

EXERCISE SEA DRAGON PHASE 2 5-7 JUNE 2012



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**STEERING
COMMITTEE
COMMENTS**

STEERING COMMITTEE COMMENTS

Scope

The Steering Committee was established for this exercise to review the planning, organising, leading and controlling aspects of Exercise Sea Dragon. Further, the Steering Committee has a responsibility to feed the lessons and recommendations to the national committee to support the ongoing planning process.

Exercise Structure

1. Planning & Organising
 - a. There was approximately 600 hours (75 days) involved in the planning for this exercise. The commitment referred to within the Exercise Report was substantial from a Commonwealth, State and Industry perspective.
 - b. Exercise Sea-Dragon was conducted in two phases; an initial one day workshop with a stakeholder group involved in a hypothetical scenario driven syndicated discussion exercise (Nov 2011) and; the two day activation/mobilisation and response exercise conducted 5-7 June 2012.
2. Leading
 - a. The Victorian Department of Transport (VicDOT) was responsible as the Statutory Agency for the overall leadership of the response.
 - b. VicDOT was responsible as the Control Agency for the response and subsequently used VICPLAN and invoked the National Plan for access to Commonwealth and Industry resources.
3. Controlling
 - a. The exercise was managed by AMSA and VicDoT and supported by AMOSC.

Aim & Objectives

The **Aim** was to *implement and review the effectiveness of a combined Commonwealth, Victorian and industry marine pollution response to a tier 3 pollution incident in Victorian State waters.*

The **Objectives** included:

1. *Establish and maintain an IMT that functions effectively under OSRICs*
2. *Develop an effective Incident Action Plan in response to the situation*
3. *Implement operational strategies as defined in the Incident Action Plan*
4. *Develop and implement an effective public communication and media strategy*

In general, the Aim was achieved. Through the implementation of this exercise, the review of the arrangements to respond to a Tier 3 incident in Victorian State waters is achievable. In supporting the achievement of the Aim, objectives 1 & 4 were achieved. Objectives 2 & 3 required exercise artificiality to achieve. As a result, there are lessons identified for both national and jurisdictional actions.

Exercise Efficiency

Command, Control & Organisation

There are report comments around the command and control aspects within the Incident Coordination Centre (ICC). Generally the motivation, focus and outputs were all satisfactory. The outward face of the Incident Controller (IC) and the Incident Management Team (IMT) is reported as coherent and stable. The internal issues around teamwork, span of control and roles/responsibilities require more effort to become enhanced. We note however, that the short duration of the exercise did not allow a longer review of the critical success factors nor allowed the IC & IMT to settle into a 'battle rhythm'. This could also account in part for the operational view of the exercise versus a longer term 'strategic' setting of objectives.

The exercise report notes organisational issues around structure, conformity and role allocation. These issues are agreed but also symptomatic of the experience level being exercised within the ICC. While a structure can be implemented and enforced, the population of the response organisation requires personnel experienced with response issues and operations to 'backbone' any successful outcomes. It is noted that VicDOT also views an exercise as a development opportunity and a safe training context where less experienced people can develop experience in a simulated environment.

Exercise Effectiveness

The effectiveness of the exercise outputs as assessed by the Steering Group and based on this report are:

Day 1 Effectiveness - IC & IMT based

(1 is ineffective and 5 is highly effective and high performing)

1	2	3	4	5

Day 1 involved the notifications, activations and mobilisation for the response. The standing up of the ICC and gaining situational awareness dominated activities.

Day 2 Effectiveness - ICC based

1	2	3	4	5

Day 2 Effectiveness - field operations based

1	2	3	4	5

Day 2 involved the Incident Action Plan (IAP) being released by the IC for operational implementation: field teams could deploy and react to the IAP objectives. Exercise control expedited the IAP in order to get the field teams operating on Day 2.

Lessons Learnt

The Steering Committee has divided the Exercise Recommendations into National and Victorian lessons. The Victorian lessons may have application for all jurisdictions and should be considered as part of State/NT planning.

National Plan Lessons

1. Organisational Structure
 - a. The National Plan should adopt the Australasian Inter-Service Incident Management System (AIIMS) for managing oil spill responses.
 - b. Public Information needs to be included as a functional Section.
 - c. One or more Deputy Incident Controllers should be appointed in the IMT structure to facilitate more effective organisational management and coordination in major incidents.
 - d. Implementing the 'Team B' concept for significant oil spill incidents.
2. Incident Management
 - a. Communication between the ICC and field teams was poor and provides scope for the next National Plan exercise and jurisdictional regional exercises.
 - b. The timely development of operational sub-plans by the IMT was poor and provides scope for the next National Plan exercise.
 - i. IMTs need to be resourced with experienced response personnel to guide and mentor the development of IAP and functional unit sub-plans.
 - c. Record keeping from incident leadership and some functional units was poor and provides scope for the next National Plan exercise and jurisdictional regional exercises.
 - d. Consideration to be given to the development and implementation of:
 - i. Standard national marine pollution incident response templates.
 - ii. Standard National Plan induction process for IMT and field groups.
 - iii. A national communication guidance document.
3. Dispersant Protocols
 - a. Dispersant protocols need to be enhanced, understood and agreed by all spill responders including agencies involved in the approval processes.
4. National Exercise Program
 - a. The National Plan endorses biennial IMT and field exercises.
 - b. The National Plan endorses a program of coordinated and facilitated discussion (hypothetical / syndicate progressive) exercises drawing on the success of the Victoria discussion exercise.

Victorian Lessons

1. Review identified ICCs within Victoria to assess their appropriateness to manage a protracted marine pollution incident (Tier 2 and 3 response).
2. Review and if required, enhance communication hardware to facilitate field to IMT communications.
3. Review and implement better Municipal engagement to build relationships and response redundancy in Victoria.
4. Identify personnel in Victoria that can operate within public information and community warning functions and where and how these functions will operate with an IMT.
5. Financial delegations are in place for the Victorian State Marine Pollution Controller and the Manager Marine Pollution, however, clarity is required how this delegation transfers effectively to the IC and delegates in the IMT, especially for a protracted operation with a number of changeovers required.

6. Review and implement better record keeping systems and processes across the IMT.
7. Continue to build human capability and capacity through the State Response Team initiative and undertake regular discussion and desktop exercises at local and regional levels.
8. Determine whether the AMSA asset database can be utilised by VicDOT and if it is fit for purpose: investigate alternative asset database if not fit for purpose.
9. Review and if required, enhance communication hardware to facilitate field to IMT communications.

Exercise Sea Dragon reinforced that there must be a whole of government obligation for managing significant oil spill incidents including participation and resources from industry and third parties where appropriate.

Jamie Storrie

Donovan Croucamp

Nick Quinn

Manager
Marine Environment
Pollution Response
Australian Maritime Safety Authority

Director
Operational Delivery Security &
Emergency Management
Department of Transport (Victoria)

General Manager
Australian Marine
Oil Spill Centre

EXERCISE REPORT

EXECUTIVE SUMMARY

Exercise Sea Dragon phase 2 (Sea Dragon) was conducted 5 - 7 June 2012 and was the first large scale oil spill response exercise conducted for the National Plan since Exercise Van Diemen was conducted in September 2006. A number of significant oil spill events between September 2006 and February 2012 requiring national response impacted on the agreed National Plan biennial exercise arrangements.

Exercises such as Sea Dragon require significant investment in time, human and financial resources. Whilst there are areas for improvement, there are equally as many areas for the sector to celebrate. The collaboration between governments and industry in the planning and conduct of the exercise, and the enthusiasm shown by all participants attending the exercise reflect strong and pragmatic national response arrangements.

Jointly developed and conducted by the Australian Maritime Safety Authority, Victorian Department of Transport and the Australian Marine Oil Spill Centre, Sea Dragon was the eighth oil spill response exercise conducted under the auspices of the National Plan and revitalises the continuous improvement paradigm recognised in Exercise Van Diemen.

Sea Dragon enabled the implementation of state and national response arrangements to manage a large and developing incident in Western Port Victoria. The exercise involved a fully functioning Incident Management Team (IMT) structure over three operational periods with shift changes, and operational management at forward operating bases for shoreline, marine, aviation and wildlife activities. Media management and public relations were an integral part of the exercise which was timely with reference to the new AIMS¹ model incorporating a designated Public Information section.

Over two hundred exercise participants and control staff were deployed over the three day period with many commenting the exercise felt like a real incident. The exercise incorporated a full day observer program on day two with 30 senior government and industry personnel attending. The observer program included visits to the Incident Coordination Centre (ICC) and operational field sites. The observers inspected equipment displays from Transport NSW and OPEC Systems.

Sea Dragon provides a solid foundation to establish an exercise framework that can meet the needs of National Plan capability development for many years to come. Over two hundred performance criteria were developed from the exercise planning groups and these are a valuable reference for future functional exercises or joined up government and industry exercises.

This report is an analysis of the information gathered through appointed evaluators, formal debriefing processes, participant and observer feedback and exercise control staff observations. This report is focused on issues to improve capability for joined up responses to significant marine pollution incidents.

¹ Australasian Inter-Service Incident Management System

EXERCISE OVERVIEW

Scenario

Exercise Sea Dragon phase 2 was a deployment exercise involving operational strategy development through an IMT combined with tactical operations conducted in shoreline, marine, aviation and wildlife responses. Strategic communications personnel were embedded with the IMT to manage media and public relations.

A Victorian state led multi-government and multi-agency IMT was appointed to manage a tier 3 response in Western Port Victoria. The Victorian Department of Transport (VicDOT) was identified as the combat agency under National Plan arrangements and the control agency under Victorian State emergency management arrangements.

National Plan assistance was requested. AMSA activated personnel from all States (with the exception of Queensland) and the Northern Territory. AMOSC activated their core group members² and overseas support from Oil Spill Response Ltd to provide assistance. Equipment resources were utilised from VicDOT, AMSA and AMOSC stockpiles.

EXERCISE AIM & OBJECTIVES

There were over 200 objectives, key performance indicators, tactical considerations and activities developed for this exercise. The primary Aim and Objectives are listed below:

Aim

To implement and review the effectiveness of a combined Commonwealth, Victorian and industry marine pollution response to a tier 3 pollution incident in Victorian State waters.

Objectives

1. Establish and maintain an IMT that functions effectively under OSRICS
2. Develop an effective Incident Action Plan (IAP) in response to the situation
3. Implement operational strategies as defined in the Incident Action Plan
4. Develop and implement an effective public communication and media strategy

EXERCISE DETAILS

Timings – the exercise was conducted from 5 to 7 June 2012.

Day 1 of the exercise focused on the IMT and ICC level operations and the development of an IAP.

Day 2 involved IAP implementation and management including tactical deployment of personnel and equipment to affected areas.

Day 3 focused on demobilising assets and the conduct of a formal debrief.

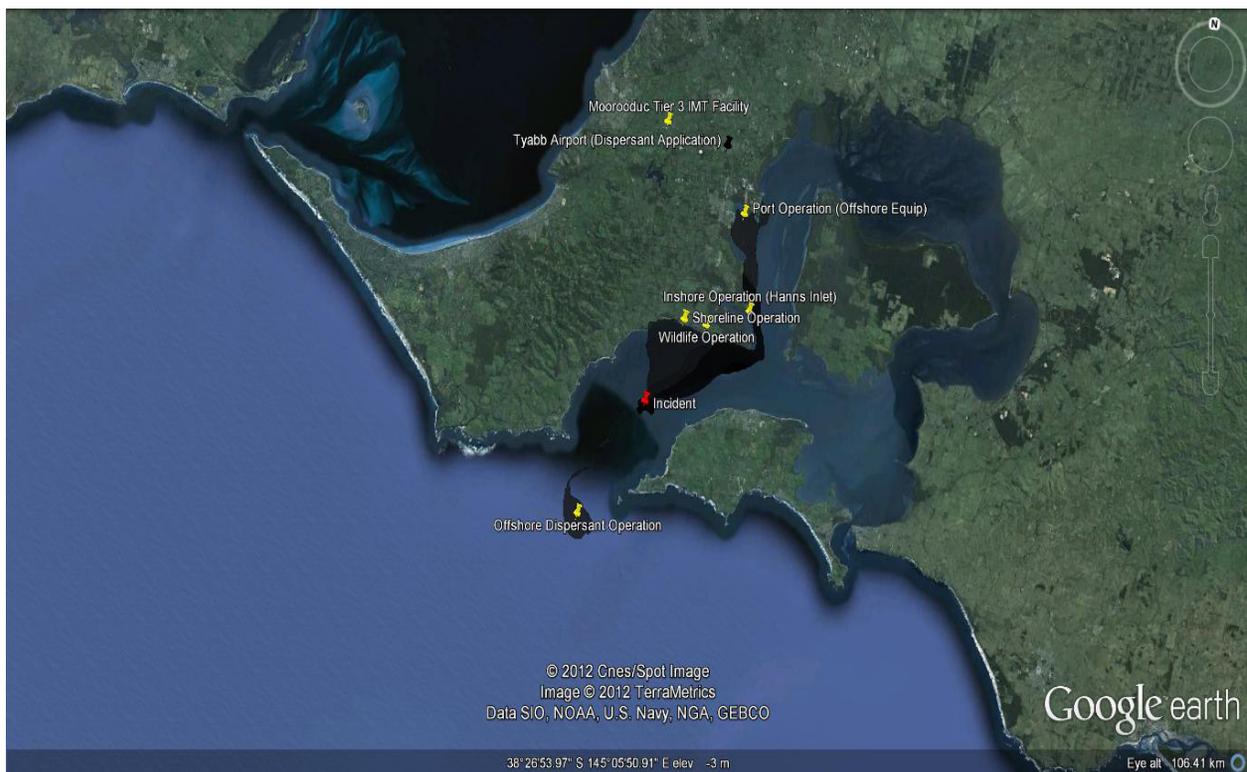
²Woodside, Apache, Chevron, BHP Billiton, Esso, BP, Santos, Shell

Location

The incident occurred in Western Port Victoria.

There were four specific exercise locations:

- ICC at the Country Fire Authority (CFA) Moorooduc Station
- Marine Operations Base at Patrick Ports Harbourmaster Office, Crib Point
- Shoreline and wildlife forward operating base at Somers Yacht Club
- Airbase Operations at Tyabb Airport.



RISK / SAFETY MANAGEMENT

The exercise planning team implemented a robust risk and safety plan. This included:

- Recognition of Workplace Victoria OH&S requirements
- Appointment of an exercise Safety Manager
- Safety briefings conducted at all sites
- Risk plans developed by all sub-planning teams
 - A comprehensive risk log was developed from the sub-planning teams risk analysis
- St John Ambulance contracted to provide 2 ambulances at shoreline and marine sites
- For aviation operations the positioning of a safety vessel in the event of an aircraft incident
- Exercise control staff at the marine base had a dedicated vessel to respond to any safety incident
- Exercise control staff at the shoreline forward operating base had a quad-bike available to respond to any safety incident
- Experienced field operators in marine, shoreline, aviation and wildlife appointed as safety officers
- Trained first aiders identified with safety arm bands

Three incident report forms from field operations were completed. These captured unsafe work practices that were appropriately managed by teams on-site.



VMR Rescue Vessel used as the safety vessel for air operations during Exercise Sea Dragon

EXERCISE GOVERNANCE

A high level exercise steering committee provided strategic oversight for National Plan capability development. AMSA, AMOSC and Vic DOT provided the Master Planning Group for strategy development and overall control of the design, conduct and evaluation for the exercise.

Sub-planning groups were established for specific planning and control tasks. These were:

- Shoreline Operations
- Marine Operations
- Aviation Operations
- Wildlife Operations
- Media & Public Relations

Exercise Planning & Control Support

Numerous agencies and individuals generously participated in planning support and exercise control roles. Without the support of the following agencies and external parties, the exercise would not have achieved its objectives:

- South Australia Department of Planning, Transport & Infrastructure
- Country Fire Authority of Victoria
- Victorian Department of Sustainability & Environment
- Phillip Island Nature Park
- Victorian Department of Primary Industries
- Patrick Ports Western Port
- Parks Victoria
- Darwin Port Corporation
- Transport New South Wales
- Turning Point Crisis Management
- Oil Response Company of Australia
- Response Resource Management

A full list of exercise planning, control and evaluation personnel is listed at Appendix A.

KEY OBSERVATIONS FOR THE INCIDENT MANAGEMENT TEAM

Marine oil spill incident management and operational field teams are unique by their very nature. They are multi-level government and industry teams that are formed rapidly to respond to the demands and challenges of a critical event. They must be high performing and must work through in rapid time the stages of team development. These teams require a great deal of energy and support throughout their life, specifically in the initial phase for them to perform effectively.

Stephen Young (Turning Point Crisis Management) and Ian Niblock (Darwin Port Corporation) led the evaluation of the IMT for the Sea Dragon incident. Their observations and information gained from the formal debrief and written feedback span the following capabilities:

Incident Management	Strategic Issues	Communications & Public Information
Leadership	Interstate Connectivity	Incident Communications
Operations Management	Industry & Government	Public Information
Functional Management		Information Management & Security
Incident Action Planning		
Command, Control & Coordination		

The following observations provide context for the exercise recommendations.

INCIDENT MANAGEMENT

There is no formal national standard for incident management in Australia, however for events such as that played out in Sea Dragon there is the Oil Spill Response Incident Control System (OSRICS). OSRICS is the agreed set of arrangements for the management of oil spills and is based on the principles and foundations of the Australasian Inter-Service Incident Management Systems (AIIMS). AIIMS is acknowledged as the standard by which most Australia Emergency Services use and is now broadly recognised as the informal Australian standard for managing critical incidents or events.

The observations and findings outlined in the report are based on the application of OSRICS and AIIMS to the scenario delivered during exercise Sea Dragon.

Leadership

The participation and willingness of all team members was exemplary, team members were willing and eager to participate and participated as though the event was real and that a real outcome was required. There were some observable experience gaps between functions and team members, and at times these gaps created an apparent unwillingness to collaborate between some functions to the fullest degree.

The management of the IMT and team dynamics are a constant challenge for an Incident Controller (IC) during a critical event, these were no different during Sea Dragon. With better utilisation, the Deputy IC could have provided much needed organisational management and coordination to the IMT and ICC, easing the pressure and demands on the IC.

Operations Management

It was not evident within the workings of the IMT that the Operations unit conducted dynamic risk assessments when developing response strategies and alternatives. A Safety Officer was present in the IMT and made comment on various issues during team briefing, but there was no evidence that this was being done as the Operations unit progressed with the development of operational strategies.

Span of Control is a key tenet of contemporary incident management; it was not evident that the incident had been broken up into formal Divisions and Sectors and that the Operations section had not appointed appropriate Divisional or Sector Commanders to manage operations and to provide a point of contact.



The Incident Coordination Centre in action at the Victorian tier 3 designated facility at the Country Fire Authority Moorooduc.

Feedback from participants working in the ICC concluded the pressure and tempo felt like they were attending a real oil spill response.

Functional Management

During the initial shifts, there was no noticeable connection or collaboration between Planning, Operations and Logistics, indeed all three units worked independently of each other. This led to the development of incomplete Incident Action Plans (IAP), incomplete and ineffective operational response strategies and standalone Logistics and supply plans. Pleasingly this improved as the exercise progressed, but it must be noted that the first few hours are the critical ones and loss of momentum in a real event could delay the deployment of effective response.

It was not clear whether key financial decision makers in the IMT had the right level of delegation for purchasing decisions. During Sea Dragon the IMT spent in excess of \$750,000 without any formal documentation process to capture the financial delegation or authority to do so. At a higher level there was evidence in the exercise of a strategic decision by the State Marine Pollution Controller (SMPC) to request treasury funds to be made available in a Vic DOT cost centre to finance the initial response. Financial delegations are in place for the SMPC and the Manager Marine Pollution but clarity is required around how that transfers to the IC or his/her finance officer in the IMT.

Whilst the expenditure in the exercise was fictional and in all likelihood justifiable, the lack of financial documentation and process could potentially expose the lead agency and the IC to scrutiny and criticism. It may be useful to deploy a finance officer from Vic DOT into the IMT in the early stages to assist in setting up the right processes.

Incident Action Planning

Management by Objectives is another key tenet of contemporary incident management: setting an incident objective is fundamental and the objective must be SMARTA³. In the first instance the objectives were slow to be developed and not well defined. They did not meet the requirements of a SMARTA objective. The objectives were not well communicated throughout the IMT or to those working in the field, leading to a loss of unity of purpose and effort.

Integrating mapping and GIS application into the development of the IAP was well considered and effectively managed, the availability of mapping and geospatial analysis provided significant benefit to the functionality of the Planning team and added to the overall performance of the IMT.

There was general uncertainty regarding the approval to deploy dispersant and the type of dispersant to deploy, and the rigour surrounding the Net Environmental Benefits Analysis (NEBA) decision-making and approvals process. This was not clarified until late on day two which showed that whilst the decision-making process was rigorous, the record keeping was not as rigorous and may not have stood up under scrutiny.

The Victorian Environment Protection Authority (Vic EPA) provided an Operations Officer for the exercise but not the resources for dispersant advice and approval. In a real marine oil spill event, Vic EPA would need to provide more resources and advice to the IC and IMT.

Command, Control & Coordination

Command decision-making by nature can be autocratic and directive and these parameters must be established early to ensure that the operational response goes in accordance to the IC and IMT's desired plan. It was observed on occasion that some IMT functional leaders and members were doing their own thing, and working towards their own objectives, rather than that of the IC or the IMT agreed path.

³Specific, Measurable, Achievable, Realistic, Timeframe & Agreed

The role of the incident controller is a complicated multidimensional task. Control is a key responsibility of the IC and was generally done well during Sea Dragon. Overall each of the ICs had their own style of leadership and with more experience and opportunities to practice will develop into highly effective incident managers.

The coordination of the multitude of players is a critical role of the IC and the leadership team and to their credit they worked hard to make sure that all the relevant agencies and stakeholders were included. It was noted during the debrief that participating groups felt included by the IMT.

STRATEGIC ISSUES

Incident Controllers must be able to address strategic issues and understand the political context as well as ensuring that the IMT and the ICC are well managed and that the operations go according to plan. Often ICs focus their attention downward on operational activities, however, in large and high-profile incidents such as that played out in Sea Dragon, the strategic issues are the ones that can make the difference between success and failure. In incidents such as Sea Dragon there will always be a set of underlying social, economic and political 'values and priorities' that need to be addressed by the IMT. ICs need to be cognizant of these 'values and priorities' and manage the impact on the IMT decision-making processes and maintain effective communication on these matters with State Executive Management Committees.

Interstate Connectivity

Interstate personnel working in a foreign jurisdiction will in most cases not know or understand local legislation, regulations and requirements. For example, local plans such as the VicPlan, the Victorian Fatigue Management Policy may not be well known by the responders or the IMT leaders. When questioned, interstate participants had no formal knowledge of the plans or policy, but rather said that "It would be similar to my local one, so I'll adopt those principles instead".

Industry & Government

It was not evident that the ICs or IMTs recognised or adequately addressed the commercial impacts of the spill on the ship or cargo owners. Nor was it evident that the impacts on the local and state-wide social and economic impacts were considered in the planning processes, the incident objectives or indeed the IMT's decision-making.

It is noted however, that in a real event these issues would have been pushed into the IMT by the political elements of such an event.

COMMUNICATION & PUBLIC INFORMATION

Communication is a constant challenge for all IMTs and all ICs, whether it is the physical communications infrastructure such as telephones and radios or the interpersonal communications required to coordinate a response to a large and dynamic event. The role of the IC is to make sense and meaning out of chaos, so that his or her immediate and extended team have the clarity of purpose, intent, focus and awareness to effectively carry out their role. Communication can be the difference between success and failure of the IMT and incident response. Best practice incident communications demands a 'single point of truth' for all incident communication and public information.

Incident Communications

Communication between the IMT and Forward Operational Bases (shoreline and marine) and other key groups was identified as less than optimal. This is a critical failing in most incidents. Incident communications is a push - pull process and responsibility. Operational based teams must ensure that they seek information from the IMT as much as the IMT seeks information and intelligence from them. The disconnect between the IMT and field results in a failure to deliver the required operational performance required to effectively manage the incident, as was the case during Sea Dragon.

Public Information

Public information was generally well managed and responsive to the relevant stakeholders needs, although at times the role wasn't used to the greatest effect. A case in point is the report about the deployment of the booms via a simulated television crew, who reported not being able to see the boom that had been claimed to have been deployed. This information and the potential risks were glossed over and the information not passed onto the IC. This created a scenario that had the possibility to embarrass the IC, the department and the Minister.

The highly public and visible nature and impact of such an event would require greater levels of collaboration at all levels of the operational team. In particular it was felt that there was an observable gap between the wildlife teams and the public information and media teams.

Information Management & Security

Whilst there was an abundance of data, it was felt that overall the data was poorly managed and stored; additionally some data used to manage the incident was not verified. An example was the NEBA process and the subsequent decision to deploy dispersant and specifically the type of dispersant deployed. This exposed not only the IMT but the government and lead agency to criticism had the strategy failed.

Record keeping, particularly logs from the incident leadership and some functional units was quite poor and would be problematic if subjected to a rigorous post incident analysis.

Personal recordkeeping was generally below par, some members of the team kept limited personal records of conversations, actions, activities and decisions, however these people were in the minority. This should have been a priority for the IMT functional leaders and could have been a direction from the IC during team briefings and meetings. It was observed during one team meeting where the IC challenged a functional leader to document the required actions, rather than commit them to memory.

The date stamping of information in and out of the IMT, including all documents, maps and photos is a sign of an effective and high-performing IMT. This was not done well or consistently and accordingly a chronological record of the event might not have been able to be developed. This would have had a direct impact on the transfer of information around the team and situational awareness, including the ability to develop an accurate picture of how the incident had developed and continued to develop.

AVIATION OPERATIONS

Exercise planning for aviation operations was managed by Andrew Griffiths.

Exercise control was managed by:

Who	Agency	Role
Andrew Griffiths	AMSA	Exercise Control
Dave Ingram	AMSA	Safety Officer
Shayne Wilde	NSW Maritime	Evaluation

Five trained Air Observers from Victoria, South Australia, New South Wales and Western Australia participated in the exercise refreshing their skills and knowledge required in this specialised field.

Airbase operations for the exercise were managed by Drew Coulter from AMSA.

Equipment utilised included:

- Tyabb Airport
- Air Tractor from the AMSA/AMOSC FWADC⁴
- Rotary aircraft
- VMR safety vessel

Aviation Operations were successfully completed for the exercise. This included:

- Management & coordination of aviation assets
- Safety and operational briefings by Airbase Manager and Pilots
- Establishment of an air operations forward field base
- Planning and coordination of fixed wing aerial dispersant application activities
- Observational flights utilising fixed wing and rotary aircraft
- Air attack flights utilising fixed wing and rotary aircraft
- Demobilisation of aviation operations and equipment
- Feedback received from Air Observers participating in the exercise was highly complementary.

Helicopter used for observation and air attack



Air tractor at Tyabb Airport



⁴Fixed Wing Aircraft Dispersant Contract

SHORELINE & MARINE OPERATIONS

The brief on shoreline and marine operations has been combined as the feedback is similar. Exercise planning and control functions for shoreline operations were managed by:

Who	Agency	Role
Adam Couch	SA DPTI	Manager Shoreline Operations
Abigail Walters	SA DPTI	Exercise Control - ICC Shoreline
Darren Hulm	NSW Maritime	Safety Shoreline Operations
Peter Braddock	SA DPTI	Evaluation Manager

Exercise planning and control functions for marine operations were managed by:

Who	Agency	Role
Dale Jolly	AMOSC	Manager Marine Operations
Ben Cropley	ORCA	Safety Marine Operations
Tom Budd	AMOSC	Marine Operations Planning Advisor
Chris Priestly	Response Resources	Evaluation Manager

Both the Shoreline and Marine control teams were instructed to let the exercise participants manage the interaction with the IMT and the safe management of shoreline / marine activities. The control team were to monitor and act as required. As mentioned in the IMT key observations section of this report, communication interaction between the IMT and both forward operating bases (shoreline / marine) was the primary issue for both field teams.

Both the Shoreline Coordination Unit and the Marine Operations Coordination Unit at the IMT did not have adequate sub-plans developed for shoreline and marine field teams at the end of day one (a key exercise objective).



An example of shoreline exercise material

The lack of adequate shoreline and marine sub-plans can be contributed to a lack of experience in the IMT, specifically in both Shoreline and Marine Coordination Units. However, it is also considered the Operations Officer should have been providing closer attention to detail as the exercise scenario and injects clearly stated that on the morning of day two, around 50 – 60 personnel would arrive at the forward operating bases ready for work.

To have appropriate sub-plans in place for day two, exercise control staff (Adam Couch Shoreline and Chris Priestly Marine) assisted the IMT with the development of these plans in the evening of day one of the exercise.

Despite the lack of communication and direction from the IMT, shoreline teams at the forward operating base were proactive and sent out assessment teams to gather information. This information was supplied back to the IMT to assist in further development of shoreline sub-plans.

Whilst it can be argued that the IMT should be providing direction to field teams, communications can also be initiated from the forward operating bases to seek direction and clarification from incident management. This did not occur from both the shoreline and marine field teams without prompting from exercise control staff.

In a real oil spill response, a lack of communication and direction from the IMT may be a reality and operational field staff may need to be proactive in determining response actions. These actions may even include for example, going to the ICC and discussing face to face with the Operations team incident objectives and how they may be achieved.



Preparing for marine operations

Tactical considerations managed well by the Shoreline team included establishing the forward operating base and assessing and reporting on shoreline impact. Tactical considerations managed well by the Marine Operations team included establishing and effective management of the forward operating base and being proactive in deploying personnel and equipment. Operational management of both shoreline and marine teams in the field and resources under their control was well done.

It is recognised that the scenario and workload at the ICC felt like a real oil spill response and the Operations Officer was quite busy dealing with strategic and other operational issues. Hence one of the recommendations in this report is the appointment of Deputy Incident Controllers in specific roles.



Marine operations team deploying heavy offshore boom on day two of the exercise

WILDLIFE OPERATIONS

Sea Dragon provided for the practicing of Victoria's wildlife response arrangements. Exercise planning and control functions for wildlife operations were managed by Caitlin Barry & Kristy Greengrass (Vic DSE) and Roz Jessop from Phillip Island Nature Park.

Wildlife coordinators were an effective part of the IMT and wildlife participants established a forward operating base at the Somers Yacht Club working in the same facility as the shoreline team.

Successful wildlife IMT operations included the Environmental Scientific Coordinator and Mapping Officer prioritising search areas and species, and both the Wildlife Response Commander and Wildlife Planning Officer working in partnership to manage the numerous exercise injects and issues.

There were initial problems with the Wildlife Response Team at the ICC as they were given responsibility for developing the shoreline response plan. Whilst it is recognised that this is not the most optimal means for effective shoreline management, it should also be recognised that early in an incident response, there may be many activities required to be done without appropriate personnel or resources available. It is noted that the Wildlife Team did not balk at this but got into the role as best as possible. This did however put the Wildlife Team behind schedule. In a real event, effective management of wildlife would be a very high strategic priority.

There were initial communications problems in establishing tactical priorities between the IMT (wildlife unit) and the wildlife FOB. These were however quickly overcome which enabled an effective wildlife response.

The Wildlife Team effectively managed the tactical considerations of the exercise, namely:

- Development of Wildlife Incident Action Plan (WIAP)
- Land based search & rescue
- Marine search & rescue
- Establishing and managing the treatment & rehabilitation centre

There were a number of action items captured by the Wildlife control team that they have taken back into their respective organisations for implementation. It is highly recommended that Vic DOT continue this working relationship with wildlife agencies for future marine pollution exercises.

MEDIA & PUBLIC RELATIONS MANAGEMENT

Department of Transport Victoria (Josephine Marriage) and AMSA (Jonathan Wills) provided planning support and materials for the exercise and participated in exercise control functions during the conduct of the exercise.

As this oil spill event was in State waters, the responsibility for coordination of communication was held by the State, in this case, Department of Transport Victoria (VicDOT). It is normal practice that the jurisdiction with operational coordination holds communication coordination as it is likely to have the most accurate understanding of the situation at any given time.

Vic DOT participation in the exercise scenario included managing the media liaison and public information roles. The exercise gave a valuable insight into some of the issues that may be experienced during a real oil spill.

The exercise injects attempted to simulate the volume and variety of enquiries that would be taken by the media and public relations team in a real oil spill event. However, it was agreed during debriefing that in a real oil spill event the volume of enquiries would be significantly greater than what the exercise provided and the media and public relations team would need more capability in timely fashion to be able to respond effectively.

Enquiries were received by the media and public relations team early in the exercise before a clear picture of the response was known. Note - this is not unusual for emergency events.

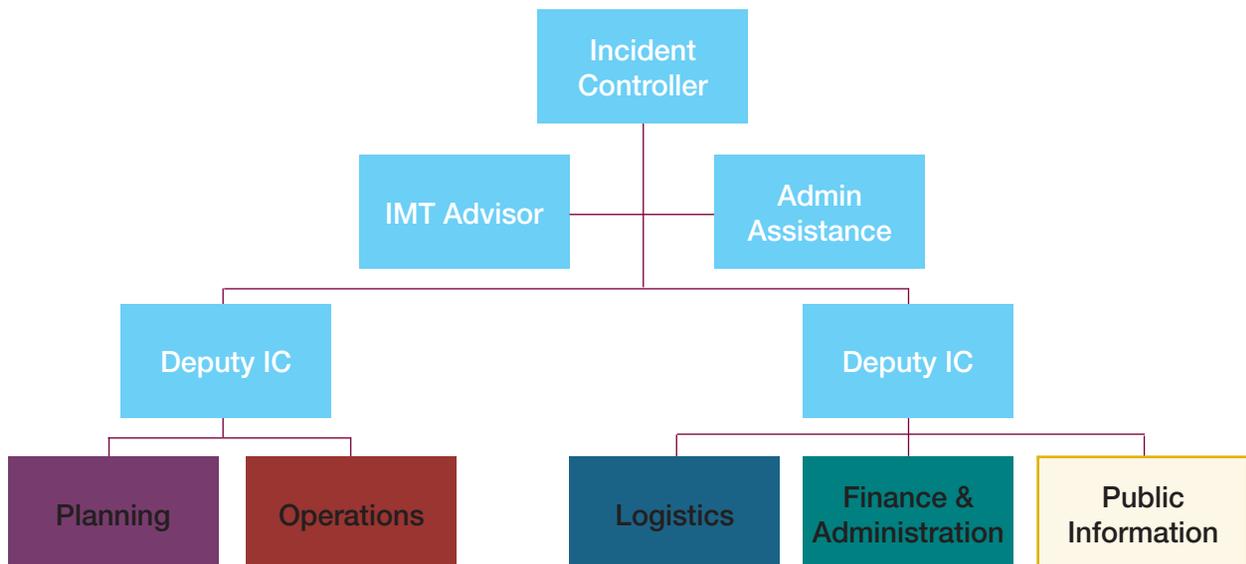
There were a small number of situations where the media and public relations team were unable to answer reasonable questions on the oil spill effects and response. For example, a simple enquiry on the first effects of the spill on wildlife was not adequately answered because the subject matter expert asked not to be interviewed and the media and public relations team were not adequately briefed.

As part of the overall incident management, parameters need to be established to ensure a small number of senior people or subject matter experts are available to assist media and public relation teams prepare public communications and where appropriate, be available for media interviews.

The newly agreed AIIMS principles (endorsed following review into Black Saturday fires) elevates Public Information to a higher level in the IMT structure.

EXERCISE RECOMMENDATIONS

1. Although the principles governing both AIIMS and OSRICS as incident management systems are the same, there is confusion over functional roles. Consideration needs to be given as to whether AIIMS or OSRICS becomes the standard marine pollution incident management system. Whichever system is used it must reflect best practice and industry requirements.
2. It is recommended that for future significant marine oil spill incidents one or more Deputy Incident Controllers are appointed to assist with span of control and specific responsibility for functions within the IMT. It is also recommended that a Public Information function be established as per newly agreed AIIMS principles. The diagram below provides one example of an IMT with appointed Deputy Incident Controllers.



3. It is recommended that IMTs for all major incidents and exercises are adequately resourced with experienced oil spill response personnel to guide / mentor the development of incident action and functional unit sub-plans.
4. The IMT for major oil spill responses are supported by a small panel of independent expert observers (Team B) to provide incident management and specialist advice and support. The Team B concept is becoming an international best practice in managing large scale emergency events.
5. It is recommended that Incident Controllers be given the option of having a formal mentor during major exercises.
6. It is recommended that Incident Controllers, Section and Unit leaders be provided opportunities to work with other agencies during major community impacted events, e.g. flooding, cyclones etc to gain practical IMT / ICC experience.
7. Timeliness in dispersant approval is critical for significant marine oil spill response. It is recommended that dispersant approval processes are reviewed to ensure clear lines of authority and regulatory decision-makers are clearly identified in contingency plans.
8. It is recommended that host agencies ensure that an appropriate induction process is applied at the start of all National Plan deployments and that interstate personnel are always supported by local trained and skilled personnel to include issues such as; workplace health and safety, financial delegations, procurement and fatigue management.
9. It is recommended that the established agreement of biennial national level marine pollution exercises continues, building on the lessons learnt and partnerships derived from Exercise Sea Dragon.
10. It is recommended that a national program of coordinated and facilitated discussion exercises occur across National Plan stakeholder groups to build consistency and develop skills and experience in the management of critical incidents.
11. In marine oil spill response, skills and abilities are finite and the national focus should be to continue investment in training and exercises. It is recommended that learning and development strategies for government and industry focus on building capability and capacity including, but not limited to:
 - a. Command, Leadership and Management
 - b. IMT functional roles and responsibilities
 - c. Incident Action Planning
 - d. Incident Communications
 - e. Public Information
 - f. Finance and Procurement
 - g. Record Keeping, Information Management and Security

12. A National Plan Communication Plan should be developed by AMSA, State Authorities and relevant industry to provide clear direction in the event of a pollution incident. The plan should include basic communication checklists including key tasks and provide clarity regarding:

- Coordination – a protocol for communication coordination should be articulated and agreed upon in advance, taking into consideration unusual circumstances such as an oil spill that effects multiple jurisdictions e.g. two States.
- Communication Roles – A clearer allocation of roles is needed, including the selection of a small number of senior subject matter experts to act as spokespeople on their area of responsibility. In addition, a comprehensive set of talking points should be developed earlier by the communication team, to be updated frequently during the response.
- Human Resources – the National Plan should clearly state its ability to quickly draw on a pool of communication people from AMSA and State Authorities in the event of a pollution event.

13. Due to the size and scope of this exercise it is recommended that lessons are identified for future exercise planning teams to assist in the development of major operational and deployment exercises.

**AIM AND
OBJECTIVES**

TACTICAL
CONSIDERATIONS
AND ACTIVITIES

EXERCISE AIM

To implement and review the effectiveness of a combined Commonwealth, Victorian and industry marine pollution response to a tier 3 pollution incident in Victorian State waters.

Objective One: Establish and maintain an Incident Management Team that functions effectively under OSRICS

Key Performance Indicators
There is a clear and commonly understood IMT structure
<ul style="list-style-type: none">OSRICS main functional roles and sub-roles established and effective
Participants have role clarity and a common understanding of responsibilities
<ul style="list-style-type: none">clear direction is provided and team members are aware of their responsibilities
The IMT gains and maintains situational awareness
Regular situation briefings are held.
Effective use of incident tools, e.g. OSTM, ADIOS and OSRA
Information is managed appropriately, e.g. record keeping, logs, security of documents
<ul style="list-style-type: none">incident logs are accurately maintained
Incoming information is sourced, verified and recorded
Intelligence is generated and effectively used by the IMT
Outgoing information is timely, accurate and targeted appropriately
Communication flow is effective and timely within and external to the IMT
<ul style="list-style-type: none">across functional areas (planning – operations – logistics)between the IMT and State strategic bodiesbetween the IMT and regional / municipal emergency management structures / arrangementseffective liaison & interaction between State & Federal agencies
Formal briefing & induction process established, agreed & implemented for IMT personnel
Requests for technical outputs/products are clearly understood and timely
Handover procedures are managed appropriately
<ul style="list-style-type: none">Use of SMEACCSHandover planned, prepared & facilitated effectively
Staff behaviours are consistent with established Code of Conducts
Workplace Health and Safety is considered, e.g. fatigue, stress and general welfare
External stakeholders are appropriately informed
IMT display effective decision making to direct the response
<ul style="list-style-type: none">decision making protocolsactions and tasks are accurately recorded and allocated appropriately

OBJECTIVE TWO: Develop an effective Incident Action Plan in response to the situation

Key Performance Indicators
Critically determine and assess key pieces of information
Understand roles and responsibilities (State Gov, Australian Gov, industry, combat/statutory agencies)
Develop an Incident action plan in a timely fashion and communicate effectively to strategic and tactical teams
Effective use of incident tools, e.g. OSTM, ADIOS and OSRA
Reference is made to all available data and this is reflected in decision making protocols
A Net Environmental Benefit Analysis (NEBA) is undertaken
Incident AIM and OBJECTIVES are determined
Protection priorities are determined
Oil spill response strategies are determined & IAP considers (not limited to): <ul style="list-style-type: none"> • oil product & behaviours • vessel position & condition • quantity of oil • weather & tidal conditions • environment & ecological considerations
Sub plans are developed, i.e. marine operations, shoreline response, wildlife response, aviation, OH&S, waste management, media, etc
Visual references / displays are used appropriately
Resources are identified & managed to achieve objectives
Resource mapping and tracking strategies are established and managed effectively <ul style="list-style-type: none"> • IMT & field operations rostering & fatigue management arrangements • transport and accommodation arrangements • physical resources & assets sourced, transported and managed at staging areas • de-mobilisation strategies
Community engagement strategies and volunteer management are considered <ul style="list-style-type: none"> • volunteer strategies include coordination, briefing & induction and OH&S management • the IAP acknowledges & develops a public management / information component

Stakeholder engagement considered

Operational risks are assessed and listed in main or sub-plans as appropriate: includes but not limited to:

- environmental risks to marine, wildlife & shoreling
- economic risks to local industry, shipping
- community risks to health, quality of life, media
- response risks to OH&S, asset / resource management, weather, timeliness, government expectations
- reputational risks to government, response agencies, emergency management arrangements

IAP review process is commensurate to changing situational circumstances

The IAP is robust and is able to withstand interrogation & scrutiny post incident

OBJECTIVE THREE: Implement operational strategies as defined in the Incident Action Plan

Key Performance Indicators

Operational strategies are communicated effectively from IMT to field teams

There is effective communication from field teams back to the IMT

Implementation of directions from IMT, including sub plans by operational teams

Development of alternative solutions by field teams to be communicated to IMT

Field teams and IMT are adaptable to dynamic incident requirements

- IAP is agile & flexible to changing priorities / conditions

Field teams actively apply risk management and OH&S plans

Resources and staging areas are managed appropriately

Field teams are supervised, briefed and managed effectively

OBJECTIVE FOUR: Develop and implement an effective public communication and media strategy

Key Performance Indicators

Vic DOT is established as the incident media lead agency and this is understood by State, Federal and Local / Regional bodies

A communications and media team is established on site with appropriate liaison officers

Key internal & external stakeholders identified including local & regional bodies, and indigenous groups

- communications & media team have appropriate representation and/or awareness of cultural sensitivities

The communications & media team develop strategies that are clearly understood, consistent & are widely consultative: strategies include:

- agreement on key speakers to the media and/or community groups
- timeliness for media requirements
- process for sign off of key messaging
- process for briefing key speakers
- process for logging media enquiries & responses
- identifying resources for media management including briefing room & managing media in field operations

Develop key messages and timely holding statements

- means of communicating key messages agreed and implemented
- Incident Controller approval process

Develop regular media releases and talking points

- consistent and agreed key messages across all stakeholder groups
- FAQs developed & kept up to date

Develop community engagement strategy in consultation with planning team & appropriate stakeholders

- public meetings
- consistent key messages
- contemporary social media management

High level support is provided to Incident Controller and key IMT members

- Regular contact with Ministers' offices and their key advisors / media advisor is established & maintained
- requests for information from 'VIPs' is managed appropriately

Consider the role of Emergency Management Joint Public Information Committee (EMJPIC) in a marine pollution event, including any interaction with the Commonwealth

TACTICAL CONSIDERATIONS AND ACTIVITIES FOR SHORELINE, MARINE, AVIATION AND WILDLIFE RESPONSES

SHORELINE

Shorelines are adequately assessed and shoreline assessment & response plan developed

Activities to achieve the tactical consideration include:

- Complete site assessments and report findings to the Planning cell (ICC).
- Develop a shoreline assessment & response plan.
- Reports are accurate including GPS information and forwarded to the ICC.
- Identify shoreline clean up operations- employ the correct technique for impact site (shovelling, protective booming, HVLP flushing of rocks, wiping of rocks).
- Reporting of oiled wildlife.
- Liaise with stakeholders affected by incident (Police, ambulance, local council).
- Oil quantities reported to ICC in timely manner.
- Sensitive areas (mangroves, water intakes, wildlife populations & breeding sites) are reported to ICC.
- Mobilisation of response equipment to suitable location near impact site.
- Suitable maps/charts provided.
- Communications network established

Develop forward operating base

Activities to achieve the tactical consideration include:

- Identify suitable site Ingress/egress.
- Site layout hot/warm/zones.
- Equipment lay down zones.
- Decontamination stations established.
- Safety briefings and PPE are used.
- Rest areas and toilets are provided in FOB's.
- Food and water supplied to staff.
- Barriers are established restricting access to impact sites. Controlled Vehicle and personnel entry points established.
- Appropriate signage is posted advising public of closure or warning of potential hazard in the area.
- Media contact is conducted in a controlled manner. Staff briefed on media contact.
- Wildlife receptors are established

Deployment of boom shoreline protection

Activities to achieve the tactical consideration include:

Deployment of shoreline protection land sea boom.
Safety briefing and appropriate PPE are used for operation.
Deployed in the correct manner in accordance to SOP's utilising suitable equipment vessels, man power.

Establish beach clean- up activities

Activities to achieve the tactical consideration include:

Manage of oiled PPE and equipment from dirty to clean zones.
Management of oiled sand, vegetation and other contaminated waste material, (Minimised sand/oil ratio).
Provided suitable bins and waste management plan through contractors.
Field teams are supervised, briefed and managed effectively.
Beach sectoring is implemented 100m -500m sectors.
Effective management of beach cleaning is monitored
Accurate recording of wasted removed from impact sites is relayed to ICC.
Oiled Wildlife is reported.

Recovery of oily waste & equipment

Activities to achieve the tactical consideration include:

Manage of oiled PPE and equipment from dirty to clean zones.
Management of oiled sand, vegetation and other contaminated waste material, (Minimised sand/oil ratio).
Provided suitable bins and waste management plan through contractors.
Utilise correct power packs, pumping, skimmers and storage equipment for recovery of oily water.

Documentation

Activities to achieve the tactical consideration include:

All shoreline activities are recorded for auditing purposes.
Induction of all staff prior to any beach activities.
Post activities reports are completed.

MARINE

Conduct offshore containment & recovery operations

Activities to achieve the tactical consideration include:
Conduct detailed briefing on expected objectives and activities
Confirm adequate and appropriate resources available to safely and effectively achieve the objective
Site assessed for suitability
Boom(s) deployed in a manner to achieve the objectives associated with individual locations
Boom(s) deployed within agreed timeframes
Demonstrate safe systems processes procedures
Deploy boom(s) with no safety incidents
Confirmation of achieving the task
Problem identification and solving

Conduct protective booming operations

Activities to achieve the tactical consideration include:
Conduct detailed briefing on expected objectives and activities
Confirm adequate and appropriate resources available to safely and effectively achieve the objective
Site assessed for suitability
Boom(s) deployed in a manner to achieve the objectives associated with individual locations
Boom(s) deployed within agreed timeframes
Demonstrate safe systems processes procedures
Deploy boom(s) with no safety incidents
Confirmation of achieving the task
Problem identification and solving

Documentation

Activities to achieve the tactical consideration include:
All marine activities are recorded for auditing purposes
Induction of all staff prior to any marine operations
Post activities reports are completed

AVIATION

Fixed wing aerial dispersant planning

Activities to achieve the tactical consideration include:
The appropriate personnel, Government and non-Government agencies and Senior Managers / Ministers are notified of the incident and a dispersant application response is mounted in an appropriate timeframe
The development of and Aviation Operations Sub-plan
The Incident Management Team is deployed and scaled up as required
The Initial Report of affected area and details from the first observation flight are recorded and fed into the IMT.
Appropriate airfield identified
Appropriate staging area identified
Responses to media enquiries are dealt with in accordance with the Communication subplan

Airbase management

Activities to achieve the tactical consideration include:
Establishment of Airfield
All personnel attend an on-site briefing before commencing their shift
All personnel are supplied with and wear the correct Personal Protective Equipment for operating in and around the airfield.
Appropriate safety equipment is available and in working order.
Appropriate record keeping is undertaken
All personnel adhere to their set shift lengths and break for meals as required.

Fixed wing aerial dispersant application operations

Activities to achieve the tactical consideration include:
All Air crew attend an on-site briefing before commencing their shift
All search and rescue personnel are supplied with and wear the correct Personal Protective Equipment for operating within the aircraft.
Intelligence gathering in relation to location of oil.
Appropriate planning in undertaken in relation to aircraft operations
Appropriate paper work is submitted
All personnel adhere to their set shift lengths and break for meals as required.
Dispersant application operations undertaken in a safe and effective manner.

Demobilisation of aviation operations

Activities to achieve the tactical consideration include:

Post incident brief and reporting

Demobilisation plan developed

WILDLIFE

Development of wildlife incident action plan (WIAP)

Activities to achieve the tactical consideration include:

The appropriate personnel, Government and non-Government agencies and Senior Managers / Ministers are notified of the incident and an oiled wildlife response is mounted in an appropriate timeframe

The Protocol, Wildlife Response Plan for Marine Pollution Emergencies, is known and used/referenced.

The Incident Management Team is deployed and scaled up as required

The Initial Report of Affected Wildlife and the Initial Site Assessment forms are completed

The Wildlife Incident Action Plan (WIAP) is developed using the correct relevant forms, and followed/implemented

Responses to media enquiries are dealt with in accordance with the Communications Plan in the WIAP.

Maps of significant environmental values (such as breeding/roosting sites, Ramsar sites, seal colonies, etc) are obtained and used in forming search and rescue priorities.

Land based search and rescue

Activities to achieve the tactical consideration include:
All search and rescue personnel attend an on-site briefing before commencing their shift
All search and rescue personnel are supplied with and wear the correct Personal Protective Equipment.
Deploy the Oiled Wildlife Response Kit(s)
The appropriate equipment out of the Oiled Wildlife Response Kit(s) are used for the relevant task and equipment not in the kits (e.g. perishable veterinary supplies) are sourced in a timely and efficient manner
Conduct search activities in a safe and efficient manner and as directed by the WIAP.
Appropriate and safe methods of capture and restraint techniques and tools are used for the species at hand.
All volunteers (if present) are registered and briefed/trained on site by the Volunteer Coordinator prior to commencing their shift, in accordance with the Volunteer Briefing form (hypothetical).
The Volunteer Sign In form, Volunteer Registration of Interest form and Site Management Form for Volunteers are completed (hypothetical).
All personnel adhere to their set shift lengths and break for meals as required.
The Patient Record is completed for all captured wildlife.
Locate wildlife using GPS and GIS information from ICC.

Marine search and rescue

Activities to achieve the tactical consideration include:

All search and rescue personnel attend an on-site briefing before commencing their shift

All search and rescue personnel are supplied with and wear the correct Personal Protective Equipment.

The appropriate equipment out of the Oiled Wildlife Response Kit(s) are used for the relevant task and equipment not in the kits (e.g. perishable veterinary supplies) are sourced in a timely and efficient manner

Conduct search activities in a safe and efficient manner and as directed by the WIAP.

Appropriate and safe methods of capture and restraint techniques and tools are used for the species at hand.

All personnel adhere to their set shift lengths and break for meals as required.

Locate wildlife using GPS and GIS information from ICC.

The Volunteer Sign In form, Volunteer Registration of Interest form and Site Management Form for Volunteers are completed (hypothetical).

All personnel adhere to their set shift lengths and break for meals as required.

The Patient Record is completed for all captured wildlife.

Locate wildlife using GPS and GIS information from ICC.

Treatment and rehabilitation centre

Activities to achieve the tactical consideration include:

Oiled wildlife is transported to the Treatment and Rehabilitation Centre in a timely and safe manner taking into consideration staff and animal's welfare.

The mobilisation and set up of the Treatment and Rehabilitation Centre is done according to the required specifications including facilities to receive, assess, wash, dry, and hold oiled wildlife, as well as facilities for staff and volunteers (toilets, meals area, etc).

Documentation

Activities to achieve the tactical consideration include:
The Patient Record is completed for all captured wildlife.
The Patient Record is passed with the captured animals to the staff at the Treatment and Rehabilitation Centre and is completed for each step in the animal's assessment, treatment, cleaning and rehabilitation.
Accurate figures on the numbers, species, status and location of oiled wildlife in care is available to the IC, Planning, Ops Officer, Comms and any other relevant personnel on a regular basis.
Approvals are obtained for all expenditure, and receipts are collected for cost recovery purposes.

APPENDIX A

Planning, Control & Evaluation Arrangements

Exercise Steering Committee

Name	Position	Organisation
Jamie Storrie	Manager Marine Environment Pollution	AMSA
Nick Quinn	General Manager	AMOSC
Donovan Croucamp	Acting State Marine Pollution Controller	Vic DOT

Master Planning Group

Name	Position	Organisation
Mick Fleming	Senior Response Coordinator	AMSA
David Crompton-Guard	Manager Emergency Risk	Vic DOT
Jessica Smith	Marine Scientist	AMOSC

Planning Support Team

Name	Role	Organisation
Ken Rickard	Manager Safety	SA Govt
Phil Starkins	Initial planning group	AMOSC
Aleksandra Henclewska	Initial planning group	Vic DOT
Giovanna Lorenzin	ICC / OSTM	AMSA
Sean Blake	ICC & Environment	Vic DPI
Andrew Griffiths	Aviation	AMSA
Graham Whitehead	Exercise Planning	AMSA
Louisa Harrington	Event Coordination	Vic DOT
Shane Vedamuttu	Marine	Western Port Harbourmaster
Tom Budd	Marine	AMOSC
Josephine Marriage	Media	Vic DOT
Jonathan Wills	Media	AMSA
John Francis	CFA liaison	Country Fire Authority
Simon Lund	ICC – IT support	Country Fire Authority
Pat Hunter	ICC - Facilities	Country Fire Authority
Caitlin Barry	Wildlife	Vic DSE
Kirsty Greengrass	Wildlife	Vic DSE
Roz Jessop	Wildlife	Phillip Island Nature Park
Mick Douglas	Shoreline	Parks Victoria
Abigail Walters	Shoreline	SA Govt
Adam Couch	Shoreline	SA Govt

Exercise Control

Name	Role	Organisation
Mick Fleming	Exercise Director	All exercise sites
David Crompton-Guard	Deputy Exercise Director	All exercise sites
Jessica Smith	Deputy Exercise Director	Exercise Control Cell
Ken Rickard	Manager exercise safety	All exercise sites
Shane Vedamuttu	Specialist Advisor	ICC & marine activities
Dale Jolly	Manager marine operations	Port & on-water
Ben Cropley	Safety marine operations	Port & on-water
Adam Couch	Manager shoreline operations	Shoreline - Somers
Darren Hulm	Safety shoreline operations	Shoreline - Somers
Abigail Walters	ICC shoreline	Exercise Control Cell
Andrew Griffiths	Manager aviation operations	Tyabb airbase
Dave Ingram	Safety aviation operations	Tyabb airbase
Giovanna Lorenzin	ICC modelling	Exercise Control Cell
Sean Blake	ICC environment	Exercise Control Cell
Kirsty Greengrass	Manager wildlife operations & safety	Shoreline - Somers
Roz Jessop	Evaluation & safety wildlife operations	Shoreline - Somers
Josephine Marriage	ICC media	Exercise Control Cell
Louisa Harrington	Exercise support	All exercise sites
Graham Whitehead	Manager observers	All exercise sites
Cassandra Brooks	Exercise support & photographer	All exercise sites
John Francis	CFA liaison	ICC
Simon Lund	CFA IT support	ICC, marine & shoreline
Pat Hunter	CFA facilities	ICC

Evaluation Team

Name	Role	Organisation
Capt. Ian Niblock	Specialist Advisor	Darwin Port Corporation
Stephen Young	ICC / IMT	Turning Point Crisis Management
Chris Priestly	Marine Operations	Response Resource Management
Peter Braddock	Shoreline	SA Govt
Shayne Wilde	Aviation	NSW Transport
Caitlin Barry	Wildlife	Vic DSE
Josephine Marriage	Media	Vic DOT

