SECTION 3

Response

3 RESPONSE

3.1 Measures to be Employed

In the event of a chemical spill in the marine environment the following measures should be employed according to the circumstances of the spill and conditions prevailing:

- if possible prevent, control or stop the outflow or release of the chemical from the source;
- if coastal or marine resources are not threatened or likely to be threatened, monitor the movement and behaviour of the chemical residues, plume or vapour;
- if coastal and marine resources are threatened, determine whether to begin response operations, either at sea and/or to protect sensitive resources;
- if possible contain the spread of chemical residues; and
- if, due to weather and sea conditions, response at sea or protection of sensitive areas is not feasible, or the foreshores have already been affected, determine appropriate chemical contamination monitoring, cleanup priorities and other response measures.

The importance of human health and safety in any response operation cannot be overstressed.

3.2 Overall Protection Priorities

Protection priorities to be employed during a response to a chemical spill are, in order of descending priority:

- human health and safety;
- habitat and cultural resources;
- rare and/or endangered flora and fauna;
- commercial resources; and
- amenities.

However, in assessing protection priorities, it is necessary to maintain a balanced view of the potential success of particular response strategies.

3.3 Specialised Agency Participation

Due to the wide range of chemicals and their diverse hazards and properties, specialist expertise from Fire Services, industry, AMSA advisers and environmental agencies should be sought to ensure the use of safe and practical response systems.

Fire Services, chemical spill response units or hazardous materials units of State/NT Environmental Agencies, as key response resources, will meet their normal agency responsibilities but will operate under direction of the Statutory or Combat Agency. This maximises the utilisation of existing local resources and expertise in fire and toxic emission control, hazardous material containment, cleanup and decontamination operations.

A response by a specialised agency does not in any way indicate an admission of liability for the source of the spill or for acceptance of the costs of a spill. Liability for a spill is to be determined by due legal proceedings.

3.4 Incident Reporting and Response Activation

3.4.1 Initial Reports

Notification of a pollution incident will normally be made from observations by Government agencies, shipping or aircraft, by the public, or by those responsible for the incident. It is important that the information received be reported without delay to enable immediate and appropriate action to be taken. The response procedures, which shall be followed, are summarised in Figure 5.

The most efficient method of ensuring that reports are dealt with promptly is by reporting through the RCC. The RCC operates twenty-four (24) hours a day and is equipped with continuously monitored telephone, facsimile and telex lines. The RCC will disseminate this information to EPR.

The RCC contact details are outlined in Appendix 3.

3.4.2 Initial Action

The agency receiving the report of a pollution incident shall notify the relevant State/NT Statutory Agency as defined in the IGA. In circumstances where the notification was not received from AMSA, then this shall include advice to EPR.

In the event that EPR is the first agency advised of a pollution incident, the relevant State/NT Statutory Agency shall be notified.

The Statutory Agency shall promptly assess the information contained in any report and make the necessary decisions in relation to appropriate investigations and response actions. This will include jurisdiction and expected Statutory and Combat Agency responsibilities. The Statutory Agency shall advise the relevant Combat Agency of the need for a response.

Following the report of an incident the Combat Agency shall issue a Pollution Report (POLREP) in accordance with part 3.4.4.

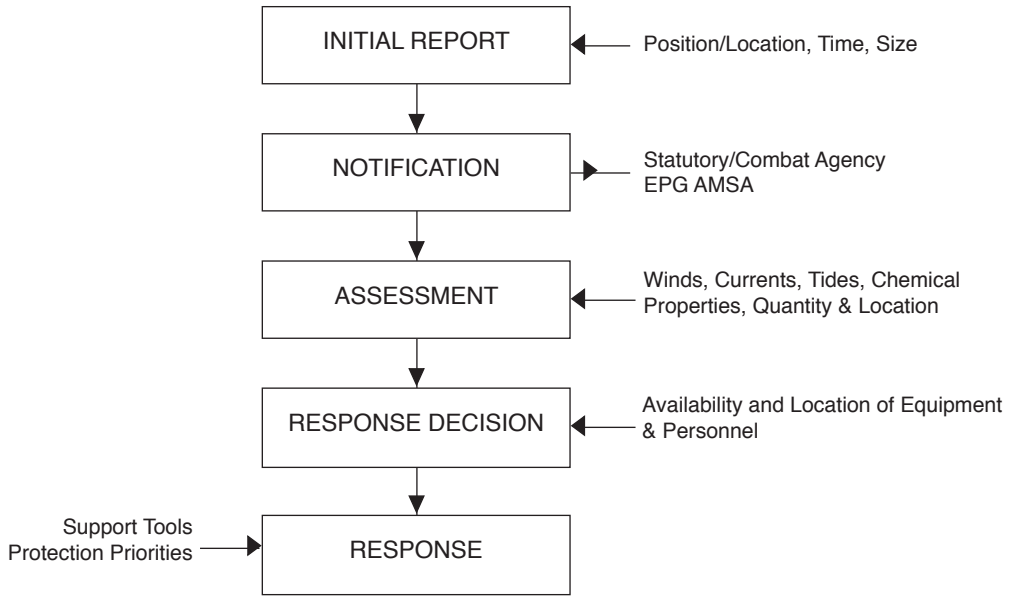

Figure 5 - Typical Response Procedure

3.4.3 Activation

When a report has been received by the Combat Agency, that agency should confirm the incident details. The proximity, and possible subsequent movement of a chemical spill to sensitive areas will dictate the urgency of the method used to confirm the presence of the pollution.

On confirmation of the presence of hazardous materials or where a decision has been made to implement response action, the Combat Agency should mount a response operation in accordance with the appropriate contingency plan arrangements.

It should be noted that some States/NT might have a requirement to formally activate a Plan. This should be done without delay to facilitate any subsequent cost recovery actions.

3.4.4 Pollution Report (POLREP)

After initial verbal advice has been provided to the Statutory Agency, the Combat Agency should issue a POLREP to relevant agencies. This would best be directed to the RCC who would disseminate to relevant agencies based on the incident type and location. A generic POLREP form is shown in Appendix 7, which can be used by agencies.

It should also be noted that the MARPOL 73/78 Convention establishes the requirement for ship's Masters to report discharges from their vessels. For reference, a copy of the details that ship's Masters should report is also listed at Appendix 8 (Harmful Substances Report).

3.4.5 Situation Report (SITREP)

During a marine pollution incident (or potential incident), it is essential that all relevant authorities be kept advised of any significant developments.

The IC will be responsible for ensuring that periodic Situation Reports (SITREPs) are dispatched to those concerned. SITREPs should contain as much information as possible.

During an incident that involves the risk of marine pollution, the Combat Agency shall be responsible for initiating SITREPs to relevant agencies, including AMSA. Concerning AMSA, these SITREPs should be directed to the RCC who would disseminate to EPR. A suggested format, including required content, for reporting this information is outlined in Appendix 9.

3.4.6 Chemical Pollution On-Shore

Chemicals washed ashore are usually in packages, drums or tank containers. Masters of vessels are also required to report the loss overboard of such cargo immediately. The reports are passed to the RCC, which will advise EPR and the nearest responsible State/NT authority as quickly as possible. At the same time, EPR will endeavour to obtain a copy of the vessel's dangerous goods manifest and identify the chemicals involved and possible trajectory or fate of lost chemical cargo containers.

3.5 Incident Control

Operational control of a pollution incident is the responsibility of the Combat Agency representative nominated as an IC, and supported by an IMT that performs the tasks of the Planning, Operations, Logistics, and Finance and Administration sections of OSRICS.

The IC shall establish an ICC at a location, in close proximity to the incident, affording resources and facilities for the sustained management of the incident. This shall include access to communication facilities, suitable road access and other resources required for the response.

3.6 Response Plans

3.6.1 Strategic Plans

In a major incident it is important that a Strategic Plan is drawn up which clearly details the aims and objectives of the overall response. In some cases it may be necessary for strategic plans to be developed to cover a number of aspects of the incident. Strategic plans address the broader issues of the response, not short-term operational activities.

3.6.2 Incident Action Plans (IAP)

Short-term operational objectives and activities are the subject of an IAP. The IAP will provide details of the operational activities and objectives to be achieved over a specified, short-term period. Initially this may be for the subsequent few hours only, but once the operation is underway it is likely to address the activities required over each of the following twenty-four hours or longer.

3.7 Response to Chemical Spills

A detailed Marine Chemical Spill Response Manual prepared by IMO and held by AMSA supports ChemPlan and State/NT and local contingency plans. Figure 6 summarises the five main phases of the response to a chemical spill.

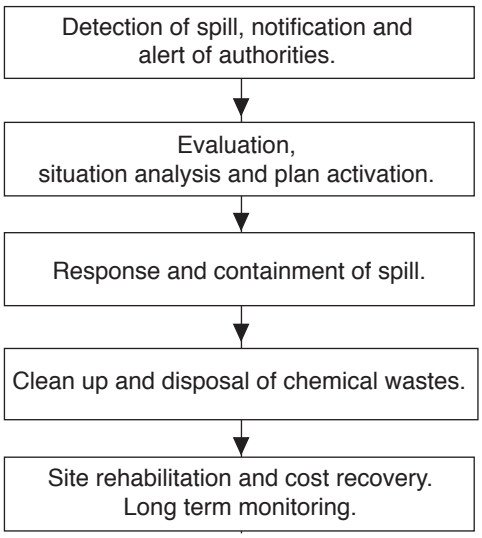

Figure 6 - The Five Phases of the Response to a Chemical Spill

3.8 Hazard Identification and Assessment

It is essential to acquire as much information as possible on the identity of the chemical(s) spilled, the quantities released and the risk of further release of chemicals before response action begins. Fire services and AMSA, as well as the shipping, plastic, and chemical industries can assist Statutory and Combat agencies with this hazard assessment. A checklist of information that may be required during this phase of a response operation is given in Appendix 10.

3.8.1 Monitoring Chemical Spills at Sea

In some chemical spill situations, especially involving gases, vapours or dissolving chemicals, the only response option is monitoring the dispersion plume, evacuating the public and advising commercial and private fishing vessels to avoid contaminated areas.

In water surface pollution and floating chemical incidents, monitoring of the plume will enable the foreshore 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 modelling.

The majority of chemicals are colourless which renders them difficult to monitor by visual means. Depending on the chemical properties, monitoring by remote ultra-violet, infrared, temperature variations or other remote sensing techniques may be useful.

Depending on the chemical spilled and the location of the spill, if there are no threats to environmentally sensitive areas or it is not likely that the pollutant will come ashore, biological and physical processes may naturally disperse the chemical over a period of time. In these circumstances the best action may be to do nothing other than monitor the concentration, movement and fate of the chemical plume or slick. Such action will require the support of sound chemical and environmental advice to Governments, the public and the media to clearly explain why no other action has been taken.

3.9 Occupational Health and Safety

Response managers should be aware that at all times human life, health, and safety is paramount. The degree of risk associated with cleanup operations will depend on:

- type of chemical spilled;
- size of the spill;
- location of the spill;
- circumstances of the spill; and
- weather conditions.

At all times response managers should be aware of the limitations and safe operating procedures for all equipment used throughout the phases of the cleanup operation. This should, where necessary, include a risk assessment and development of a formal site-specific management plan, including details for induction and briefing procedures.

3.10 *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)

The Minister for the Environment has issued a Notice of Exemption for the National Plan under the EPBC Act. The effect of this notice is that response actions taken in accordance with the National Plan are exempt from the EPBC Act. In this context, the National Plan includes separate contingency plans for oil and chemicals, supported by State/NT contingency plans, regional contingency plans, contingency plans for ports, terminals and platforms, and vessel response plans.

It is important to note, however, that any response action contrary to one of these contingency plans would be subject to the EPBC Act.

3.11 Cultural and Heritage Issues

Important indigenous and non-indigenous heritage values and places exist in many parts of Australia's coastal areas, including historic heritage sites and items, places with physical evidence of indigenous use, places of cultural value to indigenous people (eg: Dreaming places) and natural resources. The potential impact of response operations on the heritage values of the area needs to be addressed in planning the operation.

The potential heritage values of an area need to be identified and the likely impacts that result from the activities should be addressed. Specific consideration should be given to access to, and general use and disturbance of areas. The assessment should consider both direct and indirect impacts, cultural protocols and strategies for minimising impacts. Consultation with local indigenous communities should occur as part of the planning process (refer *Ask First – A guide to respecting Indigenous heritage and places, Australian Heritage Commission, 2002, www.ahc.gov.au/publications/indigenousheritage*)

Information about the heritage values of an area may be limited, or difficult to access. Some heritage registers held by State/NT agencies are subject to access restrictions. As such, appropriate Commonwealth, State/NT and local government agencies should be consulted to facilitate contact with indigenous communities and obtain necessary information required by the IMT and response personnel.

3.12 Obtaining Samples for Evidence and Analysis

In the aftermath of a pollution incident, identification of the source of contamination is a vital component in identifying the polluter not only for possible legal action but also for the subsequent allocation for the recovery of response costs. Even where one ship is considered to be clearly the source of the spill it is important to be able to establish that other potential sources have been eliminated. Where a spill has occurred there may be a number of different ships that are potential sources of the spill and they must all be identified and sampled as far as practicable. Samples must be obtained from all possible sources (tanks, bilge etc) onboard each ship to compare with a spill sample. The laboratory will use multiple analysis methods to eliminate or identify the source of the spill.

To ensure that a positive analysis result may be achieved, correct sampling, storage, handling, preparation of the samples from all potential sources is essential.

Further details concerning sample collection, storage and handling are outlined in Appendix 11.

3.13 Disposal of Spill Material

Cleanup operations can generate substantial quantities of contaminated wastes and debris. Temporary storage, transportation and final disposal methods shall be arranged to comply with local Government disposal approvals.

State/NT, regional and local contingency plans should contain information on the disposal of waste. This should include any predesignated arrangements for disposal sites and approved contractors.

States/NT should ensure that they have arrangements in place with their respective Environment Protection Agencies (EPA) for the disposal of contaminated debris and include contact details for the transport and disposal of chemical waste including chemical re-processors, approved contractors and final disposal sites in their State/NT, regional and local contingency plans.

3.14 Equipment

On completion of a chemical pollution response operation, the IC shall arrange recovery of all equipment and unused materials, and arrange their prompt return to the resource centre from which they came. In the event of a major incident, a NRT member would normally be available to assist in the coordination of equipment transfers, including returning equipment to its point of origin. The IC shall advise the Manager, EPR, of all usage of AMSA-owned National Plan equipment, including details of any damage or discrepancies.

The IC, or delegate, will ensure that all equipment is cleaned after use to the extent available facilities allow, and is returned to the ownership authority by the quickest possible means, having regard to freight costs. Where necessary the equipment should be decontaminated of any chemical substances.

On its return to the resource centre the 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 is included in the overall schedule list of costs submitted for reimbursement by the polluter.

3.15 Termination of a Response

Under the terms of the IGA, an incident response will be terminated by the Statutory Agency once the Statutory Agency considers that the effective completion of the response is achieved based on expert Combat Agency advice.

Termination arrangements are outlined in the IGA and should be included in State/NT, regional and local contingency plans.