<td>1.0</td>
<td>&gt;1000</td>
</tr>
</tbody>
</table>

Reference - The International Tanker Owners Pollution Federation (ITOPF).

Software tools are available from NSW Maritime that use the above characteristics to estimate the volume of oil in a given area.

AMSA has produced a booklet titled Identification of Oil on Water which has been developed to assist persons more accurately identify oil in the marine environment. The Port Authority of NSW and NSW Maritime have been provided with these booklets.
Appendix 4  Marine Pollution Report (POLREP)

The preferred form for a POLREP is shown on the following page.

The AMSA POLREP format can be found on the National Plan for Maritime Environmental Emergencies page of the AMSA Website.
### ADDITIONAL INFORMATION

Has the discharged stopped?  Yes  No  Unknown
Response action undertaken?  Yes  No  If yes, provide details below, please include any environmental impact

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<th>Weather conditions at site</th>
<th>Photos taken</th>
<th>Details</th>
<th>Held by</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Video taken</td>
<td>Details</td>
<td>Held by</td>
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<tr>
<td></td>
<td>Samples taken</td>
<td>Description</td>
<td>Held by</td>
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<td></td>
<td>Items retrieved</td>
<td>Description</td>
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<table>
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<tr>
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<th>Combat agency</th>
<th>Statutory agency</th>
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<th>Equipment used?</th>
<th>Possible further action</th>
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<td>AMSA State/NT</td>
<td>Legal AMSA assistance Other</td>
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### SENDER DETAILS

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<th>Name</th>
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<tbody>
<tr>
<td>Phone</td>
<td>Fax</td>
<td>Email</td>
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</table>

### PRIVACY STATEMENT

The Australian Maritime Safety Authority (AMSA) is collecting the information on this form to enable it to carry out its role as managing agency of the National Plan to Combat Pollution of the Sea by Oil and other Noxious and Hazardous Substances.

AMSA may give some or all of this information to other government bodies, non-government organisations who have responsibilities under the National Plan, and law enforcement agencies.
Appendix 5  Situation Report (SITREP)

During a marine pollution incident/emergency SITREPS should be sent regularly from the ICC to keep relevant agencies advised of significant developments during the spill response.

The last SITREP in a series covering one incident/emergency should display the words:

“FINAL SITREP”

The preferred form for a SITREP is shown on the following page.
# ICS2 - SITUATION REPORT - (SITREP)

<table>
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<tr>
<th>Incident Name</th>
<th>Reference No.</th>
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<th>Brief Description of Incident &amp; Impact</th>
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<th>Summary of Resources Available and Deployed</th>
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<th>Incident Controller</th>
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<th>Approved (Signature)</th>
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**SITREP Prepared By:**

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<th>Role</th>
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**Distribution**

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<th>Status Board</th>
<th>IC and IMT</th>
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<th>AMSA RCC</th>
<th>SEOC</th>
<th>DEMO</th>
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</table>
Appendix 6  Classification of Oils and Their Characteristics

A number of classification methods for crude oils and their refined products have been developed. Each classification generally has an emphasis its use eg. ease of dispersal, behaviours when spilt or effects on the biota. Crude oil and the refined products are mixtures of hydrocarbons and other compounds and have widely differing physical and chemical properties which determine their behaviour when spilled. The physical environment into which they are spilled also affects the properties of the oil eg. temperature of the water.

The table below is a generalised guide to the behaviour of four categories of oil types when spilt into the sea.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Light volatile</td>
<td>Moderate – heavy</td>
<td>Heavy oils</td>
<td>Residuals</td>
</tr>
<tr>
<td>Volatility</td>
<td>High</td>
<td>Up to 50% can</td>
<td>&lt;20% can evaporate in first 24 hours</td>
<td>Non-Volatile, little or no evaporation</td>
</tr>
<tr>
<td></td>
<td>Should evaporate in 1 to 2 days)</td>
<td>evaporate in a few days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural dispersion</td>
<td>Easily disperses</td>
<td>Some components disperse</td>
<td>Little dispersion</td>
<td>No dispersion</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>High</td>
<td>Moderate</td>
<td>Low</td>
<td>Very low</td>
</tr>
<tr>
<td>Biological harmfulness</td>
<td>Highly toxic</td>
<td>Variable toxicity</td>
<td>Smothering, clogging, severe impacts on birds and intertidal habitats</td>
<td>Smothering, clogging, severe impacts on birds and intertidal habitats.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intertidal resources at risk</td>
<td>Low toxicity</td>
<td>Low toxicity</td>
</tr>
<tr>
<td>Stickiness&lt;sup&gt;6&lt;/sup&gt;</td>
<td>Not sticky</td>
<td>Slightly to moderately sticky</td>
<td>Very sticky</td>
<td>Very sticky to solid</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>&lt;0.8</td>
<td>0.8 to 0.85</td>
<td>0.85 to 0.95</td>
<td>&gt;0.95</td>
</tr>
<tr>
<td>Viscosity cSt @15 °C</td>
<td>0.5 - 2.0</td>
<td>4 - solid (average 8 cTs)</td>
<td>8 - solid (average 275 cSt)</td>
<td>1500 – solid</td>
</tr>
<tr>
<td>Persistence</td>
<td>Non-persistent</td>
<td>Moderately persistent if emulsified</td>
<td>Persistent</td>
<td>Very persistent</td>
</tr>
</tbody>
</table>

<sup>6</sup> Depending on oil origin
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Light volatile</td>
<td>Moderate – heavy</td>
<td>Heavy oils</td>
<td>Residuals</td>
</tr>
<tr>
<td>Response to dispersants</td>
<td>Responds very well but generally not needed</td>
<td>Responds early before light fractions evaporate</td>
<td>With difficulty, may be an option in first 24 hours</td>
<td>Not at all</td>
</tr>
<tr>
<td>Ease of emulsification(^7)</td>
<td>Tends not to form emulsions</td>
<td>Tends to form stable emulsions</td>
<td>Tends to form emulsions in moderate to rough sea conditions</td>
<td>Tends not to form emulsions</td>
</tr>
<tr>
<td>Clean-up</td>
<td>Generally not required</td>
<td>Can be very effective Booming, Skimming, Chemical dispersants Shoreline clean-up</td>
<td>Most effective if conducted quickly. Chemical dispersants Booming Skimming(^8) Shoreline clean-up</td>
<td>Shoreline clean-up difficult.</td>
</tr>
<tr>
<td>Examples of products</td>
<td>Petroleum Naptha Kerosene</td>
<td>Marine diesel Gas oil Light fuel oil Light lubricating oils</td>
<td>Heavy lubricating oils Medium fuel oil</td>
<td>Heavy fuel oils Bunker C fuel</td>
</tr>
<tr>
<td>Examples of crude</td>
<td>NW Shelf Aust condensates Cutubu</td>
<td>Low Pour Point Abu Dhabi Brent Blend Tapis Murban Arabian Light High Pour Point Bass St Aust Bach Ho Weathered low viscosity crude</td>
<td>Low Pour Point Arabian Heavy Bachan High Pour Point Dia Hung Suez mix Weathered medium viscosity crude</td>
<td>Weathered high viscosity crude</td>
</tr>
</tbody>
</table>

---

\(^7\) The rate of emulsification is primarily a function of the amount of physical mixing of the oil and water.

\(^8\) May require specialised skimmers and pumps that can handle high viscosity oils.
## Appendix 7 Chemical Spill Behaviour Group Classification

<table>
<thead>
<tr>
<th>Designation</th>
<th>Meaning of Designation</th>
<th>Air</th>
<th>Water Surface</th>
<th>Water Column</th>
<th>Bottom Sediments</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>Gas</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GD</td>
<td>Gas/Dissolver</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Evaporator</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ED</td>
<td>Evaporator/Dissolver</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>FE</td>
<td>Floater/Evaporator</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>FED</td>
<td>Floater/Evaporator/Dissolver</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Floater</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FD</td>
<td>Floater/Dissolver</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>DE</td>
<td>Dissolver/Evaporator</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Dissolver</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>Sinker/Dissolver</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>Sinker</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

(X indicates affects the environment)
### Appendix 8  Generalised Types of Hazards Involved with Various Forms of Chemicals

<table>
<thead>
<tr>
<th>Group</th>
<th>Type of Chemicals</th>
<th>Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gases and chemical vapour clouds</td>
<td>Mostly related to toxicity by inhalation, explosion, flammability; other hazards to be considered are corrosiveness, radioactivity and carcinogenicity; gases generally do not in the short term affect the aquatic ecosystem unless they dissolve in water.</td>
</tr>
<tr>
<td>2</td>
<td>Floating chemical substances</td>
<td>Mostly related to fire and toxicity affecting the aquatic environment; unlikely damage to fish; most damaging in shallow waters or if a spill occurs in the breeding season for mammals and birds, hazard aspects of corrosivity, radioactivity and carcinogenicity might need to be considered.</td>
</tr>
<tr>
<td>3</td>
<td>Dissolving chemical substances</td>
<td>Mostly related to acute toxicity in the short term although certain phenomena such as bioaccumulation need to be considered in the long term. In open sea the chemicals will be diluted although planktonic will be threatened. In coastal waters spawning grounds can be severely affected, corrosivity, radioactivity and carcinogenicity might need to be considered along with the effects of smothering on plant life such as sea grasses.</td>
</tr>
<tr>
<td>4</td>
<td>Sinking chemical substances</td>
<td>Mostly related to the blanketing of the seabed causing losses of benthic organisms and indirectly to predators which scavenge the sea bottom for their food; corrosiveness, radioactivity and carcinogenicity might need to be considered along with the effects of smothering on plant life such as sea grasses.</td>
</tr>
<tr>
<td>5</td>
<td>Substances which react with air and seawater</td>
<td>Mostly related to acute toxicity in the short term by inhalation, explosion, flammability; other hazards to be considered are corrosiveness and carcinogenicity; gases given off generally do not in the short term affect the aquatic ecosystem unless they dissolve in water.</td>
</tr>
<tr>
<td></td>
<td>Packaged Chemicals/ Materials</td>
<td>There is no damage to the marine life if the package remains intact, however human beings or property could be affected if the package is washed ashore. The slow water logging of the packing and gradual deterioration and corrosion of the package must be considered.</td>
</tr>
</tbody>
</table>
Appendix 9  Properties and Behaviour of Chemicals and Spill Response Options

The behaviour of the chemical pollutant will depend upon the physical properties of the chemical, these properties include;
- phase (solid, liquid or gas);
- boiling point;
- melting point;
- vapour pressure (volatility);
- solubility in water;
- density/specific gravity of chemical;
- density of vapour;
- reactivity; and
- viscosity.

These properties of chemicals can subdivide all chemicals into five spill behaviour groups:
- Group 1 - substances which form gas and vapour clouds;
- Group 2 - substances which continue to float on the water;
- Group 3 - substances which are soluble, miscible or disperse in water;
- Group 4 - substances which sink; and
- Group 5 - substances which react with air and/or seawater.

Multiple behaviour characteristics may be exhibited by substances, for example a chemical may float on water but partially dissolve and also evaporate into the air.

The behaviour of spilled chemicals therefore determines the response options, containment and clean-up options available as well as the risks and hazards involved. Chemical spill containment and clean up options will be discussed in detail in the Maritime Chemical Spill Response Manual being prepared by AMSA which will support the National and local contingency plans.

The hazards and risks of spilled chemicals can be summarised on the basis of the “damage” or “injury” that could be caused.

The hazard categories are:
- combustibility;
- flammability;
- corrosivity;
- explosivity;
- reactivity;
- toxicity (acute and chronic); and
- radiological.
Properties of Chemicals and Environmental Impact Assessment

In assessing the environmental impact or risk of chemicals, chemical classification criteria developed by the United Nations joint group of experts on the scientific aspects on marine pollution (GESAMP) consider the various substances hazard profile, namely the chemicals effect associated with:

- bio accumulation;
- damage to living resources;
- hazards to human health by oral intake, skin contact and inhalation;
- reduction of amenities;
- interference with other uses of the sea eg fishing, aquaculture, corrosion of structures; and
- carcinogenic, mutagenic and other toxicological properties.

GESAMP has developed hazard profiles for more than fifteen hundred substances or groups of substances by this classification criteria. (IMO Report No 35: The evaluation of the hazard of harmful substances carried by ships)

Marine pollutants are subject to the provisions of Annex II and III of the International Convention for the Prevention of Pollution from Ships, as modified by the Protocol of 1978 (MARPOL 73/78). A solution or mixture containing 10 percent or more of a marine pollutant is classed as a ‘MARINE POLLUTANT’. However, certain marine pollutants have an extreme potential and are identified as severe marine pollutants in the individual schedules. A solution or mixture containing 1 percent or more of these severe marine pollutants is also classed as a "marine pollutant".

Substances are identified as harmful to the marine environment if they are:

- bioaccumulated to a significant extent and known to produce a hazard to aquatic life or to human health;
- bioaccumulated with attendant risk to aquatic organisms or to human health with a short retention of the order of one week or less;
- liable to produce tainting of seafood; or
- highly toxic to aquatic life, defined by an LC50/96 hour less than 1ppm.

Generally high acute toxicity, high potential for bioaccumulation and low degradability in the marine environment increases the environmental hazard of the chemical, as well as the human health impact when discharged into the sea.
Appendix 10  Criteria for Termination of an Oil or Chemical Spill Response

The implementation of a shoreline sign off plan should commence once shoreline clean-up has reached a stage where it is considered by the Incident Controller that no further environmental benefit is likely to be achieved from further clean-up operations. At this point a comprehensive foreshore inspection should be undertaken by a “Sign-Off” team comprising relevant agencies and stakeholders. Guidelines can be found on the AMSA website.


Shoreline Sign-Off Plan

The shoreline sign-off plan described in the guidelines outlines the considerations and process used to reach agreement that the foreshore clean-up operations have been completed to the satisfaction of responsible agencies and stakeholders.

The table below shows the agreed environmental values and acceptable levels of cleanliness that should be achieved if reasonably possible.

<table>
<thead>
<tr>
<th>Resource/Environmental Value</th>
<th>Acceptable level of Cleanliness</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contact Surfaces</strong></td>
<td>No visible tar balls, slicks or sheens that could adhere to organisms or interfere with normal animal/plant feeding, movement, life history processes and behaviour. Compliance with ANZECC Water Quality Guidelines for Protection of Aquatic Ecosystems to the required level of environmental protection.</td>
</tr>
<tr>
<td>Includes water surfaces, sediment surfaces and hard surfaces. Intended to encompass hard/sediment surfaces that organisms slide across; water surface that animals might broach to breathe, feed or flee and air/water interface for air-breathing organisms. Definition of clean would mean that air is suitable breathe as no surface oil would mean no air contamination.</td>
<td></td>
</tr>
<tr>
<td><strong>Shoreline - Intertidal Sediments as Habitat</strong> and <strong>Subtidal Substrata as Habitat</strong></td>
<td>Need not be totally clean but remaining residues must not inhibit potential for recovery through toxic or smothering effects. In some circumstances oiling may be preferable to disturbing the site. Compliance with ANZECC Water Quality Guidelines for Protection of Aquatic Ecosystems to the required level of environmental protection.</td>
</tr>
<tr>
<td>Habitat is the place where organisms live. Habitat should be suitable for all organisms that naturally occur in the area e.g. algae, seagrasses, mangroves, molluscs, crustaceans, annelids, etc.</td>
<td></td>
</tr>
<tr>
<td>Resource/Environmental Value</td>
<td>Acceptable level of Cleanliness</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td><strong>Subsurface Water as Habitat</strong>&lt;br&gt;In this value the water is considered as habitat for plankton, fish, corals, mammals, seagrasses, aquaculture species etc. Habitat includes suitable conditions to live in as well as an appropriate environment to feed (particularly filter feeders) and to otherwise sustain viable populations (i.e. support life cycle processes).</td>
<td>Oil contamination should not interfere with normal animal/plant feeding, movement, life history processes and behaviour. Must not be toxic to all life stages of key species or exceed recommended concentrations from ANZECC Water Quality Guidelines for Protection of Aquatic Ecosystems and/or Aquaculture if required.</td>
</tr>
<tr>
<td><strong>Shoreline (as an Ecosystem Interacting with other Aquatic Near Shore Ecosystems)</strong></td>
<td>Remaining residues must not be mobile such that they will leach out into near-shore waters.</td>
</tr>
<tr>
<td><strong>Cultural and Historic Value</strong>&lt;br&gt;Cultural values will be very diverse and particular to each resource. Responders should consult closely and be aware that in some circumstances oiling may be preferable to disturbance of sites.</td>
<td>Sensitive to and where possible address needs of cultural custodians.</td>
</tr>
<tr>
<td><strong>Food Organisms and Water that may be Abstracted for Human Consumption</strong></td>
<td>Must meet statutory specification for residues and taints (e.g. NHMRC, NFA, ANZECC) as required.</td>
</tr>
<tr>
<td><strong>Amenity and/or Safety of Beaches and Structures</strong>&lt;br&gt;(e.g. jetties and slipways)</td>
<td>No visible oil&lt;br&gt;No oil that rubs off on people, boats or infrastructure causes slip hazard&lt;br&gt;Compliance with ANZECC Water Quality Guidelines for Recreational water Quality if required.&lt;br&gt;Compliance with OHS requirements if required.</td>
</tr>
</tbody>
</table>

Order in the table does not imply any priority of values.

If the initial foreshore assessment revealed an unacceptable level of oiling in areas, then these areas may be subsequently monitored and, where appropriate, further clean-up activities initiated, prior to a further foreshore inspection for sign off. Any new areas of foreshore contamination discovered during ongoing monitoring will also require clean up action where necessary.

The Incident Controller will make the final determination of when the shoreline clean-up operation will cease based on advice from the Foreshore Inspection and Sign-Off Team.
Appendix 11 Support Resources - Oil Spill Trajectory Model

AMSA provides the States and NT with 24 hour access to a contract custodian of the interactive spill computer model known as Oil Spill Trajectory Model (OSTM) which is designed to predict the trajectory of an oil slick, and some floating chemicals, over a given period of time. Basic data necessary for predictions in ports and port approaches is already prepared thus enabling an estimate of the movement and extent of an oil slick to be provided within a reasonable time frame. Updated predictions can be made for specific time intervals or for as long as the slick is considered to be a threat. On-scene visual observations obtained from aircraft reconnaissance should be used to confirm the accuracy of OSTM predictions. This information should then be used to update inputs for the model predictions.

The following information will be required to enable the initiation of the OSTM:

- the time of the spill;
- location of the spill (latitude and longitude);
- quantity and type of pollutant;
- whether or not the spill is continuing;
- local tide heights and timing;
- surface current data; and
- the prevailing and forecast wind speeds and directions.

A copy of the OSTM request form is provided in this appendix over the page and must be completed and sent to AMSA in order to provide the relevant data for the computer model. Access to OSTM is through AMSA’s Duty Officer. These predicted trajectories can be sent by fax or email at pre-determined intervals to the incident control centre. Output from the OSTM can be displayed and analysed using the OSRA.

Cautionary Note:
A disclaimer will accompany all oil spill trajectory model predictions provided by AMSA. Oil spill trajectory modelling is a predictive tool only. The accuracy of the predictions is only as good as the data supplied and the predictions should be used as a guide only in response planning. Ground truthing should be undertaken to confirm predictions where possible.
### Oil Spill Trajectory Model Request Form

**OIL SPILL TRAJECTORY MODELLING (OSTM) REQUEST**

**Priority of request**  
Urgent [ ]  Routine [ ]  Exercise [ ]

**NB:** At least five one months notice must be given for OSTM run(s) requested as part of an exercise or for contingency planning purposes.

<table>
<thead>
<tr>
<th>Vessel/spill/exercise name or identifier</th>
<th>Name of requesting organisation</th>
<th>Name of requesting person and position in response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact telephone number</td>
<td>Email address for model output (preferred method)</td>
<td>Fax number for receipt of model output</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Format of coordinates used (select one)</th>
<th>Latitude of spill</th>
<th>Longitude of spill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degrees &amp; decimal degrees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degrees, minutes &amp; decimal minutes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degrees, minutes &amp; seconds</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spill start date (eg 23 08 2000)</th>
<th>Spill start time (spill site local time, 24 hour clock)</th>
<th>Local time used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day</td>
<td>Month</td>
<td>Year</td>
</tr>
</tbody>
</table>

**Type of oil spilt or likely to be spilt**  
*eg Name: crude oil/ Type: fuel oil/ Grade: bunker fuel*

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Grade</th>
</tr>
</thead>
</table>

**Amount of oil spilt or likely to be spilt (complete one option)**  
*If exact spill quantity is unknown for modelling purposes provide a maximum quantity of spill*

- [ ] Tonnes
- [ ] Cubic metres
- [ ] Litres
- [ ] Barrels

**Known or estimated amount of time oil was being discharged**  
[ ] hours

**How long do you want the model prediction for**  
[ ] Hours (eg 12, 24, 36 hrs)

**Surface water temperature at spill site**  
[ ] °C (if not available AMSA will use an average for this location)

**Wind speed and direction at spill location is vital to the effectiveness of the spill simulation model**

<table>
<thead>
<tr>
<th>Wind speed and direction</th>
<th>Note: If wind speed and direction are variable use page 2 to input data</th>
</tr>
</thead>
</table>

**DISCLAIMER**

Any Oil Spill Trajectory Modelling predictions are for the exclusive use of the client and not for third party use. The oil spill trajectory predictions, opinions and interpretations contained in predictions are based on observations and data supplied by the client and information sources available to AMSA.

The computer model predictions, interpretations or opinions expressed represent the best judgement of the Environment Protection Response, Emergency Response, Australian Maritime Safety Authority (AMSA). AMSA and its personnel or advisers, assume no responsibility and make no warranty or representations as to the accuracy or reliability of the predictions. It should be noted that accuracy of predictions may be adversely affected where modelling is carried out in respect of spills in enclosed waters, estuaries, close to shore, or when only low resolution maps are available. The use and mention of any specialist software or equipment in any prediction does not represent endorsement of these products by AMSA.

Enter wind information into columns starting at the time of the spill and for the duration of simulation required.

<table>
<thead>
<tr>
<th>Date (dd/mm/yy)</th>
<th>Time at site (24 hr clock)</th>
<th>Wind speed (knots)</th>
<th>Wind direction (eg from N, NW etc or degrees)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
Appendix 12 Support Resources - Cultural Heritage and Indigenous Site Registers

About 85 percent of the NSW population live in the coastal zone, consequently there are a large number of European heritage items in close proximity to the coast. The OSRA shows some of the more important locations. Local councils should be consulted about heritage areas within their localities, especially if there is to be significant shoreline clean-up activity. The more significant heritage sites are listed with the National Heritage Trust.

The NSW coast has a large number of Aboriginal sites that are considered culturally and historically important. They may be at risk through mechanical disturbance during equipment deployment and during foreshore clean-up operations.

Aboriginal relics and places are protected under the National Parks and Wildlife Act 1974, and consent must be sought from the Chief Executive or Deputy Chief Executive of OEH before disturbing an Aboriginal place or relic. A register of Aboriginal sites is maintained by OEH and currently there are more than 35,000 registered sites in NSW and a large proportion of these sites are along the coastal fringe.

If there is a need to gain access to a beach or shoreline and there are no constructed roads, or ground disturbing works of any kind are proposed, consultation must occur with OEH before access is attempted.
Appendix 13  Support Resources - Oil Spill Response Atlas

The Oil Spill Response Atlas (OSRA) was designed to provide the Incident Controller and planning section with information about environmentally sensitive marine and foreshore ecosystems, biological resources and socioeconomic resources. This information is essential to enable identification of resources at risk, as early as possible, in a spill response, thus allowing decisions to be made on their protection. The OSRA can also be used to assist in the management of a response, especially in planning of a shoreline assessment and clean-up.

NSW Maritime in conjunction with the Transport for NSW Spatial Unit maintains OSRA on the Transport for NSW Transportal Website.

Access to the OSRA can be requested during an incident via the NSW Maritime Incident Duty Officer.
Appendix 14  Support Resources - Publications and Guidelines

There are a number of publications and guidelines which provide information on various aspects of marine oil and chemical spill response. Some are produced commercially while others have been developed by the National Plan or NSW Maritime.

**NSW guidelines/plans include:**
- Shoreline Inspection and Termination of Clean-up Plan;
- Site Health and Safety Plan; and
- NSW Maritime - maritime incident operations manual.

**AMSA publications include**
- Guidelines to assess a request for a Place of Refuge;
- Oil Spill Monitoring Handbook;
- Identification of Oil on Water Aerial Observation and Identification Guide.

**Other guidelines**
- Shoreline Response Handbook.

**Emergency Procedures for Ships Carrying Dangerous Goods**
These procedures outline emergency actions to be used in conjunction with the IMO Medical First Aid Guide during chemical incidents. Each schedule lists:
- Special emergency equipment to be carried;
- Emergency procedures;
- Emergency actions; and
- Special remarks for specific substances.

Both emergency procedures and Medical First Aid Guide outputs from the computerised International Maritime Dangerous Goods (IMDG) Code are available during a chemical incident/emergency from AMSA. Ships also have the appropriate documentation regarding the dangerous goods that they are carrying.
Appendix 15  National Maritime Emergency Response Arrangements

The states/NT and Commonwealth Government have agreed to the National Maritime Emergency Response Arrangements (NMERA) which came into operation in 2006.

Under these arrangements, emergency towage is defined as the initial response required to assist a ship that is incapacitated and/or drifting, and is in danger of grounding, sinking or of suffering some other peril of the sea. The aim of the emergency towage is to stabilise the situation and prevent or minimise the extent of consequent pollution of the sea.

Under the NMERA, a number of emergency towage vessels (ETVs) are located in strategic Australian coastal regions. These ETVs provide a minimum level of emergency towage capability to deal with a significant or potential significant, threat to Australia’s marine environment.

The emergency towage capability consists of a three-tiered approach. Level 1 requires a dedicated chartered ETV that provides emergency towage and first response capability in the particularly sensitive sea area of the Torres Strait and Great Barrier Reef area north of Cairns/Mourilyan.

Level 2 provides for ongoing availability of emergency towage capability for the remaining areas around the Australian coastline is ensured by contracted suitable towage vessels with appropriately trained crews that normally undertake existing port or other operations. These vessels are contracted by AMSA to be available to be called upon in the event of an incident/emergency. Operators are paid by AMSA to ensure the availability of appropriate ocean-going vessels and the training of their crews for emergency towage operations. NSW is covered by a level 2 vessel in both Sydney and Brisbane.

Level 3 provides suitable vessels that are in the relevant area at the time of the incident/emergency that are used as “vessels of opportunity”. There is expected to be a range of vessels around the coast that would potentially be suitable for emergency towage work.
Appendix 16 Media Guidelines

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Media Guidelines

1 Introduction
Maritime incidents and emergencies vary greatly in nature, location, size and complexity hence media arrangements need to be flexible in order to deal with any given situation. These guidelines are used to enable the effective dissemination of information to the media in the event of a maritime incident or emergency. They are intended for use by NSW Maritime and the Port Authority of NSW and other agencies supporting the response. They are not intended to apply to the oil industry when they are managing the response to an incident within their own facility.

2 Notification
Notification procedures for maritime incidents are set out in section 4.2 of this Plan and are used by the Combat Agency to notify other agencies of a maritime incident/emergency. Agencies once notified of a maritime incident/emergency should use their internal procedures to notify the relevant officers within the agency.

3 Media Contact
Once a maritime incident/emergency is of sufficient size or creates public interest, the media will inevitably seek out sources of information as to what has happened, what is being done to fix the problem and who is at fault. A rapid establishment of an efficient media liaison system will reduce the possibility of inaccurate information being published or broadcast, and also encourage the media to refer information gleaned from outside sources to the Media Liaison Officer (MLO) for authentication or reaction.

The communications objective of the Incident Controller and Marine Pollution Controller (MPC) is to give the media and the community prompt and accurate information on the nature and extent of the incident and the actions being taken to deal with it.

4 NSW Government Memorandums of Understanding (MOU) with Media Organisations
The NSW Department of Premiers and Cabinet on behalf of the NSW Government have developed an MOU with the Australian Broadcasting Commission and Commercial Radio Australia Limited for the broadcasting of emergency information in NSW. The guidance in these MOUs should be followed when dealing with the media even if the incident does not constitute an emergency where the lives of people are in danger.

5 Management System
The Oil Spill Response Incident Control System (OSRICS) is used to manage the response to any maritime incident or emergency. Within the OSRICS structure the Media Liaison Officer (MLO) reports to the Incident Controller or the MPC depending on the size and complexity of the response. Appointment of the MLO will be dictated primarily by the location, size, nature and complexity of the incident.
5.1 Local Level Incident Response (Level 1)
These are small incidents that do not generally require the appointment of a MLO. If the incident is likely to draw media attention because of its location or nature, the designated Combat Agency should ensure that their Media Officer is aware of the situation and able to address any media inquiries.

5.2 State or National Level Incident Response (Level 2/3)
Tier 2/3 sized incidents/emergencies will require the appointment of a MLO. Depending on the location, size and complexity of the incident/emergency the MLO may be assisted by other media officers. These officers may be employees of the Combat Agency or supporting agencies or contracted personnel.

Under the NSW Emergency Plan (EMPLAN) arrangements further support is available from the Public Information Functional Area Coordinator (PIFAC). The PIFAC should be notified of all Tier 2/3 incidents so that the media situation can be monitored and assistance provided if necessary.

5.3 Marine Pollution Controller
When a maritime incident/emergency is large or complex the MPC may be activated to provide overall coordination of the incident/emergency.

One of the roles of the MPC is to act as the media spokesperson for the incident response, however, this role is flexible and the MPC will normally discuss the media coordination requirements with the Incident Controller as soon as possible and agree on a media coordination strategy. The strategy must remain flexible to deal with the changing conditions of the response over time.

From previous experience in dealing with large incidents, the MPC usually takes on the role of media coordination in the early stages of the response while the Combat Agency works to bring the incident/emergency under control. Once control has been established and the response is underway the media coordination arrangements may be changed to suit the circumstances.

The position of Media Liaison Officer reports to the Incident Controller. When the MPC is coordinating the media, the officer assisting the MPC is referred to as the Media Liaison Support in order to distinguish the two positions that may be operating at the same time. These two officers must work closely together to ensure that the overall media strategy is implemented and a consistent message is provided to the media.

6 Appointment of the Media Liaison Officer
The MLO will usually be the senior media officer of the Combat Agency and appointed by the Incident Controller. During prolonged responses the MLO may be appointed from the designated State Response Team Media Officers. Media Officers that form part of the State Response Team are also available to assist the MLO.
Media Guidelines

7 Functions and Responsibilities of the MLO

The functions and responsibilities of the MLO will depend to a certain extent of the location, nature, size and complexity of the response. As a response becomes larger and more complex the MLO will take on more of a strategic managerial and facilitator role advising the IC or MPC.

7.1 Action upon Notification Level 2/3 Incidents

Upon being notified as the MLO, the designated person should:

- contact the Incident Controller as soon as possible;
- advise the time of arrival at the ICC;
- Determine if the MPC is active and has appointed a Media Liaison Support;
- Make contact with the Media Liaison Support person if activated and agree an initial media strategy;
- issue a media advice to the media confirming the appointment, contact details and information on relevant matters which will be handled by the MLO;
- inform the PIFAC if it is a Level 2/3 incident/emergency; and
- attempt to establish liaison with the polluters media officer, the charterer, relevant oil company, or other shipping company or agent concerned as appropriate, regarding the arrangements on the exchange of information.

7.2 Action upon Arrival at the Incident Control Centre

The ability of the MLO to establish and maintain an authoritative focal point for the dissemination of information on the incident will be largely dependent upon the information available at the ICC and the cooperation with the media liaison personnel from supporting agencies.

The MLO must determine the priorities based on advice from the Incident Controller and undertake the following activities:

- obtain briefings from the Incident Controller;
- assess the level of media interest and activity based on the magnitude of the incident;
- establish a media centre within the ICC or adjacent to it and ensure it has the appropriate equipment and personnel to assist the MLO;
- if activated, liaise with and keep the MPC Media Support informed of all media activities;
- ensure all media and MLOs representing other agencies are advised of the appointment of the MLO, location and contact details;
- attend planning meetings as required;
- prepare and disseminate a schedule of media briefings and advise the media of the existence, location and facilities available at the media centre, if established;
- identify which organisations should be represented by spokespersons at media conferences;
- coordination of the media and information being released about the response;
Media Guidelines

- liaise with other agency’s media officers to ensure a consistent media message;
- be available for media interviews;
- coordinate press conferences and the interviewing of the Incident Controller and other Maritime personnel by media organisations;
- keep the Public Information Functional Area Coordinator informed of the situation and request assistance when necessary;
- arrange access for the media to the incident site, if it is safe to do so, with escorted controlled arrangements;
- request media support personnel as required;
- maintain a log of activities; and
- conduct handover briefings.

NB: the MLO must maintain responsibility for ensuring the professional and efficient conduct of the MLO role, including the release of only authorised statements; the provision of sound, timely advice to the Incident Controller/ MPC; and the provision of adequate two-way liaison with identified stakeholders and media representatives.

8 Prolonged Response

A significant maritime incident/emergency could result in a response period lasting weeks, months or longer. During the intense initial period, which in itself could last several weeks, major media conferences may need to be held several times daily.

As media and community interest in the incident begins to abate, media conferences can be replaced by media briefings, which are based on the same structure as conferences, but less formal and likely to be attended by less media representatives.

In the event of a major incident requiring a prolonged and/or, intensive response, all personnel including the MLO will need to have competent deputies and support staff to provide an efficient 24 hour service.

It is likely that the designated State Response Team MLOs will be called upon to provide support and assistance to the MLO. In addition to these personnel, additional assistance may be required to carry out administrative tasks, these personnel can be provided by NSW Maritime and the Port Authority of NSW from a pool of personnel trained in the various aspects of maritime incident response and should be sourced via the Logistics Officer.

The role of support staff include:

- assist the MLO as directed in the preparation and dissemination of media statements;
- assist the MLO in arranging, conducting and supervising media briefings and media conferences;
- provide background advice to journalists, restricted to information provided in media statements and briefing documents approved by the Incident Controller;
Media Guidelines

- maintain a watching and holding brief on the incident during periods of the MLO’s absence;
- assist the MLO in obtaining up to date information; and
- assist the MLO in maintaining the necessary links with other stakeholders.

9 Who Should Speak to the Media

Media inquiries should be directed to the MLO or to the Incident Controller if a MLO is not available. The media will often want to speak to response personnel and should be assisted where possible, however, the Incident Controller, in conjunction with the MLO, will decide if it is appropriate for any particular individuals to formally make statements to the media.

Response personnel, whether in the field or in an ICC are required to refrain from speaking to the media if possible and direct any media inquiries to the MLO or Incident Controller. Response personnel if in a position of having to deal with the media (typically shoreline response personnel) should confine their conversation to what they have been tasked to do and not make any comment on the polluter, management of the response or the amount of oil or chemical spilt.

10 Media Training

Maritime combat agencies should ensure that their Incident Controllers undertake relevant media training. The MPC should also undertake appropriate media training.
## Appendix 17  Guidelines for Responding to a Fire on a Vessel

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Guidelines for Responding to a Fire on a Vessel

1 Introduction

These guidelines have been developed to complement the maritime incident response arrangements described in the NSW State Waters Marine Oil and Chemical Spill Contingency Plan in recognition of the additional coordination required and complexities involved in responding to a fire on a vessel, either at sea or in a port. A fire on a vessel may also involve hazardous materials especially if the fire is on a chemical or container ship.

It has been agreed with Fire & Rescue NSW that a multi-agency incident control team (MAICT) approach will be taken when responding to a fire on a vessel. These guidelines describe how the MAICT approach should be implemented while recognising that the guidelines must remain flexible so that unique circumstances can be responded to quickly and effectively.

The guidelines have been prepared with the assistance and cooperation of Fire & Rescue NSW, NSW Water Police, Port Authority of NSW, NSW Maritime Services, Environment Protection Authority, Australian Maritime Safety Authority.

These guidelines also complement the Memorandum of Understanding in relation to Hazardous Material Incidents on Inland and State Waters between Fire & Rescue NSW, NSW Maritime and the Port Authority of NSW.

2 Purpose

The purpose of these Guidelines is to ensure a coordinated approach to responding to a fire on a vessel in order to save and protect life and property which is threatened by the fire, to respond to the fire regardless of the vessel location and to describe the MAICT approach and the communications arrangements between the incident controller, the vessel and the supporting agencies.

3 Notification

Notification arrangements are as set out in Section 4.2 of the NSW State Waters Marine Oil and Chemical Spill Contingency Plan. The following agencies are to be notified as soon as possible:

- NSW Maritime
- Fire & Rescue NSW
- NSW Police including Marine Area Command
- Port Authority of NSW
- Australian Maritime safety Authority (AMSA);
- NSW Health
- State Emergency Operations Centre (SEOC);
- Environment Protection Authority (via the Duty Hazmat Advice Coordinator);
- Relevant District Emergency Management Officer.
4 Combat Agency

The combat agency for a fire on a vessel is based on the geographical divisions in State waters (up to 3 nm off shore):

- Qld border to Fingal Head (Port Stephens) excluding the Port of Yamba; NSW Maritime
- Port of Yamba (Port Waters) Port Authority of NSW (Newcastle) as Port Manager
- Fingal Head to Catherine Hill Bay and including the Port of Newcastle; Port Authority of NSW (Newcastle)
- Catherine Hill Bay to Garie Beach including Sydney Harbour and Port Botany; Port Authority of NSW (Sydney)
- Garie Beach to Gerroa including the Port of Port Kembla; and Port Authority of NSW (Port Kembla)
- Gerroa to the Victorian border excluding the Port of Eden NSW Maritime
- Port of Eden Port Authority of NSW (Port Kembla) as Port Manager

For incidents more than 3 nautical miles offshore the Australian Maritime Safety Authority (AMSA) is the designated combat agency unless the combat agency role has been formally agreed to and handed to NSW Maritime or the Port Authority of NSW. When AMSA is the combat agency, NSW Maritime will take on a coordinating role for State resources.

4.1 Search and Rescue

Any search and rescue requirements will be coordinated by the AMSA Rescue Coordination Centre and do not form part of these guidelines.

4.2 Legislative Considerations

Both the Fire Brigades Act 1989 and the Maritime Services Act 1935 provide provision for fighting fires on a vessel and property vested in a Port Authority of NSW or NSW Maritime. The Fire Brigades Act 1989 deals with response to hazardous materials. Both fire and hazardous materials must be considered in the guidelines as a fire on a ship may also impact cargo which may be of a hazardous nature. The relevant sections of the Acts are as follows:

- Section 13S (Rescue and fire-extinguishing operations) of the Maritime Services Act 1935 provides a broad power to provide and maintain such plant, apparatus and things as it deems necessary for the extinguishing of any fire on vessels or on any property vested in it or under its control or management and may employ such persons as it deems necessary for the proper operation and use thereof.
The Fire Brigades Act 1989 limits response to fires which occur in fire districts, however under Section 20 of the Act the Commissioner may permit any members of a fire brigade, with engines and appliances, to go beyond the limits of any fire district for the purpose of extinguishing any fire.

Furthermore Section 20A, which deals with hazardous materials, requires a request from the port authority before the Fire Brigade can respond to a hazardous materials incident (or any fire that may result from them (4(1) Application of Act)).

In order to clarify agency responsibilities the following procedures are to be followed when there is a fire on a vessel in State waters no matter what the cause of the fire.

1. The Port Authority of NSW or NSW Maritime will be the combat agency for incidents in State waters as per Section 4 of this document;
2. Combat agency is to notify Fire & Rescue NSW as soon as possible and request assistance;
3. Fire & Rescue NSW to obtain appropriate authority to respond to the request by the combat agency.
4. Combat agency and Fire & Rescue NSW to establish a Multi Agency Incident Control Team (MAICT) to manage the response.

4.3 Fire on a Vessel in Port

Fire on a vessel in port will normally be responded to according to the port’s local incident response contingency plan. A vessel when in a port including moored at a wharf is in State waters and under the NSW emergency management arrangements the Port Authority of NSW or NSW Maritime is the combat agency for the response unless control is handed to Fire & Rescue NSW. It is preferable that the Port Authority of NSW or NSW Maritime is in control of the response and work closely with Fire & Rescue NSW using an MAICT approach.

4.4 Fire on a Vessel at Sea

A vessel on fire at sea will be responded to using the NSW State Waters Marine Oil and Chemical Spill Contingency Plan arrangements and these guidelines.

The type of assistance that can be provided to a ship on fire at sea will depend on several factors including; the type of vessel, fire location, distance off shore, availability of suitable transport to the vessel, and distance from significant Fire Brigades resources.

5 Multi Agency Incident Control Team

The maritime combat agencies and Fire & Rescue NSW have agreed to use a Multi Agency Incident Control Team (MAICT) approach to managing significant fire on a vessel and hazmat incidents using the following principles:

- The Oil Spill Response Incident Control System (OSRICS) is used to manage a response to a fire on a vessel appropriate to the size and complexity of the response required.
The combat agency will provide the Incident Controller and the planning and finance and administration functions.

Fire & Rescue NSW will provide the Operations Officer.

The logistics function will be provided by either the combat agency or Fire & Rescue NSW depending on the size and complexity of the response required. The role of Logistics Officer may be undertaken by Fire & Rescue NSW when there is a significant commitment of resources by them.

The combat agency will establish and manage the Incident Control Centre at a suitable location.

Fire & Rescue NSW will provide the Operations Officer.

The logistics function will be provided by either the combat agency or Fire & Rescue NSW depending on the size and complexity of the response required. The role of Logistics Officer may be undertaken by Fire & Rescue NSW when there is a significant commitment of resources by them.

The combat agency will establish and manage the Incident Control Centre at a suitable location.

A Forward Command Post may be established and managed by the Operations Officer when necessary.

Two additional positions may be used depending on the location of the vessel and the type of fire fighting support that can be provided to the vessel. These positions are:

- Vessel Coordinator; and
- Fire Operations Coordinator.

A Vessel Coordinator and Fire Operations Coordinator should be appointed if necessary and transported to the ship as soon as possible to assist with communications between the Incident Controller and the vessel and fire fighting operations on the vessel.

The Planning Section should prepare and distribute the Incident Action Plan with input from relevant agencies as soon as possible and updated as necessary so that all supporting agencies are kept briefed on the situation.

### 5.1 Vessel Coordinator

A Vessel Coordinator is appointed when there is a need to have a person on the ship to act as a single point of contact for communications to and from the vessel. Such a person should have a strong marine background to provide accurate information about the vessel, its cargo (if any) and the location and nature of the fire. The person should be a marine officer of a Port Authority of NSW, marine pilot or marine surveyor.

The Vessel Coordinator reports to the Incident Controller or another person nominated by the Incident Controller.

If a salvor has been appointed by the vessel’s owner to deal with the incident, then a Casualty Coordinator should be appointed as per the arrangements in the *NSW State Waters Marine Oil and Chemical Spill Contingency Plan*. (see section 3.4 of the Plan) The Maritime Casualty Officer position then replaces the Vessel Coordinator.

### 5.2 Fire Operations Coordinator

When the ship’s crew needs assistance to fight the fire a Fire Operations Coordinator should be appointed to provide the advice and assistance. The Fire Operations Coordinator will also be the single point of contact between the vessel...
and the Incident Controller regarding fire fighting operations and will be an experienced Fire & Rescue NSW officer.

The Fire Operations Coordinator should be placed on board as soon as possible to assess the situation and provide advice to the vessel’s crew.

The Fire Operations Coordinator will liaise with the ship’s master to control the fire fighting operations on the vessel and must also liaise closely with the Vessel Coordinator in regard to the safety of the vessel and crew.

6 Issues to be Considered

There are a number of issues that need to be considered in dealing with a fire on a vessel and will depend on the location of the vessel (distance off shore), proximity to shore structures and facilities (if alongside), the type of vessel, location of the fire, the type of cargo, vessel access methods, weather and sea conditions. The issues listed below may not apply to all incidents of a fire on vessel. The OSRICS forms ICS30, ICS31 and ICS32 should be used to record relevant information regarding the issues.

6.1 Customs and Quarantine

If the vessel on fire has not been cleared by Customs and Quarantine, these agencies must be advised as soon as possible, particularly when it becomes necessary to land persons from the vessel ashore, whether for medical attention or other purposes.

6.2 Injured Crew

If rescue or evacuation has been requested by the Master, the RCC and/or MAC should coordinate this aspect. Medical evacuation should be tasked to NSW Health to coordinate the provision of a medical helicopter to provide medical assistance and evacuate injured crew.

6.3 Exclusion Zones

A sea exclusion zone may be required when the vessel is close to shore or alongside to ensure that the area in the vicinity of the vessel is kept free from unauthorised vessels to allow response vessels have unhindered access to the casualty and for public safety. If a sea exclusion zone is declared there must be the capability to monitor and enforce the sea exclusion zone. Methods available for creating a sea exclusion zone include:

1. Within a port area the Harbour Master has powers to declare an exclusion zone and should do so as required.

2. Outside a port area, a Special Event Notice under Section 12 of the Marine Safety Act 1998 could be used to declare an exclusion zone around a vessel. This method takes some time because the notice has to be published in the appropriate newspapers.

   Section 15A of the Marine Safety Act 1998 also provides the power for an authorised officer to give directions. Under this power an authorised officer
can give (verbal) directions to a person to ensure the safety of the person and property.9

3. Outside a port area any area of navigable waters can be declared a port by the Minister for the purpose of marine safety and a Harbourmaster appointed. This then gives the combat agency all the powers of the Harbourmaster to manage the casualty and the area declared as a port.

An air exclusion zone might be considered to ensure that that the airspace over the vessel is kept free from unauthorised aircraft, a restricted airspace should be established and the appropriate Notice to Airmen (NOTAM) should be issued by the appropriate authority. A request for an air exclusion zone can be made through AMSA or via the State Emergency Operations Centre. The Incident Controller must approve in writing the requirement for an air exclusion zone.

The agency requesting the exclusion is also responsible for monitoring the air exclusion zone and enforcing the exclusion zone. Any breaches need to be recorded and forwarded to Air Services Australia.

6.4 Vessel Details

It is important that as much information as possible with regard to the ship (nature and location of fire, injuries, cargo in particular Dangerous Goods) and other relevant information to assess the nature of the response, be collected as soon as possible and recorded on the appropriate using OSRICS forms ICS30, ICS31 and ICS32.

If a place of refuge is requested, use Form ICS33 to record the relevant information and refer to the Commonwealth Place of Refuge guidelines.

6.5 Helicopter Transfers

If it is necessary for response personnel to be transferred to the vessel by helicopter the Incident Controller should consider the matters listed in Section 7 of this appendix. Suitable helicopters should be sourced via Rural Fire Service or the NSW Police (if winch capability is required).

6.6 Vessel Transfers

Should it be decided to transfer personnel and/or equipment to the affected vessel using an assisting vessel, consideration should be given to using a suitable port fast transport vessel if appropriate. Consideration should also be given to matters listed in Section 8 of this appendix.

6.7 PPE

All personnel attending the vessel must have the appropriate PPE as per their agency requirements. For example, ensure adequate gear and personnel are available to fight fire. Eg: SCBA’s, relief fire fighting crew, VHF sets and spare

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9 All NSW Maritime Boating Service Officers are authorised officers under the Marine Safety Act 1998.
batteries, fire hoses, International Shore Connection, Thermal Imaging Cameras and PFDs.

6.8 Communications
Having assessed the nature of the response in consultation with the NSW FB, the Incident Controller will decide upon a communications structure. Ideally, at least three discrete channels of communication should be established:

1. between the Incident Controller and the vessel via the Vessel Coordinator if aboard the vessel;
2. between the Incident Controller and the Fire & Rescue NSW via the Fire & Rescue NSW Liaison Officer in the Incident Control Centre; and
3. between the NSW FB Liaison Officer and the Fire Operations Coordinator if on board the vessel.

See Section 9 of this appendix for more information on communications issues.
A communications plan should be prepared using OSRICS form ICS11

6.9 Media
The media guidelines (Appendix 16) should be followed, however, if sea or air exclusion zones are put in place, then efforts should be made to provide alternative images/footage etc to the media or arrange for media to enter the exclusion zones at specific times. The media will need to be kept up-to-date on the response progress, including relevant technical information regarding the vessel, fire location, etc.

Media representatives from all agencies involved in the response should work cooperatively with the combat agency Media Officer.

7 Helicopter Transfers
When using a helicopter to transfer response personnel and equipment between the shore and a vessel on fire, consideration should be given to the following:

Ashore
- Landing site should be near the boarding area of the assisting vessel. When necessary, a different site or sites should be identified for a “one-off” helicopter operation.
- Landing site should be readily accessible by road at all times.
- Landing site should be large enough to act as a staging area for personnel and equipment. Landing site should be clear of overhead cables and other overhead obstructions to enable the helicopter to land and take off with safety.
- All supporting agencies to be advised of the landing site.
- Logistics should discuss the refueling requirements of the helicopter with the pilot.
- The need of a back-up helicopter in case of an emergency.
The helicopter is suitably equipped for intended distance offshore, ie inflatable pontoons, life raft, etc.

The helicopter is carrying sufficient life jackets for all persons to be carried.

Carrying capacity of the helicopter (including fuel capacity).

In selecting personnel for helicopter transfers those with previous training or experience in such transfers should be first considered for selection.

**On Board Vessel on Fire**

- Type of vessel.
- Possibility of an explosion.
- Weather conditions and ship movements including the roll, pitch and heave of the vessel.
- The capability of the vessel on fire to assist, should the helicopter catch fire or ditch into the sea.
- Is there enough Information to properly evaluate an appropriate helicopter strategy

**Land on Operations**

- Is there a designated helicopter landing site on board the vessel.
- Is the designated landing site available and suitable for use by the helicopter.
- If there is no designated landing site helicopter landings are not to be used.
- Are direct communications possible between the helicopter and the vessel.
- Adequate lighting on the vessel in the vicinity of the landing site.

**Winch Down Operations**

- Are direct communications possible between the helicopter and the vessel.
- Adequate lighting on the vessel in the vicinity of the winching site.
- Appropriate skills and training of personnel in winching operations

8 Transfer of Personnel and/or Equipment from an Assisting Vessel to a Vessel on Fire.

When using an assisting vessel to transfer personnel and equipment to a vessel on fire, consideration should be given to the following:

- Maximum safe carrying capacity (personnel and cargo) of the assisting vessel.
- The vessel is carrying sufficient life jackets and life raft capacity for all persons to be carried.
- Location of the boarding area for the assisting vessel.
Steaming range for intended vessel to be used and also Survey Classification.

Location of the boarding area with respect to the helicopter landing site (ashore).

Possibility that equipment and personnel may need to be transported from the helicopter landing site ashore to the boarding area.

No assisting vessel to be alongside the vessel on fire while helicopter operations are underway above or on the vessel on fire.

Fuel requirements for the assisting vessel and the possibility of a back-up vessel being required.

The possibility that personnel may have to board the vessel on fire via a pilot/Jacob’s ladder/gangway.

The possibility that equipment may need to be hoisted manually on to the vessel. Where a hoist is available, it should be used for placing equipment on board.

Prevailing and forecast weather conditions and the possibility that it may deteriorate.

9 Communications

Communications will be effected as follows:

The Incident Controller is the only person who will communicate with the vessel on fire unless it is a matter of urgency or the Incident Controller has approved such communications.

Fire & Rescue NSW will communicate only with the Incident Controller and the Fire Operations Coordinator on board the vessel and will ensure that communications will be relayed to the Fire & Rescue NSW Communications Centre.

Supporting agencies will only communicate with the Incident Controller via their Liaison Officer, unless approval has been obtained to do otherwise.

Any problems with communications must be brought to the attention of the Incident Controller who will be responsible for resolving them.

When establishing communication channels, the vessel on fire would normally be equipped with marine band VHF and HF channels. The types of communications used by the NSW FB and the supporting agencies are listed in Table 1 and Table 2.

Consideration should be given to providing personnel to be transferred to the vessel with suitable primary and back-up communication systems.

If using the vessel’s communications systems, be aware that power could be lost at any time.

All lines of communications must be tested.

When using portable VHF sets ensure that adequate sets and spare batteries are available at the site.
- Ensure VHF sets are waterproof or have waterproof covers on portable VHF sets when working in the vicinity of water.
- Radios will be required to be Intrinsically safe for some vessel operations (ie tanker) (Despite there already being a fire on board).

Table 4  Type of Communications Used by Various Agencies

<table>
<thead>
<tr>
<th></th>
<th>Fire &amp; Rescue NSW</th>
<th>Government Radio Network (GRN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>NSW Water Police</td>
<td>UHF Police Radio, Marine VHF</td>
</tr>
<tr>
<td>3.</td>
<td>Volunteer Marine Rescue</td>
<td>Monitors Marine VHF channels 16, 88</td>
</tr>
<tr>
<td>4.</td>
<td>Port Communications Centre</td>
<td>Sydney Monitors Marine VHF channels 16, 12, 13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Newcastle Monitors Marine VHF channels 16, 11, 9, 8, 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Port Kembla Monitors Marine VHF channels 16, 11, 8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eden Monitors Marine VHF channels 16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yamba Monitors Marine VHF channels 16</td>
</tr>
<tr>
<td>5.</td>
<td>Helicopters</td>
<td>Varies depending on owner, the following could be available Civil Aviation VHF, UHF, Police Radio, Marine VHF, GRN.</td>
</tr>
</tbody>
</table>

Table 5  Distress, Safety and Calling Frequencies Used by Vessels

<table>
<thead>
<tr>
<th>Channel No.</th>
<th>Communicating with</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>VHF 16</td>
<td>All ship stations and the 5 commercial ports</td>
<td>Distress, safety and calling. Monitored at all times by the 3 Port Communications centres.</td>
</tr>
<tr>
<td>VHF 6</td>
<td>Ship and aircraft stations.</td>
<td>Coordinated search and rescue.</td>
</tr>
<tr>
<td>VHF 6, 8, 9 &amp; 11</td>
<td>Ship stations</td>
<td>Newcastle Vessel Traffic Information Centre</td>
</tr>
<tr>
<td>VHF 8 &amp; 11</td>
<td>Ship stations</td>
<td>Port Kembla Vessel Traffic Centre</td>
</tr>
<tr>
<td>VHF 12 &amp; 13</td>
<td>Ship stations</td>
<td>Intership Safety of navigation. Sydney Harbour Control</td>
</tr>
<tr>
<td>VHF 72, 73 &amp; 77</td>
<td>Ship stations Limited coast</td>
<td>Calling and working channels</td>
</tr>
</tbody>
</table>
End of Document