



Australian Government  
Australian Maritime Safety Authority

# Exercise Nautical Twilight

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## 2016

## Evaluation Report





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# 1. Executive Summary

## 1.1 Exercise overview

Maritime emergencies are some of the most complex disruptions to affect communities. They are jurisdictionally complex, they can affect the natural environment, the built environment, the economy and have significant consequences on community psycho-social health.

The Australian Maritime Safety Authority (AMSA), the various state and Northern Territory government emergency management agencies, the maritime industry and port operators have a national program for training and exercising emergency managers. The *Nautical Twilight* series practised field deployment, operational response management and explored strategic recovery issues in separate exercises. *Nautical Twilight* focussed on NSW State Waters and therefore the interaction of the NSW maritime incident and emergency management arrangements with the National Plan for Maritime Emergencies (National Plan). Key agencies involved in the exercise were Transport for NSW (TfNSW), Roads and Maritime Services (RMS) the Port Authority of NSW and Fire & Rescue NSW (FRNSW). In addition, the broader NSW emergency management system was engaged through off-site impact and an exploration of recovery issues.

*Nautical Twilight* was designed to explore the impact of a hazardous materials emergency, rather than the more frequently exercised oil spill scenario. The scenarios were considered plausible and were developed following extensive consultation.

The exercise was held in three phases consisting of a real-time test of the National Maritime Place of Refuge Risk Assessment Guidance (the Guidance), an examination of the wider operational and recovery impacts of a chemical incident in a port and a real time deployment of the National Hazardous and Noxious Substance (HNS) response capability involving deployment of a reconnaissance team to a vessel at sea.

**Phase one** saw a New South Wales incident management team (IMT) working with a Maritime Casualty Control Unit (MCCU) and the Maritime Emergency Response Commander (MERCOTM). The IMT and MCCU evaluated a scenario where a vessel experiencing a HNS incident at sea made a request to enter the Port to discharge the affected cargo.

**Phase two** was a multi-agency functional exercise simulating a hazardous material spill and fire on board a ship in the Port of Newcastle. The spill and subsequent fire resulted in pollution of the Port including the Hunter River and widespread toxic fallout from smoke in the wider region. The exercise focussed on initial operational response, followed by a strategic, multi-agency discussion about recovery.

**Phase three** tested the national HNS response capability and deployed the HNS Reconnaissance Team (HRT) to a vessel at sea. The HRT was intended to report to MERCOTM in real time during phase one, however due to weather on the date of the exercise, the field deployment was postponed until Tuesday 6 September 2016.

## 2. Recommendations of the Steering Committee

The Exercise validated the efficacy of the Guidance documentation, the strength of the NSW State maritime incident and emergency management arrangements and the effectiveness of the National HNS response capability.

Many of the operational observations from the exercise again relate to the planning function of the response and are similar to those identified in Exercises Sea Dragon, Northerly and Westwind. The areas of response planning, particularly the development of an Incident Action Plan, operational orders and situational awareness, were again identified as being areas for potential improvement. The steering committee makes no recommendations on these issues as they are well known and the subject of numerous previous recommendations.

The Steering Committee notes these findings and makes the following recommendations to the National Plan Strategic Coordination Committee (NPSCC).

No.	Recommendations	Responsibility
<b>Strategic</b>		
1	The NPSCC should consider the range of compensation arrangements available for HNS incidents, including those available under international insurance arrangements and more broadly within the disaster management sector.	NPSCC
2	NPSCC to consider reviewing the risk assessment template with a view to simplifying it and creating a number of tools to assist in the risk assessment process and recording the assessment process and results.	NPSCC
<b>Operational</b>		
3	Control agencies* should familiarise themselves with their local emergency management arrangements in particular transfer of control of incidents or unified command and recovery arrangements where broader impacts are possible.	Jurisdictions
4	Jurisdictions should review the applicability of their legislative authority to deal with non-traditional impacts from maritime emergencies that are ship sourced.	Jurisdictions
<b>Tactical Issues</b>		
5	FRNSW and AMSA to review HRT deployable equipment.	FRNSW/AMSA
6	AMSA to incorporate man overboard training in future HRT courses.	AMSA
7	AMSA to organise next year's HRT exercise in a jurisdiction other than NSW.	AMSA
8	FRNSW and AMSA to finalise the HNS Mutual Aid Agreement and Joint Standard Operating Procedures.	FRNSW/AMSA

\* Control agency is the generic term applied by the National Plan, the NSW State Emergency Plan uses the term combat agency. For the purpose of this report, the terms are interchangeable.

### 3. Exercise governance

The NPSCC is responsible for the commissioning and formal response to the Exercise. The Exercise was managed on behalf of NPSCC by the Exercise Steering Committee ('the Steering Committee) in accordance with the governance structure depicted in Figure 1.

**Figure 1 – Governance structure for Exercise Nautical Twilight**



The Exercise Steering Committee was responsible for:

- management of the exercise
- setting exercise objectives
- oversight of the writing teams
- review of the exercise
- production of the Exercise Evaluation Report and recommendations.

The exercise writing teams conducted detailed exercise planning and development. The phase one and three exercise writing team was responsible for the development of the refuge guidance and HRT deployment components addressing objectives 1-3 and 10-11. The phase two team was responsible for the development and delivery of the community impact and recovery exercise addressing objectives 4-9.

Membership of the Steering Committee and exercise writing teams are specified at Table 1.

**Table 1 – Membership of Steering Committee and Exercise Writing Teams**

Steering Committee	Phase One and Three Writing Team	Phase Two Writing Team
<ul style="list-style-type: none"> <li>• Australian Maritime Safety Authority (AMSA)(Chair)</li> <li>• Transport for NSW</li> <li>• Fire and Rescue New South Wales</li> </ul>	<ul style="list-style-type: none"> <li>• Australian Maritime Safety Authority (Chair)</li> <li>• Transport for NSW / Roads and Maritime Services NSW</li> <li>• Fire &amp; Rescue NSW</li> <li>• NSW Water Police</li> <li>• Risk and Emergency Management (REM) Associates</li> <li>• Tactical Maritime Solutions Pty Ltd</li> </ul>	<ul style="list-style-type: none"> <li>• Transport for NSW / Roads and Maritime Services NSW (Chair)</li> <li>• Australian Maritime Safety Authority</li> <li>• Tigertail Pty Ltd</li> </ul>

## 4. Exercise objectives

The objectives for the exercise were as follows:

### Phase one

1. Practice the establishment of a MCCU in accordance with guidance documentation
2. Assess the fitness for purpose of the MCCU structure
3. Practice the application of National Maritime Places of Refuge Risk Assessment Guidance

### Phase two

(Functional exercise)

4. Practice gaining control of an incident via establishment of an effective Incident Control Centre, timely distribution of accurate situation reports, briefings to senior management, accurate media briefings and the preparation of an initial Incident Action Plan
5. Assess the effectiveness of multi-agency functionality in dealing with a significant marine hazardous materials response
6. Assess the State's personnel capability to respond to a significant marine hazardous materials incident.

(Discussion exercise)

7. Explore the interface between response and recovery.
8. Apply the NSW State recovery arrangements to a significant marine hazardous materials incident caused by a ship.
9. Explore the financial implications to recovery arrangements for a significant marine hazardous materials incident caused by a ship.

### Phase three

10. Practice the deployment of the HRT in accordance with the Joint Standard Operating Procedure.
11. Assess the fitness for purpose of HRT structures.



## 5. Background

### 5.1 Overview

#### 5.1.1 Phase one

Phase one consisted of a test of the Guidance including the establishment of a NSW IMT and a MCCU operating in the Port of Newcastle. The task of this multi-agency, multi-jurisdictional team was to evaluate an unfolding scenario based on a container ship at sea.

#### **THE SCENARIO**

The Master of a container vessel, on a north south voyage, requested entry to the Port of Newcastle to offload a container that was discovered to be leaking after the vessel had experienced heavy weather. The container was located below the hatch covers and the leak was affecting the containers below it and the tank top (the floor of the container bay and also the top of the fuel tank). The crew of the vessel undertaking a routine damage inspection experienced respiratory distress and reported a strong chemical smell in the area near the damaged container. The crew took readings with a ships sensor, however the information provided was not accurate due to calibration issues. Further readings were not possible due to the Master's unwillingness to send his crew into the affected container bay and the failure of the ship's sensor.

Notionally, the HRT was dispatched to the vessel to undertake reconnaissance. The substance leaking from the container was identified as Glacial Acetic Acid, a very strong, corrosive substance that is incompatible with organic matter and can form explosive mixtures with air. This information was relayed to the MCCU and MERCOM.

The exercise was held in the Newcastle Port premises on Wharf Rd Newcastle on 7 June 2016.

#### 5.1.2 Phase two

Phase two practised the Port Authority of NSW's initial response to a hazardous materials incident on a vessel in port. The functional exercise was followed by a facilitated discussion exercise with panel members simulating decision-making and communicating recovery priorities and the interface between a maritime incident response and the NSW Recovery Arrangements.

#### **THE SCENARIO**

A container vessel was given approval to enter the port to unload containers leaking a suspected hazardous chemical substance. Risk assessments of the ship, the manifest and the chemical were undertaken and the appropriate consultations determined that the vessel could enter the port to remove the containers. Whilst alongside an explosion occurred in the container which caused it to rupture and a fire rapidly spread to other containers. There was a spill of the leaking chemical and wastewater and a thick, black and acrid smoke plume impacted much of the surrounding community leaving a toxic residue behind.

#### 5.1.3 Phase three

This phase consisted of the operational deployment of the HRT to a vessel at sea. The scenario matched that for Phase one.

## 6. Conduct of the exercise

### 6.1 Phase one

The vessel's situation and the initial reports to AMSA via the Joint Rescue Coordination Centre were provided to participants on the afternoon of 6 June 2016 and formed the initial information available to the exercise participants. The exercise was conducted in real time using real weather conditions for the day. There were no external communications outside the participating agencies.

Following an induction briefing on 7 June 2016 the exercise commenced at 0800 hrs.

The MCCU consisted of four participants:

1. MERCOM
2. Manager Salvage and Intervention (AMSA)
3. Fire & Rescue NSW (as part of the HNS Reconnaissance Capability)
4. AMSA Administrative Officer

The participants from various NSW government agencies formed two teams.

The Marine Pollution Controller (MPC) team consisted of four participants:

1. The MPC (participant was the Deputy MPC)
2. Senior Advisor to the MPC
3. Environment and Scientific Advisor
4. Administrative Officer

The Port Authority of New South Wales team consisted of participants from the following agencies:

1. Port Authority of New South Wales (representatives from Newcastle, Port Kembla, and Sydney Ports)
2. Fire & Rescue NSW
3. Port of Newcastle (private port operator)

Exercise control monitored the participants' progress in dealing with the scenario, provided injects at the appropriate times and kept the exercise on track and on time.



## 6.2 Phase two

The exercise was conducted on 10 August 2016 in Newcastle with the ship notionally coming alongside while dealing with a leaking container on-board. The Port Authority's risk assessment had been comprehensive and the vessel was brought alongside to unload sufficient containers to identify and deal with the leak.

An IMT was placed on stand-by while FRNSW were notionally positioned to deal with any HAZMAT incident beyond the capacity of the ship and Port Authority.

When the situation unexpectedly worsened, the Port Authority was well-positioned to establish an IMT and take control of the problem, as detailed in the NSW State Waters Marine Oil and Chemical Spill Contingency Plan.

There were 35 participants in the exercise, 25 observers and 12 exercise control staff from AMSA, Commonwealth Department of Infrastructure and Regional Development, NSW Environment Protection Authority, FRNSW, NSW Department of Health, NSW Department of Primary Industries, NSW Police Force, National Parks and Wildlife Service, Office for Emergency Management, Port Authority of NSW, RMS, Royal Australian Navy, TfNSW, Queensland Department of Transport and Caltex.

## 6.3 Phase three

The final phase of the Exercise was a real-time test of the HRT's capability and involved deployment of a reconnaissance team to a vessel at sea. The HRT was developed to assess a vessel experiencing a chemical incident at sea and report to the MERCOM.

The exercise was conducted on board the MV *Island Trader* which operates a freight service between Port Macquarie and Lord Howe Island. An AMSA officer sailed on the *Island Trader* from Lord Howe and managed exercise control from on board. Another officer oversaw the HRT operations and exercise control from Port Macquarie and on board a command vessel.

The HRT were transported to the *Island Trader* by New South Wales Water Police who provided both the deployment and the command vessel. Port Macquarie Volunteer Marine Rescue transported observers and acted in a safety vessel capacity.

An AMSA Maritime Casualty Officer (MCO), boarded the *Island Trader* with four FRNSW Hazardous Material (HAZMAT) qualified firefighters. The HAZMAT team undertook an investigation and successfully identified the suspect container below decks and the chemical leaking from it. This information was relayed to the MERCOM (played by Exercise Control) to assist in decision making surrounding a place of refuge.

## 7. Exercise evaluation

Exercise evaluation for all phases was conducted using independent observers coordinated by AMSA and Transport for NSW. The exercise evaluation templates were developed based on the exercise objectives.

### 7.1 Data analysis

Data was collected from each phase via the following methods:

- Direct observation (through the completion of individual evaluator reports)
- Outcomes of debriefs
- Reviews of documentation from observers.

Observations were collated and categorised based on Key Performance Indicators (KPIs) developed from the exercise objectives.

### 7.2 Scope

The following items were out-of-scope for the exercise:

- The actual deployment of the HRT to the forward operating base (Port Macquarie)
- The actual deployment of MCCU personnel to Newcastle
- The actual departure of the MV *Island Trader* from its normal passage between Lord Howe Island and Port Macquarie
- The physical preparations that would normally be undertaken by any response agency or the Port of Newcastle to receive a vessel as a result of a place of refuge request
- Actual communications to the State Emergency Management Committee or higher level State committees (Minister, Premier, etc.)
- Actual media engagement (interviews, response to social media, etc.)
- Actual or simulated injured personnel or medical related issues
- Customs, immigration related to personnel, crew and equipment.

## 8. Analysis

The *Nautical Twilight* Series focused on the practical use and functional implementation of Commonwealth and State maritime incident and emergency management arrangements in response to a series of major incidents. The three phases focused on multi-agency and multi-jurisdictional interoperability and the ability to manage complex incidents with multiple consequences. The analysis and observations from all phases are presented below as a combined report for the benefit of all National Plan partners.

In accordance with 'best-practice lessons management' the evaluation team has identified only those findings that appear systemic or identify areas of significant concern that have not been raised in previous exercises or addressed by recommendations from previous Exercise Steering Committees.



## 9. Findings – Phase one

### 9.1 General

All agencies involved in the exercise worked together to achieve a successful and agreed solution to a complex, time critical, cross-jurisdictional, multi-agency incident. The findings listed below should be considered only with the view to enhancing what were demonstrably sound and well developed arrangements.

### 9.2 Communications between agencies

Communications during the early stages of the exercise left room for improvement. The participating agencies and their teams were not aided by the layout of the venue with the MCCU, SMPC and IMT in separate areas of the Port Building. As a result it took some time before effective communications were established and there were occasions where important information was held by one group and not shared with others.

Similarly decisions on directing the vessel were being considered in isolation by participants with conflicting authority. This potential conflict was identified and avoided through the communication efforts of both MERCOM and the SMPC. The potential for conflict in events that are planned to cross jurisdictional boundaries are almost unique to the National Plan and it is a demonstrated strength that this was avoided by the stakeholders involved.

### 9.3 Situational awareness and a common operating picture

The layout of the venue provided challenges to communication and information flow. It was observed that there was limited information regarding the incident being displayed and updated in the IMT. The IMT relied on predetermined laminate displays for recording information regarding the incident. These displays were designed for oil spills and are not necessarily appropriate to a place of refuge request incident.

### 9.4 Record keeping

Record keeping amongst participants varied widely. Some participants kept detailed notes in specifically designed log books, others used computers to record information while others did not keep any notes. Given the potential for the scenario to develop into a major incident with possible community impacts it is important to be able to justify and provide reasoning for decisions.

The IMT, SMPC and MCCU undertook detailed discussions on the risks associated with bringing the vessel into a NSW port, however it was not evident that these discussions were well documented or summarised by all parties.

## 9.5 Guidance risk assessment template

The National Plan risk assessment template is comprehensive, however the table complex with minimal instruction on how it should be used. Feedback from exercise participants included:

- Some of the risk descriptors are more of an aide-memoire and could be placed in a separate table or checklist because they are actions, checks, or notifications that must be carried out if relevant. For example contact with Quarantine and Border Protection, the provision of financial indemnities and establishment of exclusion zones.
- Some of the risk descriptors duplicated the same key risk using different wording (e.g. provision of financial indemnities) these could be simplified into one risk descriptor.
- Some risk descriptors used complex wording which made it difficult to understand the risk.
- One of the key risk areas identified by the group was the risk to the personnel who would have to manage a vessel's port entry, berthing and unloading. These included risks to the pilot, pilot vessel crew, tug crews, linesmen and line vessel crews and to personnel who would have to unload the containers from the vessel. This risk type is not adequately listed in the risk descriptors.

## 9.6 Stakeholder engagement

There were several stakeholder groups that were out of exercise scope. In an actual incident these may need to be included and would likely increase the time needed to make decisions and may have led to different outcomes. The groups that may need to be engaged include:

- Legal advisors
- Stevedores
- Political representatives
- Media (control and supporting agencies)
- Salvors (if appointed or required)
- Community groups

The port land side owners and operators for Newcastle port were represented at the exercise and were considered to be providing views that would have been similar for the other port land side owners and operators. In the event of an actual incident port land side owners and operators for each port considered for a place of refuge or entry of a distressed vessel would have to be included in the consultations.

In an actual incident the control agency would also have to enlist the assistance of health experts to provide advice on the impact of the hazardous materials on individuals working in an exclusion zone and also on the public (perceived or actual harm) and provide the information to the personnel working in and near the exclusion zone.

## 10. Findings – Phase two

### 10.1 General

Oil spill responses, at least on the small/regular scale, are well understood and well-practiced. Chemical incidents can affect a far wider area and affect the broader land side community on a scale not considered by traditional oil spill response. The scenario for phase two was effectively a hazmat problem that happened to originate on a ship in port. This created complexities in control and coordination, particularly given the significant off-site impacts and the long-term nature of those. Unlike an oil spill, where the technical know-how and management capability resides within the marine pollution response arrangements, the consequence management of a hazmat do not. This requires a different mindset and potentially different control arrangements for both response and recovery.

### 10.2 Control

Once the explosion occurred and the smoke plume developed over populated areas consideration of consequences should have seen the Incident Controller and the Local Emergency Operations Controller discussing the boundaries and responsibilities of control as outlined in the NSW State maritime incident and emergency management arrangements.

In the interests of effectively managing the broader impacts on community safety, hand-over of the incident to central jurisdiction control should be considered early. In such an event the port response team should be subsumed by, or operate in conjunction with, broader emergency management arrangements.

### 10.3 Liaison

It became apparent that the off-site impacts of the incident was going to have a considerable impact on the wider Newcastle community. At this stage the Police assumed control of the incident outside the port limits e.g. warnings to the public and evacuations/shelter in place arrangements. The Police controlled these activities from the Local Emergency Operations Centre (LEOC) this decision in effect established two incident control centres, two IMTs and two controllers for different aspects of the one incident. While this is acceptable practice, incident managers should be aware that effective communications between centres is essential in the successful management of complex incidents.

As evidenced during this phase of the exercise, effective liaison between centres requires the timely deployment of liaison officers.

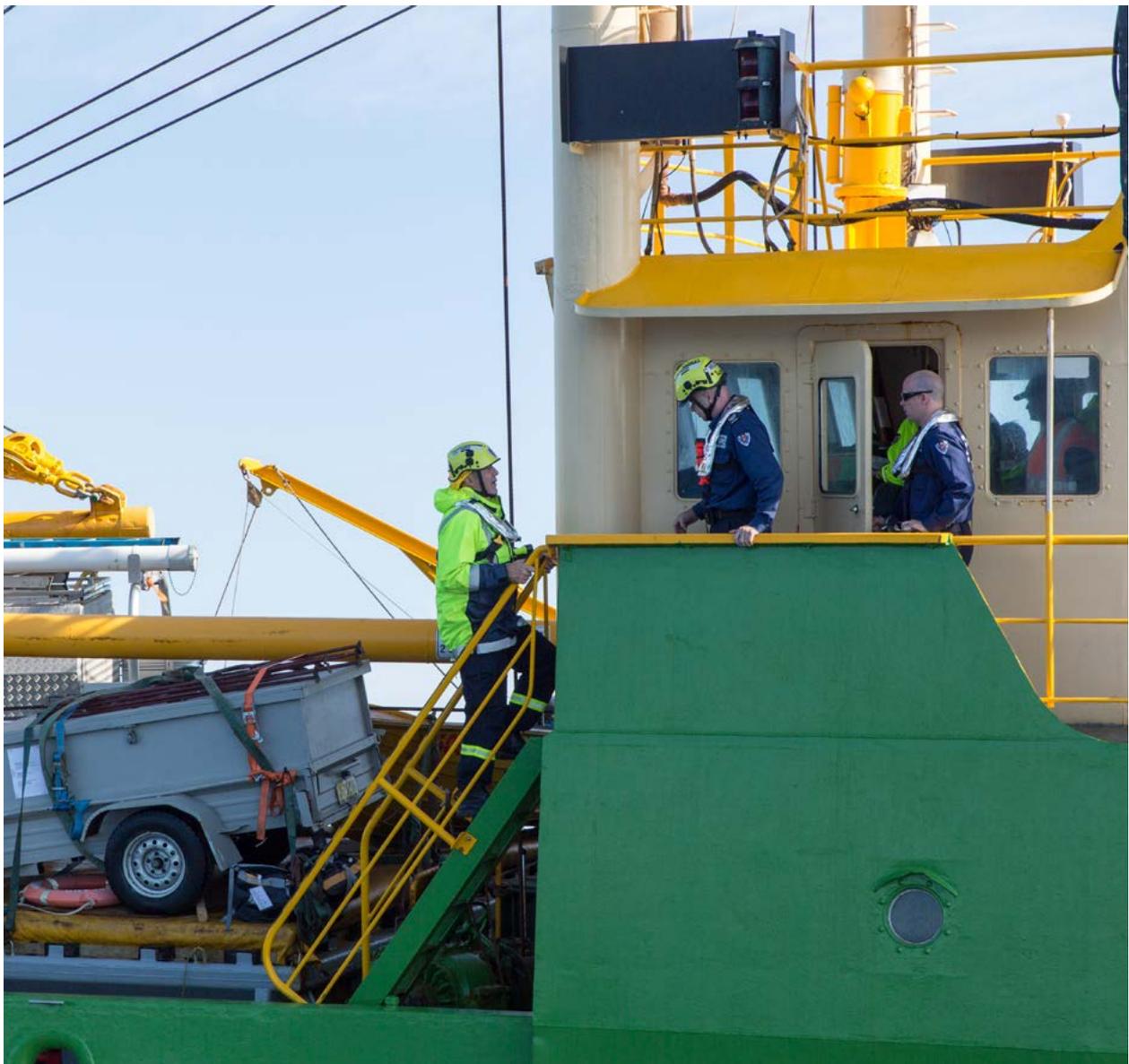
### 10.4 Community and media

Warnings to the community are often considered in oil spill response however in chemical incidents these warnings can take on an urgency outside the realms of our normal experience. During the exercise the port IMT media officer was tasked with developing a holding statement, this is standard practice and should be encouraged. Despite the early start on the holding statement, and some connection with the NSW Public Information Services Functional Area (PISFA), it was not clear either who was responsible for, or was managing, media communication to the wider community to ensure consistent messages.

## 10.5 Cost recovery and legislative authority

Cost recovery arrangements and legal authority were extensively workshopped and the limits of these were identified as a potential issue. There was extensive discussion about the applicability of the NSW Protection of the Environment Operations Act or Marine Pollution Act to managing the impacts of the incident. As the pollution was primarily airborne/land based pollution, rather than marine pollution, there was no clear direction as to what legislative authority or cost recovery arrangements were applicable.

Cost recovery processes for chemical incidents are unclear, this is especially the case when the pollution was not easily defined as marine pollution, e.g. the air pollution and smoke plume in the scenario. The fact that Australia was not a signatory to the HNS convention was identified as a potential cost recovery issue. Engaging legal advice early was discussed.



## 11. Findings – phase three

### 11.1 General

The Exercise tested the validity of both the HRT and its supporting structures as an effective tool in assessing the impacts of a ship experiencing an incident with HNS at sea. Following three years of development and training the team was successfully deployed with only minor issues identified for correction/enhancement.

### 11.2 Personnel and training

The HRT as defined in the capability statement is the appropriate size for initial reconnaissance missions. Training provided at the Australian Maritime College is fit for purpose. Training should include man overboard drills and be provided to FRNSW senior officers who will act in support of the HRT as either liaison officers or forward controllers.

Ongoing skills maintenance and annual exercising is essential to the continued viability of an infrequently called upon capability. Maritime Casualty Officers (MCO) should also participate in this training with FRNSW.

The capability panel should consider an exercise where the HRT deploys from another jurisdiction.

### 11.3 Equipment

- FRNSW's current personal flotation devices (PFD) are not ideal for offshore operations
- FRNSW to consider the application of UAV technology and to advise through the capability panel how this might be brought to bear
- MCO's headwear/helmets are not ideal for deployment via vessel or helicopter
- MCO and FRNSW personnel did not utilise sat phones as operations occurred within mobile phone range
- FRNSW to review deployment equipment with a view to minimising equipment taken on board
- FRNSW to consider size/number of equipment bags taken on deployment.

### 11.4 Doctrine

AMSA and FRNSW to finalise the Joint Standard Operating Procedure and Mutual Aid Arrangement.

## 12. Achieving objectives

### 12.1 Phase one

Objective 1 - Practice the establishment of a MCCU in accordance with draft guidance documentation.

#### General comments

It is concluded that this objective was met for the type and complexity of the incident described in the exercise scenario. A more complex scenario may have required the MCCU to have a wider range of members as described in the National Plan for Maritime Environmental Emergencies.

Key Performance Indicators	Y/N	Comments/Observations
A. The MCCU established in a timely manner	Yes	The MCCU was established in a timely fashion.  The liaison between the MCCU, the representatives of the State Control Agency, Transport for NSW, the port operator, and the Port Authority of NSW, met the performance criteria expected in a response.
B. The incident response level, and thus requirements, determined at the start of the response	Yes	The level of response was determined by the MCCU as soon as information was received in relation to the incident.  At 0915 AMSA requested the identification of the DG container, through acquisition of manifests and shippers information.
C. Roles defined and positions engaged as required in the MCCU	Yes	MCCU roles and responsibilities clearly defined at the commencement.

Objective 2 - Assess the fitness for purpose of the MCCU structure

#### General comments

The MCCU structure was fit for the complexity of the exercise scenario with additional advice provided via phone from AMSA personnel in the Canberra office.

Key Performance Indicators	Y/N	Comments/Observations
A. Was the interoperability between the MCCU and IMT effective in the management of the incident?	Yes	Generally yes – although at times information was not immediately passed on.  Communication and cooperation between MERCOM and the SMPC was particularly effective.
B. Was the interoperability between MCCU members effective in the management of the issue?	Yes	The MCCU functioned well independently.  The MCCU personnel were allocated tasks commensurate with their experience levels, and functioned well within the timeframe and detail provided. The strength of the relationship between AMSA and FRNSW was a particular stand out.
C. Monitor performance of incident control centre personnel and review as the incident unfolds to determine ongoing requirements	Yes	The MCCU support staff did not appear to have a thorough understanding of IMT/ICC processes. Had the MCCU staff been more familiar with the challenges of an ICC spread over several rooms the location specific communications issues may have been identified and addressed earlier.

## Objective 3 - Practice the application of the National Maritime Places of Refuge Risk Assessment Guidance

### General comments

The guidance document is well founded and fulfills its purpose of providing information that expedites the decision making around a place of refuge request.

Key Performance Indicators	Y/N	Comments/Observations
A. Was the National Maritime Places of Refuge Risk Assessment Guidance document consulted?	Yes	The guideline was consulted regularly, and was fully tested. The guidance document provided realistic and applicable information to all the participants.
B. Were the guidelines in the National Maritime Places of Refuge Risk Assessment Guidance appropriate to this incident?	Yes	The guidelines were appropriate to the incident but a number of observations have been noted regarding the complexity of the guidelines and suggestions for streamlining the risk assessment processes and tables.
C. Provide or obtain guidance and support to/from management and support structures	Yes	The guidelines enable support to and from Agency structures but aligning the response to an IMT structure and using the guidelines as part of Incident Action Plan (IAP) development would likely improve the effectiveness of the response.



## 12.2 Phase two

Objective 4 - Practice gaining control of an incident via establishment of an effective Incident Control Centre, timely distribution of accurate situation reports, briefings to senior management, accurate media briefings and the preparation of an initial Incident Action Plan.

### General comments

Overall the IMT was effective in achieving their objectives. The team gained situational awareness, established a structure, issued situation reports and developed an incident action plan. There are a number of opportunities to make the work of IMTs more efficient, improve the effectiveness of information management, ensure role clarity and facilitate working with other parts of the emergency management system.

Key Performance Indicators	Y/N	Comments/Observations
A. Establish an IMT within one hour	Y	The IMT Structure was formed quickly and the IC briefed the team heads within 20 minutes, however, it seemed that the IMT was established by rote, rather than based on actual operational needs. There appeared to be an over-emphasis on Operations and under-emphasis on Planning. The Planning and Operations sections duplicated work and did not appear to have clear communications.
B. Issue first SITREP within two hours	Y	Three SITREPs were prepared and provided to the MPC and support personnel in a timely fashion.
C. Provide regular briefs to senior management	Y	Overall communication between agencies and functional areas appeared effective and the communication between the SMPC and IMT worked well.
E. Provide talking-point brief within three hours	Y	Talking point brief was provided.
F. Prepare an initial IAP within four hours	Y	An IAP with a clear aim, objectives and identified strategies, deemed acceptable to the MPC, was developed within four hours. The IAP was continually being updated however, the full IMT was not aware of the document.

Objective 5 - Assess the effectiveness of multi-agency management of a significant marine hazardous materials response.

### General comments

The scenario was effectively a chemical incident that happened to originate on a ship alongside a port. This created complexities in control and coordination, particularly given the significant off-site impacts and the long-term nature of those. Unlike an oil spill, where the technical know-how and management capability resides within the marine pollution response arrangements, the consequence management of a chemical incident do not. This requires a different mindset and potentially different control arrangements for both response and recovery.

Key Performance Indicators	Y/N	Comments/Observations
A. Engagement with broader EM arrangements in the first hour	Partial	There was early and continuing effective engagement with the EOC established by NSW Police; however, the exercise format limited the reality of interaction between the IMT and the EOC.

## Objective 6 - Assess the State's capability to respond to a significant marine hazardous materials incident.

### General comments

The understanding and cooperation between the responding agencies is a strength apparent in the NSW Maritime Incident and State Emergency Management Arrangements. There was a commendable collegiate approach to dealing with a novel and complex situation that is not apparent in the partial achievement of this particular performance requirement.

Key Performance Indicators	Y/N	Comments/Observations
A. Produce an IAP within four hours that addresses the requirements of NSW EM arrangements and plans	Partial	Practise in managing complex chemical incidents, particularly managing off-site impacts, will improve response and recovery. Ability to meet this outcome was constrained by the exercise format.

## Objective 7 - Explore the interface between response and recovery.

Key Performance Indicators	Y/N	Comments/Observations
Participants identified recovery issues relevant to the scenario	Y	The exercise reinforced that the work of many functional areas is not materially different in response and recovery.

## Objective 8 - Apply the NSW State Recovery arrangements to a significant marine hazardous materials incident caused by a ship.

Key Performance Indicators	Y/N	Comments/Observations
A. Participants determined the management structure required to address the identified issues	Y	Contingency planning for managing the recovery, noting this event would be outside the NDRRA, is required.
B. Agreement was reached on the transition process from response to recovery	Y	See A. above.

## Objective 9 - Explore the financial implications to recovery arrangements for a significant marine hazardous materials incident caused by a ship.

Key Performance Indicators	Y/N	Comments/Observations
Agreement was reached on the appropriateness of the NSW Recovery Arrangements for a Maritime event	Y	Additional work to clarify the arrangements, particularly for cost-recovery is required.

## 12.3 Phase three

Objective 10 - Practice the deployment of the Hazardous and Noxious Substance Reconnaissance Team in accordance with the Joint Standard Operating Procedure.

### General comments

Comments and observations for the objectives below were taken from the post operation debrief.

Key Performance Indicators	Y/N	Comments/Observations
A. Deployment risk assessment completed prior to departure	Y	Positive feedback received at debrief that pre-departure risk assessment process was sound. AMSA and FRNSW forward deployed personnel worked through the JSOP prior to the departure of the HRT.
B. HRT successfully board target vessel	Y	HRT successful at boarding the target. Initial training and skills maintenance was effective. FRNSW to review deployment equipment.
C. HNS correctly identified and relayed to MERCOM along with advice on consequences	Y	The HNS was correctly identified and advice relayed to MERCOM.

Objective 11 - Assess the fitness for purpose of HRT structures

Key Performance Indicators	Y/N	Comments/Observations
A. HRT operates effectively on board target vessel	Y	Comments at the debrief indicated that the HRT at 5 Personnel, 4 X FRNSW, 1 X AMSA is the appropriate size. Communications and team functions as outlined in the JSOP are effective.
B. Shore side support and decision making is effective	Y	Support structure and FRNSW Liaison Officer for onshore support were good.
C. Equipment is suitable and effective for deployment at sea	Partial	FRNSW require appropriate PFDs (with storage and pockets) Consider limiting equipment on initial deployment with equipment available from vessel (if appropriate). Initial Level 1 assessment may be able to provide some guidance on required detector functionality. Re-supply of PPE and breathing apparatus cylinders needs review for a larger response. Consider weight/number of deployment bags.

