

Guidance document:
Incident Management Teams -
Knowledge requirements for responding
to marine oil spills

australian petroleum production & exploration association limited

Preface

Suitable responder training is essential for the effective and timely response to an oil spill. In the unlikely event of a spill, response strategies require personnel who understand, and can perform, a variety of emergency roles and incident management functions.

This guidance document has been prepared by the Australian Petroleum Production & Exploration Association (APPEA), in consultation with the Australian Marine Oil Spill Centre (AMOSC), and peer reviewed by Oil Spill Response Limited (OSRL).

Contributors

APPEA would like to acknowledge the principal authors: Daniel Hazell (INPEX); and Phillip Starkins (AMOSC); and wish to also recognise the sustained efforts of the APPEA Oil Spill Preparedness and Response Working Group.

Review and update

This publication is intended to be a 'living' document with feedback welcomed and incorporated where necessary or desirable.

Version control

Distribution	Version	Notes
December 2020	V01	Exposure draft released.
February 2021	V02	Inclusion of (1) stock model for roles to be covered by the paper [embedded in file in appendix] (2) shift of order of chapters [COVID-19 consideration vs single large IMT] (3) mapping between different training course regime noted for completion and inclusion.
April 2021	V03	Changes to address APPEA OSPRWG feedback. (1) Address comments around org structure specifically the roles requiring OSPR knowledge (2) Details of the OSPR knowledge & skills requirement for each role (3) Draft training pathway reconditions (ICS, AIIMS) (4) Language re-writes through out
June 2021	V04	Updates to Table 3 and EPO/EPS section and completion of appendices. Issued for APPEA OSPRWG review.
June 2021	V05	Updated based on APPEA OSPRWG review
August 2021	V06	APPEA OSPRWG internal revision of Table 3
August 2021	V06A	Addendum 1 and linking statement on page 35.
Sept 2021	V06B	Addition of Addendum 2 – Implementation program.
October 2021	V07	Incorporation of OSRL peer review feedback.

November 2021	V08	Incorporation of NOPSEMA review feedback.
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Glossary of acronyms and terms

Acronym or Term	Meaning
AIIMS	Australian Inter-Service Incident Management Systems
AMOSC	Australian Marine Oil Spill Centre
AMSA	Australian Maritime Safety Authority
CBT	Competency Based Training
COP	Common Operating Picture
C&R	Containment and Recovery
DoT	Department of Transport
EP	Environment Plan
EMT	Emergency Management Team (interchangeable with IMT)
FOB	Forward Operating Base
GIS	Geographic Information System
GN 1488	NOPSEMA Oil Pollution Risk Management Guidance Note (1488)
IAP	Incident Action Plan
IC	Incident Commander/Controller
ICC	Incident Command Centre
ICS	Incident Command System
IMS	Incident Management System
IMT	Incident Management Team (interchangeable with EMT)
ISB	In-Situ Burning
Nat Plan	National Plan for Maritime Environmental Emergencies
OWR	Oiled Wildlife Response
OPEP	Oil Pollution Emergency Plan
OPGGGS E Regs (2009)	Offshore Petroleum and Greenhouse Gas Storage Environment Regulations 2009
OSMP	Operational and scientific monitoring program
OSPR	Oil Spill Preparedness and Response
OSRL	Oil Spill Response Limited
OSTM	Oil Spill Trajectory Modelling
OSRO	Oil Spill Response Organisation
P&D	Protection and Deflection
SME	Subject Matter Expert
SMV	Surveillance, Monitoring and Visualisation
STB	Spill Tracker Buoy
TH	Titleholder (titleholder of an offshore petroleum title/lease/permit)
WWC	Wild Well Control

1. Purpose

Key Concept:

The purpose of this document is to *provide guidance to offshore petroleum titleholders (THs) on a set of defined 'knowledge requirements' for Incident Management Team (IMT) personnel responding to an oil spill.*

By the offshore petroleum industry maintaining appropriate and consistent levels of oil spill response training, this in turn facilitates the sharing of TH IMT personnel, to optimise the Australian offshore petroleum industry's mutual aid capability.

Using this guideline

- Responder training is an essential pre-condition for an effective and timely oil spill response.
- In the unlikely event of a spill, response strategies require personnel who understand, and can perform, a variety of emergency roles and incident management functions.
- TH are encouraged to read this guideline as industry recommended practice for the Australian upstream petroleum industry.
- This guideline presents a repeatable process to assist Australian TH to assess and manage individual IMT training cycles and corporate IMT functional capability.
- The terms and processes contained in this guide are intended to have flexible application.
- While THs retain the flexibility to tailor the contents of this guideline to their individual circumstances, corporate processes, and operational risk profiles, bridging to a consistent approach is desirable to strengthen mutual aid arrangements and titleholder interoperability.
- The active tone of the guide intends to describe what a successful IMT 'will do' or 'will need to do'.
- Note – some THs utilise the term Emergency Management Team (EMT). This term is considered interchangeable with the term IMT.

Regulatory construct

The Offshore Petroleum Greenhouse Gas Storage and Environment Regulations (2009) (OPGGGS E Regs) and the National Offshore Petroleum Safety and Environmental Management Authority's Guidance Note (GN) 1488¹ require that an Environmental Plan (EP) must include measures to ensure that oil pollution response personnel (including the members of the IMT) are aware of their responsibilities and have appropriate competencies and training.

This guidance document addresses the following key areas, in relation to TH IMT oil spill response capability and arrangements:

1. Overview of All Hazard and Oil Spill Preparedness and Response (OSPR);
2. Overview of industry good practice associated with all-hazards IMT training;
3. Detailed industry good practice recommendations for IMT oil spill roles, knowledge requirements and competencies;
4. IMT training models/pathways, including ongoing training/skills maintenance
5. Different models of incident management, based on centralised, remote, or blended teams; and
6. Implementation guidance for TH's EPs and Oil Pollution Emergency Plans (OPEPs).

¹ [A382148 \(npsma.gov.au\)](https://www.npsma.gov.au/A382148)

Out of scope

This guidance document does not seek to define complex, unique and individual characteristics of training, competency, and experience towards mastery. The skills of a full-time, professional oil spill responder (such as AMOSC and OSRL staff), are not expected to be achieved through Titleholder IMT training.

The following activities/elements of spill response are also considered outside of the scope of this document:

- Source control activities for well-control events are outside of the scope of this document. Training guidance associated with source control teams is available in the IPEIPCA-IOPG (2021) document titled *Guidance for Subsea Source Control Competency and Skills*.
- Crisis management (management of the reputation and business sustainability of an operation) are outside the scope of this document. The personnel involved and training associated with Crisis Management Teams (CMT) for offshore petroleum THs is determined on a TH-by-TH basis, with CMTs often located overseas, at TH's head offices.
- In-field response personnel training (e.g. personnel conducting for operations within aircraft, onboard vessels or at shorelines) is outside of the scope of this document.

2. The Incident Management Team – purpose and function

Key Concept:

An IMT is the collective group of people, led by an Incident Controller (IC)/IMT Leader, who are undertaking predetermined delegated functions and jointly carry the responsibility for putting in place measures that lead to the resolution of the emergency incident.

An IMT is typically activated when an event has resulted in risks and/or consequences which are:

- beyond that able to be managed by normal business practices and process, and
- requiring of an expanded/scalable response organisation.

An IMT will use an Incident Management System (IMS) as both a management structure and project process to resolve the causes and consequences of the incident.

An IMT will typically operate using a response philosophy of People, Environment, Asset, Reputation, Sustainability (PEARS), or similar. Typically, the IMT will focus on addressing the P, E and A, whilst a CMT will typically focus on the R and S aspects of a response.

To implement a successful response, an IMT will need to:

- utilise an emergency management process which drives outcomes-based decision making,
- facilitate the execution of operations/actions in the field to achieve the desired outcomes,
- acquire resources (internal and external), financial expenditure and all other support necessary to implement the field response operations,
- be made up of competent individuals who execute their IMT role in a manner which contributes to the incident management and resolution processes,
- implement controls and other measures (including those defined within the EP/OPEP) as appropriate to the situation at the time, driving reactive and proactive planning process whilst concurrently managing field operations, and
- maintain its capacity to undertake its functions for the duration of the event, including longer term response activities².

² These may include demobilisation/decontamination of equipment, personnel and staging areas, long-term scientific/recovery monitoring programmes, financial repatriation of affected stakeholders, media and other stakeholder management.

IMTs should operate an IMS, based on a number of formative principles, summarised as follows:

- **Flexibility:** Structures and hierarchies within the IMS should be swiftly put in place (or disbanded) as required for the situation at hand. Specialised or technical operations should be brought into the IMT under the relevant functional areas rather than left 'outside' the IMT.
- **Management by objectives:** For each operational period, the IC in consultation with the IMT personnel must set objectives which are the agreed, desired outcomes for the incident response for that operational period. IMT objectives must be specific to the incident at the time and should align with the TH's operating goals/priorities (e.g. People / Environment / Asset / Reputation / Sustainability (PEARS)).
- **Functional management:** The IMT must be structured into workable units and sections, and in the operations function in branches, divisions, strike teams and task forces. This must reflect the objectives to be achieved for the response.
- **Span of control:** An individual officer, section chief, manager, or task force leader must be able to adequately manage and command the teams and units reporting to them to ensure actions are completed consistent with objectives. To achieve this, there should generally be no greater than seven direct reports, with five being the 'ideal' number. An exception to this rule is for simple repetitive labour tasks (for example, shoreline clean-up duties).
- **Unity of command:** At any one time there must only be a single set of objectives for all those involved in the response, leading to a single consolidated plan (and effort) for the response.

Structure and functions of an IMT

Core critical functions that constitute the IMT may vary, but typically include the following, in a spill response context, (extract from the IPIECA/IOPG Report 517 - Good Practice Guide Incident Management System for the Oil and Gas Industry³):

TABLE 1: TYPICAL IMT FUNCTIONS FOR AN OIL SPILL EVENT

Function	Oil Spill Outputs	Outcomes
Incident Control	Safe and efficient response structure and organisation.	A response is put in place that meets the requirements of the TH's OPEP (Environmental Performance Outcomes (EPOs) & Environmental Performance Standards (EPS). People and process in place that meets the above.
Planning	Drive the planning process that develops the Incident Action Plan (IAP). Tracking resources. Provide Intelligence/Environment function.	Response planning and 'thinking' that best fits the scenario (oil type, weather, fates, locations, sensitivities), to most effectively cleans up oil.
Operations	Run the operations in the field. Provide technical input to the production of the next operational period IAP. Draft the daily operational orders for each field team Provide tech input to the safety plans.	Run the current operations in the field – the execution of the IAP for that operational period.
Logistics	Acquire resources and materials that match the operations	For purpose resources are where they need to be at the right time.

³ [Incident Management System for the Oil and Gas Industry | IOGP Publications library](#)

	Ensure resources are serviced and maintained to required specifications.	
Finance & Administration	Tracks all costs and provides financial oversight consistent with the control agency requirements.	Financial management process in place for the response.
Other critical functions and examples of their tasks include:		
Safety	Draft the development of a plan that assesses and manages the safety risk of the response.	Safety risks assessed and mitigation plans/processes in place.
Public Information	Develop messaging and manage external information flows to stakeholders and members of the public.	Public information messaging viable and accessible across all relevant platforms.
(Planning subsection including Environment & Intelligence	Oil Spill Preparedness and Response (OSPR) strategies are tactically implemented consistent with good global practice, accounting for the advantages and risks of each strategy. Common Operating Picture (COP) – situational assessment (intelligence). Assessment of environmental risk.	Daily NEBA/SIMA analysis. Analysis of the resources at risk. Deployment of OSPR subject matter experts and technical advice into the IMT.
Liaison Officers	External/public/stakeholder affairs are managed.	Key stakeholders (government, regulatory and community) are informed of the incident and have their concerns acknowledged and addressed by the response organisation.

The IC/IMT Leader, commanding the IMT as above, plans and authorises the operational activities in the field that lead to the resolution of the incident. For the TH, this success (end point of the response) is realised when the set objectives of the response have been achieved, (in agreement with any additional relevant stakeholders, e.g. a State/Territory Control Agency).

From an operational perspective, all IMTs need to focus on the timeliness of response phases, moving the IMT to operating at a response 'level' and 'cadence' commensurate to support the required operations in the field. The speed at which an IMT reaches the optimum staffing to match the ongoing response level will be driven by individual factors of the scenario, as it evolves and as the IMT responds. To achieve this success, the IMT structure adjusts through the different phases of response, diagrammatically demonstrated below:

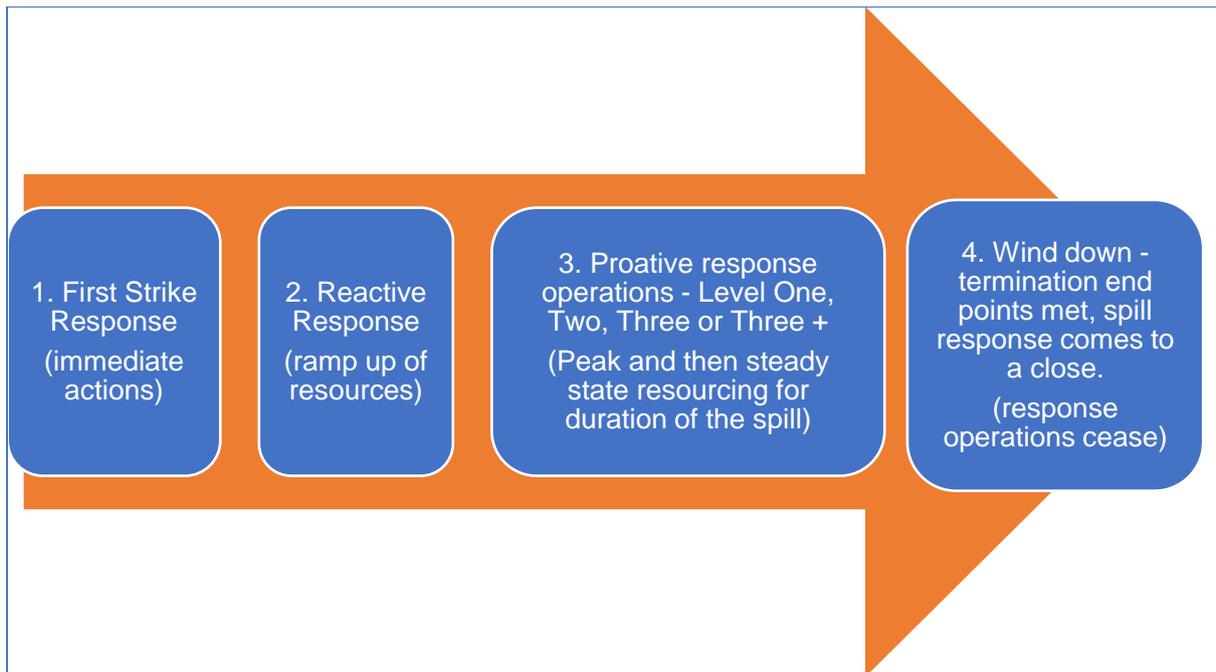


FIGURE 1 -RESPONSE PHASING

3. Overview of all hazards and oil spill knowledge requirements

Key Concept:

A common practise emergency management model within the TH community is for their IMT members to have a solid foundation of transferable general emergency management skills ('core knowledge') applicable for all incidents.

This core 'all-hazards' knowledge is then built upon with hazard specific knowledge applicable for the risks that may be present through a TH's individual activities/operations.

THs are required to maintain an IMT, and typically achieve this utilising in-house expertise, with personnel appointed to roles based on their skill sets and position within the company.

A TH's IMT may be supplemented by subject matter experts (SMEs) from external organisations such as the Australian Marine Oil Spill Centre (AMOSC), Oil Spill Response Limited (OSRL), Wild Well Control (WWC) etc, or from within global related entities to the TH (regional or global response team members).

A challenge presented by this model is that participation in an IMT is not the routine element of many IMT members' day-to-day jobs. The Incident Command Centre (ICC) can present as an unfamiliar and possibly stressful working environment. This in turn can compromise the performance of the IMT if members are not sufficiently trained and skilled in their respective roles/overview of the process.

This challenge can be overcome with a robust, ongoing training and skills maintenance programme, bought together at the time of a response with a commonly understood and practised IMS. Section 6 of this document provides guidance on the ongoing training and skills maintenance programs a TH IMT should undertake.

All-hazards vs hazard-specific knowledge

With the view that IMTs are used to resolve events associated with a range of different hazards, it is a requirement of an IMT to have a baseline of knowledge and skills that can be applied across different types of incident response.

A TH should then build upon this baseline with hazard-specific knowledge appropriate to the risks faced by the operations, and the specific types of incident response generated by these risks.

Figure 2 provides an example of the inter-relationship between all-hazards, and hazard-specific knowledge requirements for an IMT.

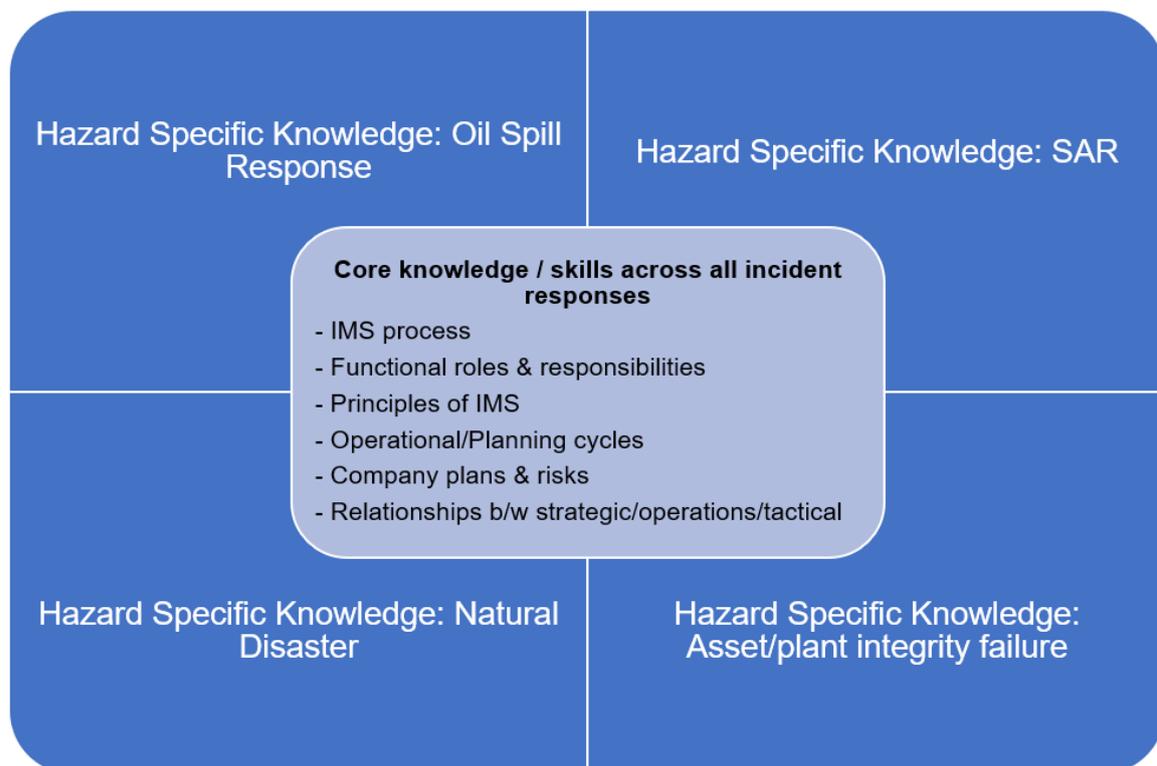


FIGURE 2 – RELATIONSHIP OF ALL HAZARDS VS HAZARD SPECIFIC KNOWLEDGE

Oil spill response is one of several incident responses that a TH must be prepared for. These include ensuring that OSPR-trained people are ready to respond to and manage the consequences of an unplanned event. This type of response has several characteristics that make managing this hazard different to others including:

- specific regulatory attention and focus,
- a high degree of public attention and critique,
- potential for long response timeframes and post spill actions (scientific monitoring may last many years) and
- financial and reputational impacts of a very high severity.

Outside of these characteristics, OSPR includes a number of key operational components and critical technical skills that are required to ensure a timely successful response. These are compounding characteristics that make OSPR a unique, difficult and complex hazard to manage.

4. Industry good practice – IMT all-hazards training

Key Concept:

THs should ensure that they maintain an IMT with appropriate all-hazards training.

Industry good practice, driven by a range of various safety and environmental regulations as well as a TH's own social licence to operate, dictate that THs maintain an IMT, ready to respond to a wide range of potential emergency events, which could occur as a result of the TH's activities.

All-hazards IMT training is typically required for all members of a TH's IMT. The all-hazards training provides the foundational knowledge required to function within the various roles of an IMT. Typically, all-hazards training addresses the following areas:

- TH activities, risks, and potential emergency situations.
- Details of the incident management system (IMS) used by the TH (e.g., Incident Command System [ICS], Australian Inter-Agency Incident Management System [AIIMS] or a TH variation).
- Core principles of the selected IMS.
- Hierarchy of command and organisation of the TH IMT.
- Core functions of the IMT (leadership, planning, operations, logistics, finance and admin), and details (e.g. objectives/tasks/outcomes) of the specific IMT roles.
- Standing up and management of an ICC.
- Establishing effective communication systems.
- Accurate recording, collation and analysis of incident data – the management of emergency response information/record keeping.
- Situation assessment.
- Phases of emergency response, (e.g., event escalation/de-escalation or the 'prevent, prepare, respond, recover' model).
- The design and scope of incident response plans specific to risks and needs.
- Determining incident priorities and objectives (using TH-defined processes).
- Response planning cycles and Incident Action Plan (IAP) development.
- TH-specific financial processes as related to the IMT activities.
- Interfaces with external agencies (government) and command/control arrangements for different hazard types.
- Liaison with internal and external support structures.
- Clarifying and implementing the TH's legal obligations.

All THs should ensure they develop a program of IMT training, to enable their IMT personnel to obtain and maintain the required all-hazards knowledge – and demonstrate and practice the all-hazards competencies – associated with their respective IMT role/position.

Typically, THs can achieve their all-hazards training through either TH-specific, in-house, all-hazards training program, or a TH may choose to outsource the training to a third-party training provider, who may or may not be accredited.

Regardless of the selected all-hazards IMT training pathway, the fundamental outcome of the all-hazards IMT training should be that records exist to demonstrate that individuals have been imparted with the relevant knowledge requirements and have demonstrated a suitable level of skills to fulfill their role during their all-hazards training.

At the time of preparation of this document, the most commonly used all-hazards training courses, delivered by third parties to TH IMTs were:

- Incident Control System (ICS) training. E.g.
 - ICS200 – Basic Incident Command System for Initial Response
 - ICS400 – Advanced Incident Command System
- PMAO training. E.g.
 - PMAOMIR418 – Coordinate incident Response (e.g. IMT Leaders)
 - PMAOMIR322 – Manage Incident Response (e.g. all other IMT roles)
- PUAO training. E.g.
 - PUAOPE012 – Control a Level 1 incident
 - PUAOPE018 – Control a Level 2 incident
 - PUAOPE019 – Control a Level 3 Incident
 - PUAOPE006 – Control multi-agency emergency situations
 - PUAOPE025 – Manage planning for a complex incident
 - PUAOPE023 – Manage operations for a Level 2 incident
 - PUAOPE022 – Manage logistics for a complex incident

The skill sets gained through the various all-hazards training pathways are close to being intra-operable. An IC or other IMT member who has undertaken the AIIMS/National Accredited training system could – with some small re-familiarisation/induction – work in an ICS environment. Similarly, an IC or other IMT member from the ICS system would understand and be effective within an ‘AIIMS’ IMT.

For comparative purposes, the ICS and AIIMS organisational structures are presented in Appendix A.

Each TH IMT structure may be slightly different from these structures, however they should be broadly aligned with one or the other.

5. Industry good practice – Oil spill knowledge requirements

Key Concept:

THs should ensure that nominated IMT personnel maintain specific oil spill response knowledge requirements and competencies, as detailed in this section.

IMT oil spill functions

Figure 3 is an IMT organisation chart, only showing those IMT Functions deemed necessary to have oil spill knowledge/competencies, to manage a spill event.

There are many other typical IMT positions not displayed on Figure 3. This is considered acceptable, as the functions not displayed do not need any oil spill knowledge/competencies to function effectively within the IMT, regardless of the spill in the scenario. For example, log keepers, general logistics support personnel, and the finance and admin section can successfully complete their functions during an oil spill event using their all-hazards training and competencies only.

Figure 3 was designed under the assumption that all OSPR strategies are required. Specifically, surveillance, monitoring and visualisation, at-sea containment and recovery, surface and subsurface dispersant, sensitive resource protection, oiled-wildlife response, shoreline clean-up assessment technique (SCAT), and shoreline clean-up.

THs should tailor their IMT structure to match their activity-specific risks and consequences. If there are specific IMT functions which are applicable to the risk/consequence needing to be managed, the specific functions may be removed. (E.g. – if there are no shoreline impacts then no shoreline response or SCAT functions are needed).

For cross-referencing purposes, full IMT structures, using traditional ICS or AIIMS IMS are presented in Figure 7 and Figure 8.



FIGURE 3: IMT ORGANISATION CHART – OIL SPILL SPECIFIC FUNCTION

Oil spill general knowledge requirements

All members of an IMT who have been nominated to maintain oil spill awareness should, as a minimum, be provided with the general oil spill knowledge requirements shown in Table 2.

TABLE 2: IMT OIL SPILL GENERAL KNOWLEDGE REQUIREMENTS

Applicable to all Functions identified in Figure 3.		
TOPIC	KNOWLEDGE	CONTEXT
Oil spill response strategies	<p>Awareness of the range of available response strategies, their purpose, and how they will affect an outcome. Specifically:</p> <ul style="list-style-type: none"> • Surveillance, modelling and visualization (SMV) • Offshore surface dispersants • Offshore subsea dispersants • Controlled in-situ burning (ISB) • At-sea containment and recovery (C&R) • Protection of sensitive resources (protect and deflect/P&D) • Shoreline clean-up assessment technique (SCAT) • Shoreline clean-up (shoreline response programme) • Oiled wildlife response (OWR) • Waste management and decontamination • Operational and scientific monitoring program (OSMP) 	<p>Provides the IMT with an awareness of the range of available OSPR strategies, which enables the IMT to:</p> <ul style="list-style-type: none"> • evaluate if the response strategy is appropriate/likely to be effective, based on the IMT's objectives at the time • understand the function each IMT functional undertake to mobilise and execute the response strategies • communicate with authority & knowledge to stakeholders.
Fate and environmental effects of spills	<p>Awareness of the characteristics of different oil types.</p> <p>Awareness of the weathering properties/process of different oil.</p> <p>Awareness of the different effects different oil types can have on environmental and socio-economic values and sensitivities.</p>	<p>Provides the IMT with an awareness of the range of potential consequences of different types of oil spills.</p>
Regulatory context and stakeholder engagement	<p>Awareness of the legislative context/regulatory environment governing oil spill response, as related to the upstream petroleum industry in general, and any key TH specific activities.</p> <p>Awareness of the interfaces and responsibilities of response and coordination agencies involved in the TH OSPR response.</p> <p>Awareness of external oil spill support agencies and the broad types of support they can offer (AMOSC, tier 3 Oil Spill Response Organisations [OSROs], AMSA, State/Territory Control Agencies, contracted specialist agencies).</p>	<p>Provides the IMT with an awareness of the functions and responsibilities of the various government and other agencies and stakeholders the IMT is likely to interface with across a range of spill response scenarios.</p>

Applicable to all Functions identified in Figure 3.		
TOPIC	KNOWLEDGE	CONTEXT
	Awareness of other third parties likely to be involved in OSPR operations (vessels, FOBs, surveillance contractors, etc.).	
TH-specific oil spill preparedness and response arrangements	<p>Awareness of the TH's OPEP requirements. Specifically, a high-level/overview of the following:</p> <ul style="list-style-type: none"> • TH activities and associated spill risks • Environmental values and sensitivities in the area in which the TH operates • OPEP activation/trigger and notification requirements • First strike actions • Secondary response options related to TH risks (strategic Net Environmental Benefit Analysis [NEBA]/Strategic Impact Mitigation Assessment [SIMA] outcomes) • TH response capability/arrangements. 	Provides the IMT with the awareness of their specific OPEP requirements.

IMT function-specific oil spill knowledge requirements and competencies

Whilst there are some functions within the IMT which would only require the general knowledge requirements provided in Table 2, (e.g. media/public information function) most of the nominated IMT oil spill functions will require specialised knowledge and skills, beyond the oil spill general knowledge requirements. These are IMT functions where:

- technical competence and specialist knowledge is critical to successfully execute a task or process within the application of the IMS, or
- there is an OSPR-specific element within the IMS critical to the completion of that task (e.g. – completion of a NEBA/SIMA to inform IAP development), or
- specific responsibilities include executing and implementing the IMS process through leadership of sections/branches/units.

For each of the IMT oil spill-specific functions presented in Figure 3, the recommended function-specific knowledge requirements have been provided in Table 3.

To aid in interpretation, the following definitions have been used within Table 3, to provide context to the level of knowledge/competency personnel fulfilling a functional position should maintain.

- **Awareness of:** IMT personnel within the function have an understanding/familiarity of the topic, or rudimentary understanding of a process and how to apply the outcomes. May require additional support/validation from subject matter experts (SMEs) depending on the specific scenario.
- **Detailed understanding:** IMT personnel within the function have the skills equivalent to that of a competent practitioner and are able to deploy/apply knowledge/information (with limited assistance from other SMEs as required).

TABLE 3: FUNCTION SPECIFIC OIL SPILL KNOWLEDGE REQUIREMENTS AND SKILLS

Control Function (Incident Commander/Controller)		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
Dynamic IAP planning and implementation	<p>Detailed understanding of the processes required to lead a team that drafts, executes and reviews IAPs against an oil spill scenario using;</p> <ul style="list-style-type: none"> • environmental risk assessments • Situational awareness and predictive processes/tools • response strategies selection processes • ongoing monitoring of response effectiveness/awareness of the criticality/outcomes required of the environmental/socio-economic risk assessments and NEBA/SIMA processes as these tasks relate to IAP planning/development. 	<p>The Control Function should be able to drive the IAP process – directly or through delegation – as it applies to a dynamic/evolving spill response situation.</p> <p>This Control Function ultimately has accountability for the execution of appropriate response operations/actions by the TH achieve the defined objectives.</p>
OSPR Strategies	<p>Awareness of the pros/cons of the range of response strategies (how the response strategies will affect an outcome), as related to a range of spill scenarios, response objectives and values and sensitivities at risk.</p> <p>Awareness of the typical end points criteria/termination criteria typically used for each response strategy.</p>	<p>The Control Function should have the subject matter knowledge/understanding to agree/authorise OSPR strategies, to achieve defined objectives.</p>
Regulatory context and stakeholder engagement	<p>Detailed understanding (ability to accurately describe, role/function) of interfaces and responsibilities, of statutory, policy, response and coordination agencies involved in the TH OSPR response (Commonwealth – NOPSEMA, DISER, OPICC, State Control Agencies and Wildlife Response agencies, etc.).</p> <p>Detailed understanding of ‘cross-jurisdiction’ response arrangements (division of command and control between TH and State/Territory Control Agency) and process for the transfer of Control Agency, as related to TH location.</p> <p>Detailed understanding of ‘cross-jurisdiction’ response arrangements (division of command and control between TH and State Control Agency) and process for the transfer of Control Agency, as related to TH location.</p> <p>Detailed understanding of processes for the activation/authorisation of Mutual Aid Arrangements with other TH or OSROs (e.g. MoUs for access to other TH assets/capabilities)</p>	<p>Control function needs to be able to navigate the external regulatory environment on behalf of the TH and understand the regulatory/statutory regime for OSPR within the relevant jurisdictions.</p> <p>Control function should have awareness of available mutual aid capabilities and how to activate/access these resources.</p>
Safety during spill response	<p>Awareness of the hazards presented within an oil spill that are different from day-to-day operations, specifically:</p> <ul style="list-style-type: none"> • hydrocarbon contact • atmospheric risks associated with on water and shoreline response activities, as related to oil types and weathering • operating environments (marine, aviation, shoreline, wildlife, waste) • hazards specific/unique to the range of response strategies. 	<p>Control Function should have an awareness of the hazards each response strategy may present and be able to verify that controls are in place to manage the hazards, prior to authorising their implementation.</p>

Liaison Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
Regulatory context and stakeholder engagement	<p>Detailed understanding of interfaces and responsibilities, of statutory, policy, response and coordination agencies involved in the TH OSPR response (Commonwealth - NOPSEMA, DISER, OPICC. State/Territory – Control Agencies/wildlife response agencies).</p> <p>Detailed understanding of ‘cross-jurisdiction’ response arrangements (division of command and control between TH and State/Territory Control Agency) and process for the transfer of Control Agency, as related to TH location.</p>	<ul style="list-style-type: none"> • LO provides the TH IMT with the interface to critical external stakeholder. • LO may be required to speak with the authority of the IC/TH. • In certain circumstances, a TH LO may be required to make decisions and commitments on behalf of the TH to an external stakeholder. • The LO should therefore be able to contextualise information based on the TH’s operational and regulatory environmental.

Safety Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
Safety during spill response	<p>Detailed understanding/ability to apply risk mitigation processes to the planning and execution of response strategies.</p> <p>Awareness of the hazards presented within an oil spill that are different from day-to-day operations, specifically:</p> <ul style="list-style-type: none"> • hydrocarbon contact • Atmospheric risks associated with on water and shoreline response activities, as related to oil types and weathering. • operating environments (marine, aviation, shoreline, wildlife, waste) • hazards specific/unique to the range of response strategies. <p>Awareness of the available documents and guidelines that are available, to assist with the risk assessment and safety planning in a response setting – e.g. AMSA/National Plan, AMOSC and IPIECA health and safety guidance documents.</p> <p>Awareness of modelling tools available to inform atmospheric risk assessment associated with on water response activities. Ability to activate this capability and interpret the outcomes.</p>	Safety function should be able to ensure the unique suite of hazards/risks associated with oil spill response are identified, considered and managed appropriately.

Media & Public Affairs Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
General knowledge function only – no specific knowledge/skills required.		

Operations Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
Regulatory operating environment and external stakeholders	<p>Awareness of (ability to accurately describe the role/function) of interfaces and responsibilities, of response and coordination agencies involved in the TH OSPR response.</p> <p>Awareness of the external support agencies and the types of support they can offer (AMOSC, tier 3 OSROs, AMSA, State/Territory government agencies, contracted specialist agencies).</p>	<p>Operations function needs to have awareness of the regulatory/statutory regime and boundaries/responsibilities for OSPR within the relevant jurisdictions, especially where there are multiple Control Agencies (e.g. cross-jurisdiction response scenarios).</p> <p>Operations function should have awareness of the regulatory regime to be able to effectively communicate/interface effectively and at times operate in conjunction with external stakeholders.</p>
TH-specific oil spill preparedness and response arrangements	<p>Awareness of the capabilities available to the TH, both in-house and via third parties, necessary to implement response strategies (e.g. vessels, aviation, response equipment, personnel, FOBs, surveillance contractors, etc).</p> <p>Awareness of the processes/arrangements in place to activate/mobilise in-house and third-party capabilities</p> <p>Awareness of specific capabilities/arrangements in place to activate and implement TH OPEP specific first strike arrangements, within OPEP specified timeframes.</p> <p>Awareness of TH's NEBA/SIMA process and likely ongoing/secondary response strategies, and ability to execute these strategies through specific operations functions including:</p> <ul style="list-style-type: none"> • marine operations • aviation operations • shoreline operations • oiled wildlife response operations • Waste management operations • any other operations as required to meet the incident objectives of the IAP. 	Operations function should be able to execute the OPEP using the resources and platforms available to the TH.

Operations Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
OSPR Strategies	<p>Awareness of the safe and efficient use, and limitations of equipment and consumables used for the range of response strategies listed in Table 2.</p> <p>Awareness of the safe and efficient use and limitations of marine, aviation and land platforms (vehicles, vessels, aircrafts, etc) to execute response strategies listed in Table 2.</p> <p>NOTE: These tasks may be delegated to marine, aviation, shoreline, waste or OWR functional leads.</p>	Operations function should have the knowledge of the equipment and platforms, and their limitations, to coordinate the implementation of response strategies.
Dynamic IAP planning and implementation	<p>Awareness of the processes to prepare task assignments/orders that will be used by in-field teams to tactically execute response strategies to achieve the objectives.</p> <p>Detailed understanding of process to oversee/provide ongoing support and monitor the effectiveness the in-field teams implementing the IAP.</p> <p>NOTE: These tasks may be delegated to marine, aviation, shoreline, waste or OWR functional leads.</p>	Operations function should be able to assist in the preparation and implementation of the IAP.
Safety during spill response	Awareness of the processes for safely managing all operations.	Operations function should be able to ensure hazards are identified and processes are in place to ensure safety when conducting marine, aviation and shoreline operations.

Marine Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
TH specific oil spill preparedness and response arrangements	<p>Detailed understanding of marine based capabilities/arrangements in place to activate and implement TH OPEP specific marine based first strike arrangements, within OPEP specified timeframes.</p> <p>Detailed understanding of marine based capabilities/arrangements in place, required to activate and implement marine based secondary/ongoing response strategies.</p>	Marine function should be able to execute the OPEP using the resources and platforms available to the TH.
OSPR Strategies	<p>Awareness of the mobilisation, safe and efficient use and limitations of equipment and consumables used for marine based response strategies, including:</p> <ul style="list-style-type: none"> • Surveillance, modelling and visualization (SMV) • Offshore surface dispersants • Offshore subsea dispersants • Controlled in-situ burning (ISB) • At-sea containment and recovery (C&R) • Protection of sensitive resources (protect and deflect / P&D) • Shoreline assessment (SCAT) – marine side operations • Shoreline clean-up (shoreline response programme) – marine side operations • Oiled wildlife response – marine side operations • Waste management & decontamination • Operational and Scientific Monitoring Program (OSMP). <p>Detailed understanding of the safe and efficient use and limitations of marine platforms (vessels) when executing strategies as detailed above.</p>	Marine function should have the knowledge of the equipment and platforms, and their limitations, to coordinate the implementation of marine based response strategies.
Dynamic IAP planning and implementation	<p>Awareness of the processes to prepare task assignments/orders that will be used by marine based in-field teams to tactically execute response objectives.</p> <p>Detailed understanding of process to oversee/provide ongoing support and monitor the effectiveness the marine based in-field teams implementing the IAP.</p>	Marine function should be able to assist in the preparation and implementation of the IAP, as related to marine operations.

Marine Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
Safety during spill response	Detailed understanding of the processes for safely managing marine operations.	Marine function should be able to ensure hazards are identified and processes are in place to ensure safety when conducting both offshore and nearshore maritime operations.

Aviation Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
TH-specific oil spill preparedness and response arrangements	Detailed understanding of aviation-based capabilities/arrangements in place to activate and implement TH OPEP specific first strike arrangements, within OPEP specified timeframes. Detailed understanding of aviation-based capabilities/arrangements in place, required to activate and implement secondary/ongoing response strategies.	Aviation function should be able to execute the OPEP using the resources and platforms available to the TH.
OSPR Strategies	Awareness of the mobilisation, safe and efficient use and limitations of equipment and consumables used for: <ul style="list-style-type: none"> • SMV – specifically light and heavy rotary or fixed wing aircraft, AUV, aerostats or other tethered aerial platforms, • Aerial dispersant application • Directional control from overhead assets for marine, shoreline or OWR responses. Detailed understanding of the coordination of oil spill aerial surveillance operations. Detailed understanding of AMSA/AMOSC FWADC deployment arrangements and JSOP, and other planning documentation Awareness of tier three (international) FWAD aviation capabilities and arrangements (if relevant to TH activities/risks) Awareness of the airfield locations and requirements of those airfields to mount ongoing aerial operations. Detailed understanding of the safe and efficient use and limitations of aviation platforms to execute strategies as detailed above.	Aviation function should have the knowledge of the equipment and platforms, and their limitations, to coordinate the implementation of aviation-based response strategies.
Safety during spill response	Detailed understanding of the processes for safely managing aviation operations.	Aviation function should be able to ensure hazards are identified and processes are in place to ensure safety when conducting aviation operations.
Dynamic IAP planning and implementation	Awareness of the processes to prepare task assignments/orders that will be used by aviation based in-field teams to tactically execute response objectives. Detailed understanding of process to oversee/provide ongoing support and monitor the effectiveness the aviation based in-field teams implementing the IAP.	Aviation function should be able to assist in the preparation and implementation of the IAP, as related to aviation operations.

Protection of Sensitive Resources Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
TH specific oil spill preparedness and response arrangements	Detailed understanding of resource protection-based capabilities/arrangements in place to activate and implement TH OPEP specific first strike arrangements, within OPEP specified timeframes. Detailed understanding of resource protection capabilities/arrangements in place, required to activate and implement secondary/ongoing response strategies. Detailed understanding of any TH specific Tactical Response Plans for specific shoreline sensitivities/resources.	Resource protection function should be able to execute the OPEP using the resources and platforms available to the TH.

Protection of Sensitive Resources Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
OSPR Strategies	<p>Awareness of the mobilisation, safe and efficient use and limitations of equipment and consumables used for resource protection including:</p> <ul style="list-style-type: none"> - Near-shore containment and recovery (C&R) - Protection of sensitive resources (protect and deflect / P&D) - Shoreline clean-up (shoreline response programme) – marine side operations - Oiled wildlife response - Waste management & decontamination. <p>Detailed understanding of the safe and efficient use and limitations of marine and land platforms to execute strategies as detailed above</p>	Resource protection function should have the knowledge of the equipment and platforms, and their limitations, to coordinate the implementation of resource protection-based response strategies
Safety during spill response	Detailed understanding of the processes for safely managing resource protection (nearshore/shoreline) operations.	Resource protection function should be able to ensure hazards are identified and processes are in place to ensure safety when conducting resource protection operations.
Dynamic IAP planning and implementation	<p>Awareness of the processes to prepare task assignments/orders that will be used by resource protection based in-field teams to tactically execute response objectives.</p> <p>Detailed understanding of process to oversee/provide ongoing support and monitor the effectiveness the resource protection in-field teams implementing the IAP.</p>	Resource protection function should be able to assist in the preparation and implementation of the IAP, as related to resource protection operations.

Shoreline Response Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
TH specific oil spill preparedness and response arrangements	<p>Detailed understanding of SCAT and shoreline clean-up capabilities/arrangements in place to activate and implement TH OPEP specific first strike arrangements, within OPEP specified timeframes.</p> <p>Detailed understanding of SCAT and shoreline clean-up capabilities/arrangements in place, required to activate and implement secondary/ongoing response strategies.</p> <p>Detailed understanding of any TH specific Tactical Response Plans for specific shoreline sensitivities/resources.</p>	Shoreline response function should be able to execute the OPEP using the resources and platforms available to the TH.
OSPR Strategies	<p>Awareness of the mobilisation, safe and efficient use and limitations of equipment and consumables used for SCAT and shoreline clean-up response, temporary waste management, and decontamination.</p> <p>Awareness of how SCAT data is used to inform shoreline response planning.</p> <p>Detailed understanding of</p> <ul style="list-style-type: none"> - stages of shoreline clean up, - different techniques required to clean different types of shoreline (shoreline treatment recommendations) - the execution of the shoreline treatment programme - shoreline waste management and decontamination. <p>Awareness of the safe and efficient use and limitations of marine and land platforms to execute shoreline response as detailed above.</p>	Shoreline response function should have the knowledge of the equipment and platforms, and their limitations, to coordinate the implementation of shoreline-based response strategies.
Safety during spill response	Detailed understanding of the processes for safely managing shoreline response operations.	Shoreline response function should be able to ensure hazards are identified and processes are in place to ensure safety when conducting shoreline operations.

Shoreline Response Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
Dynamic IAP planning and implementation	<p>Awareness of the processes to prepare task assignments/orders that will be used by resource protection based in-field teams to tactically execute response objectives.</p> <p>Detailed understanding of process to oversee/provide ongoing support and monitor the effectiveness the shoreline response in-field teams implementing the IAP.</p>	Shoreline response function should be able to assist in the preparation and implementation of the IAP, as related to shoreline operations.

OWR Function (note – knowledge and skills listed below were derived from the WA DBCA Oiled Wildlife Response Plan and Manual (2021))		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
TH specific oil spill preparedness and response arrangements	<p>Detailed understanding of OWR capabilities/arrangements in place to activate and implement TH specific or Regional OWR plans, including first strike arrangements, within OPEP/OWR plans, specified timeframes, and ongoing OWR activities.</p> <p>Detailed understanding of the IMT personnel, relevant agencies and specialists needed to determine initial wildlife response requirements and activate Regional OWRP if required.</p> <p>Detailed understanding how to implement industry/government OWR plans as required.</p> <p>Detailed understanding of how to assume control of wildlife response operations; collaborate with IC and OSC on likely priorities of wildlife response pending approval of formal IAP.</p>	OWR function should be able to execute the OPEP using the resources and platforms available to the TH.
OSRP Strategies	<p>Detailed understanding of all techniques and aspects of operationally safe and effective implementation of fauna reconnaissance, collection, transportation, treatment, rehabilitation, release and post release monitoring.</p> <p>In consultation with relevant IMT members and stakeholders appoint personnel as Wildlife Unit Team Members for deployment. Detailed knowledge of the infrastructure required to mount an OWR.</p> <p>Detailed knowledge of the requirements to coordinate Wildlife Unit personnel and OWR activities in all phases of the wildlife response.</p> <p>Detailed understanding of animal welfare principles, and how they are applied as a priority across the Wildlife Division and the IMT.</p> <p>Detailed understanding of the processes required to:</p> <ul style="list-style-type: none"> • Support the establishment of field oiled wildlife facility/s and primary care facility/s as required. • Manage the function of the wildlife facility/s. • Provide decisions on the operational objectives of the Wildlife Unit, and allocate duties based on the wildlife affected, the particulars of the spill and the capacity for intervention. • Determine the tactics to implement the strategies to achieve the objectives of the IAPs. • Maintain an effective record system of wildlife cases. • Authorise the disposal of dead wildlife. • Convene daily meetings for key personnel in the Wildlife Unit and act on needs for external assistance. • Liaise extensively and regularly with other operational units throughout the incident. • Represent the wildlife response to the media, or delegate as necessary. 	OWR function should have the knowledge of the equipment and platforms, and their limitations, to coordinate the implementation of shoreline-based response strategies.
Safety during spill response	Detailed understanding of the processes for safely managing OWR operations, including the identification of new and potential risks within the Wildlife Division and monitoring of safety of personnel.	OWR function should be able to ensure hazards are identified and processes are in place to ensure safety when conducting OWR operations.
Dynamic IAP planning and implementation	Detailed understanding of the processes to prepare task assignments/orders that will be used by OWR in-field teams to tactically execute response objectives.	OWR function should be able to assist in the preparation and implementation of the IAP, as related to OWR operations.

	<p>Manage personnel in the Wildlife Unit, including providing a safe working environment and maintaining a log of activities and decisions.</p> <p>Ensure tactics are consistent with the strategies approved within the IAP and provide input into the review of strategies as required</p> <p>Detailed knowledge of how to Implement Incident Action Plans (IAPs) associated with Secondary & Tertiary wildlife response activities.</p> <p>Detailed understanding of process to oversee/provide ongoing support and monitor the effectiveness OWR in-field teams implementing the response strategies.</p> <p>Maintain ongoing exchange with the Operation's Officer on the incident situation, progress towards achievement of allocated tasks, and when:</p> <ul style="list-style-type: none"> • IAP is to be modified • Additional resources are needed • Surplus resources are available • Hazardous situations are present • Significant events occur <p>Maintain ongoing liaison with the Environment Unit Lead and Situation/Intelligence Unit to provide specific information on the incident situation, progress towards achievement of incident objectives, emerging risks and effectiveness of strategies.</p> <p>Ensure tactics are consistent with the strategies approved within the IAP and provide input into the review of strategies as required.</p>	
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Planning Function (Note – Planning, Environment, Situation/Intelligence Functions may cross-over, depending on the TH defined IMT structure).		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
Regulatory context and stakeholder engagement	<p>Awareness of (ability to accurately describe, role/function) of interfaces and responsibilities, of statutory, policy, response and coordination agencies involved in the TH OSPR response (Commonwealth - NOPSEMA, DISER, OPICC, State Control Agencies and Wildlife Response agencies, etc).</p> <p>Awareness of 'cross-jurisdiction' response arrangements (division of command and control between TH and State/Territory Control Agency) and process for the transfer of Control Agency, as related to TH location.</p> <p>Awareness of 'cross-jurisdiction' response arrangements (division of command and control between TH and State Control Agency) and process for the transfer of Control Agency, as related to TH location.</p>	<p>Planning function should have an awareness of regulatory and external stakeholder expectations and responsibilities, to ensure response objectives are appropriate within the regulatory context of the spill scenario.</p> <p>Planning function (with support from Environment function) should also be able to provide support to the Control function in their role to navigate the external regulatory environment on behalf of the TH and understanding the regulatory/statutory regime for OSPR within the relevant jurisdictions.</p>
TH specific oil spill preparedness and response arrangements	<p>Awareness of the use and application of the planning/situational awareness tools including:</p> <ul style="list-style-type: none"> • OSTM • vector analysis • satellite tracker buoys (STBs) • visual observations • satellite imagery • other SMV processes. <p>Awareness of capabilities/arrangements in place to activate and implement the above-mentioned planning/situational awareness tools.</p> <p>Awareness of the TH's EP/OPEP specified environmental assessment and response strategy selection requirements and process including NEBA/SIMA, resources at risk and other environmental planning tools.</p> <p>Awareness of the scalability in use of response planning/situational awareness tools and techniques from small responses through to worst credible spill scenarios.</p>	<p>Planning function should ensure that during IAP preparation, relevant OPEP and regulatory requirements are achieved, based on sound environmental analysis and situational awareness.</p> <p>Planning function should ensure the ongoing analysis of environmental and situational awareness information, to ensure response objectives are appropriate and can be achieved via the selected response strategies.</p>

Planning Function (Note – Planning, Environment, Situation/Intelligence Functions may cross-over, depending on the TH defined IMT structure).		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
OSPR Strategies	<p>Awareness of the safe, efficient use and limitations of the response strategies in Table 2</p> <p>Awareness of the safe and efficient use and limitations of marine, aviation and land platforms (vehicles, vessels, aircrafts, etc) to execute response strategies as detailed in Table 2.</p> <p>Awareness of the typical end points criteria/termination criteria for each response strategy. and an understanding of the response strategy effectiveness monitoring requirements, to ensure the ongoing efficiency (or need to terminate) the in-field response activities.</p>	Planning function should have an awareness of the appropriateness, effectiveness and limitations of response strategies, to ensure appropriate response objectives are selected.
Dynamic IAP planning and implementation	<p>Detailed understanding of and ability to execute the planning ‘p’ process across the IMT that drives the production of an OSPR IAP.</p> <p>Detailed understanding of the types of information/data and processes (environmental risk assessment, resources at risk, NEBA/SIMA etc) that will be utilised by the various IMT functions, to inform objective setting and IAP development.</p> <p>Awareness of what types of information/data should be displayed on Incident Status Boards/COP – current / future situation, to assist with IAP development and implementation.</p> <p>Detailed understanding/ability to collaborate with Operations functions to draft tactical assignments / orders that will be used by field teams to implement response strategies.</p> <p>Detailed understanding of requirements of the outputs required from each IMT function, and the processes in place for quality control (Environment Function, Situation/Intelligence Function, SCAT Function etc).</p>	Planning function should ensure appropriate oil spill risk assessment and response strategy selection processes are implemented during the IAP development process.
Safety during spill response.	<p>Awareness of the hazards presented within an oil spill that are different from day-to-day operations, specifically;</p> <ul style="list-style-type: none"> • hydrocarbon contact • atmospheric risks • operating environments (marine, aviation, shoreline, wildlife, waste) • hazards specific/unique to the range of response strategies. 	Planning function should have an awareness of the hazards each response strategy may present and be able to verify that controls are in place, as part of IAP document preparation, to manage the hazards.

Situation /Intelligence Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
Dynamic IAP planning and implementation	<p>Awareness of the IAP planning ‘p’ process, and what types of information/data are utilised by the various IMT functions, to inform objective setting and IAP development.</p> <p>Detailed understanding of the different information sources that will be arriving and utilised by the IMT and what/how data should be displayed on Incident Status Boards/COP/GIS system – current / future situation.</p> <p>Detailed understanding/demonstrated ability to operate a COP/GIS system to collate and display various data sources, including:</p> <ul style="list-style-type: none"> • TH surface and subsea infrastructure and asset locations • TH defined EP/OPEP environmental values/sensitivities layers • Current spill response operations/assets • Data from Operational monitoring programs • OSRA Atlas/GIS environmental databases, including how to access and utilise these data sets. • Outputs of OSTM, STB and other types of SMV data. 	Situation/Intelligence function should ensure the data arriving in the IMT is collated and displayed onto a single system (single source of truth) such as a COP/GIS system, so that other IMT functions are able to interrogate and utilise the data for decision making purposes.

Environment Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
Regulatory context and stakeholder engagement	<p>Detailed understanding (ability to accurately describe, role/function) of interfaces and responsibilities, of statutory, policy, response and coordination agencies involved in the TH OSPR response (Commonwealth - NOPSEMA, DISER, OPICC, State Control Agencies and Wildlife Response agencies, etc).</p> <p>Detailed understanding of 'cross-jurisdiction' response arrangements (division of command and control between TH and State/Territory Control Agency) and process for the transfer of Control Agency, as related to TH location.</p>	<p>Environment function should have a detailed understanding of regulatory and external stakeholder expectations and responsibilities, to ensure response objectives are appropriate within the regulatory context of the spill scenario.</p> <p>Environment Function should also be able to provide support to the Control function in their role to navigate the external regulatory environment on behalf of the TH and understanding the regulatory/statutory regime for OSPR within the relevant jurisdictions.</p>
TH specific oil spill preparedness and response arrangements	<p>Detailed understanding of the use and application of the planning/situational awareness tools including:</p> <ul style="list-style-type: none"> • OSTM • vector analysis • satellite tracker buoys (STBs) • visual observations • satellite imagery • other SMV processes. <p>Detailed understanding of the capabilities/arrangements in place to activate and implement the above-mentioned planning/situational awareness tools.</p> <p>Detailed understanding of the TH's EP/OPEP specified environmental assessment and response strategy selection requirements and process including NEBA/SIMA, resources at risk and other environmental planning tools.</p> <p>Detailed understanding the scalability in use of response planning/situational awareness tools and techniques from small responses through to worst credible spill scenarios.</p>	<p>Environment function, in support of Planning function, should ensure that during IAP preparation, relevant OPEP and regulatory requirements are achieved, based on sound environmental analysis and situational awareness.</p> <p>Environment Function, in support of Planning function, should ensure the ongoing analysis of environmental and situational awareness information, to ensure response objectives are appropriate and can be achieved via the selected response strategies.</p>
OSPR Strategies	<p>Awareness of the safe, efficient use and limitations of the response strategies in Table 2</p> <p>Awareness of the safe and efficient use and limitations of marine, aviation and land platforms (vehicles, vessels, aircrafts, etc) to execute response strategies as detailed in Table 2.</p> <p>Detailed understanding of the typical end points criteria/termination criteria for each response strategy, and an understanding of the response strategy effectiveness monitoring requirements, to ensure the ongoing efficiency (or need to terminate) the in-field response activities. End-point criteria considerations should include:</p> <ul style="list-style-type: none"> • operational effectiveness of response strategies, and the concept of diminishing returns associated with continuing the response • hazards/risks to the environmental values/sensitivities associated with continuing the response • ability of the values/sensitivities to recover naturally upon termination of a response strategy • consultation with relevant stakeholders • linkages to the OSMP 	<p>Environment function should have an awareness of the appropriateness, effectiveness, and limitations of response strategies, to ensure appropriate response objectives can be selected.</p>
Dynamic IAP planning and implementation	<p>Awareness of and ability to execute the planning 'p' process across the IMT that drives the production of an IAP.</p> <p>Detailed understanding/ability to conduct environmental risk assessments, resources at risk assessments, NEBA/SIMA processes, to inform objective setting and IAP development.</p> <p>Awareness of/ability to collaborate with Operations functions to draft tactical assignments / orders that will be used by field teams to implement response strategies.</p> <p>Awareness of what types of information/data should be displayed on Incident Status Boards/COP – current / future situation, to assist with IAP development and implementation.</p>	<p>Environment function, in support of Planning function, should ensure appropriate oil spill risk assessment and response strategy selection processes are implemented during the IAP development process.</p> <p>Environment function should be able to support the development of IAP documentation.</p>

Trajectory Forecasting Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
OSPR Strategies	<p>Detailed understanding and knowledge of the application of computer models that predict the future location and weathering of oil spills.</p> <p>Detailed understanding and knowledge of how SMV data can be used to improve the accuracy of OSTM outputs.</p> <p>Awareness of how OSTM data can be integrated into COP/GIS models.</p> <p>Awareness of how OSTM and associated modelling packages (such as VOC and LFL modelling) can be used to support safety assessments.</p>	Trajectory forecasting function should be able to provide timely forecasts of spill trajectory, and supporting modelling functions (such as dispersant, VOC, LFL etc.), to inform environmental risk assessments, response strategy selection processes and safety/risk assessments.
TH-specific oil spill preparedness and response arrangements	<p>Detailed understanding of TH OPEP-specific first strike/OSMP requirements/commitments.</p> <p>Detailed understanding of the capabilities/arrangements in place to activate TH-specific OSTM.</p>	Trajectory forecasting function should be able to activate and provide timely OSTM results into the IMT.

Resources At Risk Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
Dynamic IAP planning and implementation	<p>Detailed understanding of the values and sensitivities in the EMBA and how oil may impact that sensitivity. Note that values/sensitivities include:</p> <ul style="list-style-type: none"> • environmental • socio-economic • cultural heritage <p>Awareness of how to access additional SMEs, to provide specific advice regarding values/sensitivities.</p> <p>Awareness of how to integrate this information within the environmental risk assessment and NEBA/SIMA process as part of IAP development.</p>	Resources at risk function should be able to conduct risk/damage assessments across a wide range of values and sensitivities to assist with objective selection and IAP development. Often additional/specialist SMEs will be required to support/conduct these assessments depending on the particular sensitivity types and the spill scenario, and the Resources at Risk function must identify and procure this specialist advice as necessary depending on the spill scenario.

SCAT Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
Regulatory context and stakeholder engagement	Detailed understanding of external shoreline and nearshore control/support/land management agencies (in particular state/territory and government agencies) and the broad type of support/control they can provide, as related to shoreline response activities.	SCAT function should show awareness of the regulatory context to be able to provide support to Planning and Operations functions during the selection of response objectives for SCAT activities, and for integration between TH capabilities and other Controlling Agency SCAT capabilities.
OSPR Strategies	<p>Detailed understanding of the core requirements of the SCAT programme (e.g. IPEICA SCAT Good Practice Guide) and ability to support/execute a SCAT data collection field programme proportionate to a TH's spill risk, within the TH operational area/environment.</p> <p>Detailed understanding of the process to ensure smooth flow of SCAT data from the SCAT field teams back to the IMT.</p>	SCAT function should be familiar with standardised SCAT processes to ensure the SCAT program implementation in the field, and quality of data received by the IMT is accurate and can be relied on for shoreline response planning. This will also ensure consistency with SCAT processes and expectations of state/territory control agencies and OSROs.
TH-specific oil spill preparedness and response arrangements	<p>Detailed understanding of TH OPEP-specific first strike/SCAT requirements/commitments.</p> <p>Detailed understanding of the capabilities/arrangements in place to activate TH-specific SCAT program.</p>	SCAT function should be able to assist Planning/Operations Function in the timely mobilisation of the SCAT capability.
Dynamic IAP planning and implementation	<p>Detailed understanding/ability to collaborate with Operations functions to draft tactical assignments/orders that will be used by SCAT field teams to implement the SCAT data collection programme.</p> <p>Detailed understanding of how to interpret SCAT data outputs to support/inform shoreline response/resource protection planning and associated IAP development.</p>	SCAT function must be able to interpret the SCAT data outputs and work with the IMT Planning function to consider the SCAT data outputs in the context of shoreline response planning/resource protection planning.

Shoreline Response Programme Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
Regulatory context and stakeholder engagement	Detailed understanding of external shoreline and nearshore control/support/land management agencies (in particular state/territory government agencies) and the broad type of support/control they can provide, as related to shoreline response activities. Awareness of any relevant jurisdictional specific Shoreline Response Programs or Tactical Response Plans.	Shoreline response programme function should have a detailed understanding of the regulatory context to be able to provide support to Planning and Operations functions, during the setting of response objectives for shoreline response activities, and for integration between TH capabilities and other Controlling Agency shoreline response capabilities.
Dynamic IAP planning and implementation	Detailed understanding of the breakdown of tasks and roles between operations and planning as related to shoreline response. Detailed understanding of the process to ensure smooth and timely transfer of SCAT data from the SCAT field teams into the IMT and how to interpret SCAT data outputs to support/inform shoreline response/resource protection planning and associated IAP development. Detailed understanding/ability to collaborate with Operations functions to draft tactical assignments/orders that will be used by SCAT and shoreline clean-up field teams to implement the response strategies.	Shoreline response programme function should have the skills/knowledge to support both the Planning and Operations functions in the establishment of IAP documentation necessary to mobilise and implement SCAT and shoreline response field teams.
OSPR Strategies	Detailed understanding of shoreline response team organisational structures/hierarchies. Detailed understanding of the application of the SCAT process, and the core requirements of the SCAT programme (e.g. requirements of the IPEICA SCAT Good Practice Guide Detailed understanding and application of the IPEICA-defined Shore Response Program methods.	Shoreline response programme function should be familiar with standardised SCAT and shoreline treatment processes (such as IPEICA-recommended processes or jurisdiction-specific processes) to ensure appropriate planning is conducted and all shoreline activities are executed in an efficient and appropriate manner, achieving the selected response objectives, and not generating excessive waste.

OSMP Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
TH-specific oil spill preparedness and response arrangements	Detailed understanding of the TH Operational & Scientific Monitoring Programme requirements/commitments, including program activation triggers, timeframes, and termination criteria. Detailed understanding of the capability the TH has in place to execute the OSMP, and the arrangements in place to activate/mobilise the capability.	OSMP function should be able to activate and execute the OSMP within the TH OPEP-specified timeframes.
Dynamic IAP planning and implementation	Detailed understanding of the process to ensure smooth and timely transfer of OSMP data from the OSMP field teams into the IMT. Awareness of how the OSMP will be used by other IMT functions for response planning/implementation purposes and ongoing IAP development.	OSMP function should ensure the OSMP data is transferred into the IMT in a timely manner to enable the ongoing monitoring of response effectiveness, and to inform response objectives and response strategy termination decision making.

Logistics Function		
TOPIC	KNOWLEDGE AND SKILLS	CONTEXT
TH-specific oil spill preparedness and response arrangements	<p>Detailed understanding of the TH-specific arrangements in place and logistics chains available to activate/mobilise assets/equipment/personnel required to implement the response strategies.</p> <p>Awareness of TH processes for the rapid engagement/onboarding of contractors which are not typically used by the TH during day-to-day operations, and timely processes for managing these non-routine operations and risk.</p> <p>Awareness of risks associated with use of volunteers for spill response, and processes a TH has in place, if use of volunteers will be considered.</p> <p>Awareness of surge capability/capacity available to the TH.</p> <p>Awareness of the various waste management streams (liquid, hard/solid waste, PPE, sundry people management waste) could be generated through the response.</p> <p>Detailed understanding of the TH contracts in place to support waste management.</p> <p>Detailed understanding of any TH-specific remote response logistics capabilities and arrangements, especially related to response activities which will be conducted outside of the TH's normal area of operations. This would also include understanding of potential FOB locations to support remote response activities.</p> <p>Detailed understanding of any TH-specific call out contracts/arrangements for sub-sea and/or tier three/international support capabilities, including:</p> <ul style="list-style-type: none"> • Global dispersant stockpile, and resupply logistics chain • AMOSC/other third-party SFRT/SSDI, TH logistics required to support delivery of this equipment, and specific equipment and platforms the TH must provide • Requirements and logistical support needed to mobilise and implement international air dispersant capabilities. 	<p>Logistics function should be able to support the procurement and importation of both routine and specialist assets, equipment, and personnel to support the spill response.</p> <p>Logistics function should have an awareness of specific issues unique to spill response, which are not managed as part of day-to-day operations, such as non-routine contractors, non-routine waste handling and use of volunteers etc.</p>
OSPR Strategies	Awareness of the requirements and limitations of the various logistics platforms (vessels, aircraft etc), required to implement the OSPR strategies defined in Table 2.	Logistics function should have an awareness of the requirements and limitations of the logistical support platforms necessary to support response activities, to ensure the correct logistical support platforms are identified and mobilised.

6. Training models & pathways

Key Concepts:

THs must ensure that their IMT oil spill personnel have undertaken an oil spill training pathway commensurate with their function within the IMT that matches the nature and scale of oil spill incidents the TH IMT may need to manage.

All training and capacity building must be contextualised to the Australian operating environment, and to the risks posed by a TH's operations.

A typical IMT oil spill training pathway is presented in Figure 4.

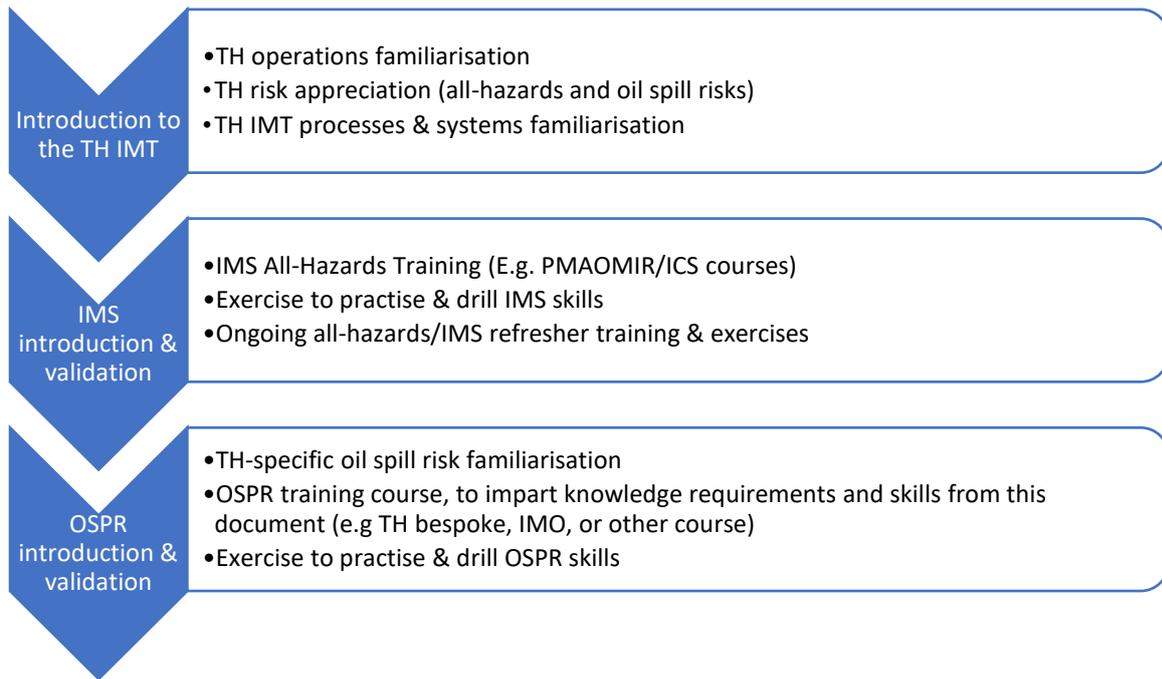


FIGURE 4 – TYPICAL IMT OIL SPILL TRAINING PATHWAY

THs within Australia have a range of all-hazards training courses available to them, including their own in-house, or others such as ICS and PMAO (refer Section 4), and that training should reflect their selected IMS.

THs must also ensure their IMT oil spill nominated personnel are imparted with, and maintain the knowledge and skills – aligned with the requirements outlined in Table 2 and Table 3 – to enable them to undertake their oil spill function within the IMT.

Within each Function there are likely to be several support and administrative personnel that may require none, or only some of the full suite of knowledge and skills. Ideally, a Function Lead should have all the knowledge/skills of that function. THs should determine which roles/personnel (and numbers of them, including consideration for team rotations and redundancy) within the TH's IMT structure require which elements of the training, to ensure the knowledge exists within that Function in the TH's IMT structure.

In addition, THs should consider whether they wish to train individuals in only single Functions, or whether certain personnel within the TH's IMT structure may be able to complete multiple Functions. For example, a number of the 'Planning' functions could all be covered/addressed by a particular position within the TH's IMT. E.g. the Enviro person may fulfill the Functions of Environmental, Resources at Risk, Trajectory/Forecasting, and OSMP. Similarly, a TH may choose to train certain Operations people in multiple Operations Functions.

Ultimately, the TH should evaluate the Functions and knowledge requirements, and ensure the TH has mapped their specific in-house IMT capability to the requirements of this document, recording/justifying any deviations.

Finally, the all-hazards and oil spill knowledge and skills should be maintained, typically through ongoing training and exercises. This is further discussed below.

Oil spill knowledge and skills can be taught through training programmes commensurate and tailored to the function that the individual will be undertaking within the IMT.

THs can choose to impart and maintain knowledge and skills through many different avenues. For oil spill training, this may include one or a combination of the options below.

- International Maritime Organization (IMO)-equivalent training (accredited or aligned);
- Australian nationally accredited oil spill training courses;
- TH's own bespoke oil spill training; and/or
- Blend of the above, e.g. IMO-accredited or aligned, bespoke-to-TH OPEP training

Regardless of the training pathway selected, it is incumbent upon the TH to ensure the selected training pathway addresses the oil spill knowledge and skills presented in Table 2 and Table 3. For example, if utilising an entirely in-house course or training pathway, the course material and outcomes should be mapped against the Table 2 and Table 3 requirements.

If utilising an externally provided course, the TH should ensure the course delivered by the third-party training provider is also appropriately mapped against the Table 2 and Table 3 requirements.

To assist in this process, Appendix C presents a mapping of two oil spill courses traditionally utilised within the Australian upstream petroleum industry context, including annotation of where the traditional courses may not address all the Table 2 and Table 3 requirements. The two courses mapped in Appendix C are:

- Apply decision making strategies in an oil spill response (PUAOIL404)
- IMO Level 2 & Level 3 (IMO 2/3).

A TH should ensure that the training system and structure in place maximises the individual's ability to undertake their nominated IMT function to an acceptable and consistent level of performance.

Some TH organisations are very large, with dedicated training divisions and processes, which are used to train their personnel across a wide variety of skills required to operate and maintain a major hazard facility. Therefore, where these larger THs have the in-house capability, they may choose to design and undertake their IMT all-hazards and oil spill training completely internally.

Other organisations with less-developed training divisions/teams may choose to outsource their IMT training to third parties, including registered training organisations, or organisations whose training has been independently accredited.

It remains incumbent upon the TH to make and justify the decision on internal vs external training providers and accredited versus non-accredited courses, depending on the capability/capacity of the TH's internal training team. This also includes THs justifying their decision regarding the selection, qualification and experience of persons who are assessing competency.

Regardless of the TH training pathway and training provider/competency assessor selected, the TH must ensure and be able to demonstrate that the learner will be capable of undertaking the functions/tasks as required by their IMT role.

To this end, competency-based training (CBT) should be considered. Key elements of CBT are:

- Training material meets industry good practice (e.g. aligned with Table 2 and Table 3).
- Personnel demonstrates the application of knowledge and skills to a suitable level of performance, as would be required of them in their role, during an incident.
- Evidence is collected and a judgement is made as to whether a person has demonstrated competence or not.

Some IMT members may already have knowledge and skills that they bring into their function from prior learning and experience. This experience should be evaluated using a recognition of prior learning processes/systems, which are mapped against the knowledge/skills defined in in Table 2 and Table 3.

Once the initial oil spill training is completed, ongoing skills maintenance/refresher training is required. An appropriate refresher training program is necessary because there are very few actual oil spills in the Australian upstream industry for personnel to gain actual/practical experience and the skills needed for IMT oil spill response are generally not a routine part of any person's normal day-to-day job.

Some example options for refresher training/drills/exercises include:

- Small exercises as part of routine IMT handover meetings.
- Desktop exercises (whole of IMT, or just function specific).
- Large activation exercises (with just the TH, or possibly including OSROs and government agencies).
- Oil spill refresher training (core elements of the original course).
- Full repeat of initial oil spill training course.

The refresher training frequency will depend on the level/depth of the refresher training element.

Two example oil spill training and skills maintenance pathways are presented below. However, it is for each TH to select and justify the acceptability of their oil spill skills maintenance program, based on their own organisational structure, processes, and risk.

Example A – all IMT oil spill personnel will undertake:

- Initial all-hazard and oil spill training.
- Weekly IMT handovers – including 10-minute, all-hazards exercises, (rotating scenarios over time) with some oil spill scenarios throughout the year.
- Once-per -year, half-day oil spill desktop scenario.
- Once every three years – repeat initial training.

Example B – all IMT oil spill personnel will undertake:

- Initial all-hazard and oil spill training.
- Twice-per-year, half-day oil spill desktop scenario.
- Once every two years, participate in a multi-day, multi-organisation oil spill exercise.

7. Incident Management Team models/structures

Key Concept:

The traditional IMT model is one of standing up a large, single, centralised IMT operating out of an Incident Command Centre (ICC).

During the COVID-19 pandemic, (driven by necessity) other IMT models have emerged. THs (and government control agencies) have pivoted to virtual, geographically dispersed teams with work sets delegated closer to the field.

This shift in operating models provides both challenges (such as learning to operate an IMT in a remote setting) and opportunities (such as rapid access to expertise in remote locations) for all THs to address.

Alternative IMT models may be used to overcome other similar challenges in the future.

Traditional/centralised IMT model

Traditionally, IMTs have been structured based on a centralised single operating entity, usually in an ICC which is in a single space/closely linked space – a ‘centralised’ IMT.

Each section/functional area of the IMT was located within the same floor/room. The IMT then reaches out to Forward Operating Bases (FOB) where limited elements of response planning is undertaken, and then actioned through operational units.

Diagrammatically, this traditional/centralised model is presented in Figure 5.

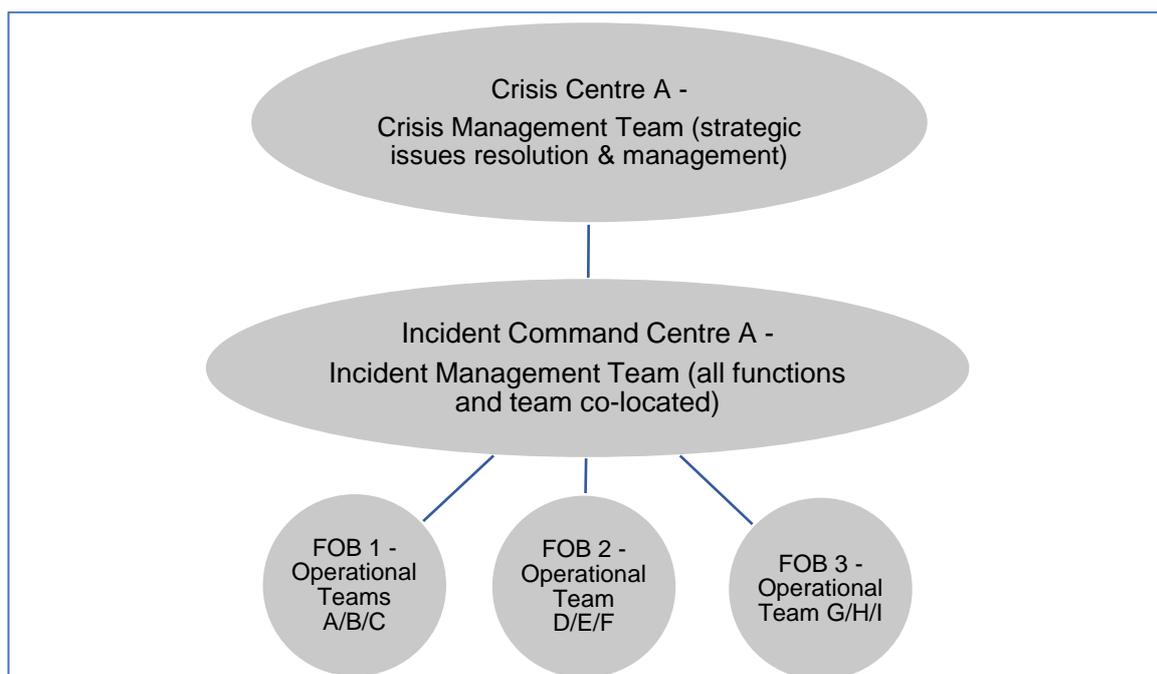


FIGURE 5: HISTORICAL CENTRALISED INCIDENT MANAGEMENT TEAM MODEL

Alternative IMT models

There are a range of scenarios which could result in a requirement to utilise an IMT structure and operating model which is not the traditional/centralised model described above. Whilst the COVID-19 pandemic presents the most recent and significant example of a scenario requiring the use of alternative models, other scenarios such as political instability and natural disasters etc. will also present challenges requiring an IMT to adapt to an alternative model.

The key features and response consequences of the COVID-19 pandemic are presented in Table 4.

TABLE 4: COVID-19 IMPACT AND CONSEQUENCE ON IMT OPERATING MODELS

COVID-19 Impact/Feature	Response Consequences
Federal, state and territory governments enforcing sustained border closures and internal restrictions on the movement of people.	Overseas or interstate human resources unable to physically immediately relocate to attend a spill, without quarantine periods or specialist exemptions. Requirement to establish in-field response isolation hubs away from local populations.
THs and other organisations adopting strict control measures, based on public health advice, to prevent/minimise groups of people being in the same space, principally by working from home/working remotely to normal office spaces.	Large IMTs unable to be physically located together. Significant reliance on remote Information Technology services to connect and communicate between the workforce. Significant reliance on structured programmed planning/working/meeting cycles to execute and produce IAP's.
The widespread adoption of Personal Protective Equipment (including personnel face masks) and social distancing.	Unable to share equipment or workspaces (or not without compromise). Compromised communication with face masks.
Lasting need to factor into any response the requirement to standardise COVID-19 safety measure concerns that prevent and minimise the spread of illness amongst a response workforce.	Additional requirement on the IMT to factor COVID-19 risk management (disease prevention and response) into the response plan. Causes response inefficiency in the need to apply factors outlined above.

The examples presented in Table 4 demonstrate how a range of disruptive elements can cause considerable impact on a TH's ability to establish and operate under a traditional/centralised IMT model. Events such as the COVID-19 pandemic challenge the following IMT response assumptions:

- (1) the ability of the tiered preparedness model (bringing in large numbers of responders at very short notice from out of region/country) to surge resources for a level two/three event; and
- (2) that a single large group of people (the IMT) will be able to physically operate out of a single facility (the ICC).

However, these constraints can be overcome through the establishment of remote/virtual support from dispersed teams to a single smaller or virtual IMT. Internal and external SMEs are also able to provide support through this model.

Alternative models

The key challenge to the centralised IMT model resulting from the COVID-19 pandemic is the need to social distance. Responding to an oil spill does not warrant the risk of infection by establishing a single large IMT within a single ICC.

The IPEICA Oil Spill Group⁴, is an example of how industry has been grappling (globally) with methods to overcome COVID-19 challenges, having identified several different operating models for how level two/three resources would be able to offer remote IMT support. Similarly, the Australian Federal, state and territory governments have been addressing the same issues in the localised/Australian context.

A summary of the models developed by the IPEICA⁵ Oil Spill Group are presented in Table 5 and more detailed figures of the models are presented in Appendix B. These models present different delivery mechanisms of IMT outputs, giving THs alternative options to running the IMT. The IPEICA proposed models align with IMT models proposed by the Australian Federal, state and territory governments. These models also provide benefits of being able to rapidly obtain SME support from afar, in shorter timeframes than the traditional/centralised IMT model.

TABLE 5: IPEICA OIL SPILL GROUP RESPONSE SUPPORT MODELS

Operating Model	In-Country	Virtual Support	Benefits	Constraints
1. Full Face to Face (centralised)	Site Response Local Response Incident Management Team Incident Command Post	None	Face-to-face interface with local authorities – positive representation. Easier to foster collaboration environment (rainbow effect). Greater situational awareness. Quicker to react to changing circumstances. Traditional method of response and processes well known.	Quarantine and travel restrictions. Team resilience: one case in the team can have a spreading effect on other members. Managing precautions to limit spread of the virus (more space required, hot/cold zones). Extended rotation times for team members.
2. Local IMT with virtual support	Site Response Local Response Local Incident Management Team	Virtual responders interact directly with appropriate section in physical IMT.	Face-to-face representation to the local and national authorities – positive representation. Hurdles that arise in-country may be easier to resolve by IMT members. Fallback team if IT systems fail or are unavailable. No quarantine or travel issues for virtual responders.	Team resilience: One case in the team can spread to other members. Small team available could become overloaded. Interaction between virtual team and physical team may be challenging. Public/government perception that only a small team is dealing with the incident. National infrastructure (internet access and speeds) can be a constraint to expert

⁴ [Guide to IPEICA groups | IPEICA](#)

⁵ The IPEICA OSG are yet to formally endorse these pandemic operating models and as such they should be considered 'draft'. However, they can be utilised and developed by THs as they see fit.

				response support to the IMT.
3. Forward Operating Base with virtual IMT	Site Response Interaction with on-scene resources	Expanded Incident Management Team. Virtual Command Post	Face to face representation in-country. No need for most IMT members to travel or leave home work area. Very minimal physical staffing requirements. No Quarantine or travel issues for virtual responders.	National infrastructure (internet access and speeds) can be a constraint in supporting the forward operating base. Very small response presence in-country. Limited opportunity for regulator Face to Face engagement.
4. Forward Operating Base with remote IMT	Site Response Interaction with on-scene resources	Incident Management Team physical, but in another location. Physical Command Post.	Face to face representation in-country. Remote IMT can respond using traditional F2F techniques. Improved overall situational awareness. Reduction in quarantine and travel restrictions to the remote IMT.	National infrastructure (internet access and speeds) can be a constraint in supporting the forward operating base.
5. Full Virtual	Site physical response only. Work assignments received electronically.	Virtual Incident Management Team & Virtual Command Post	No quarantine and no travel restrictions. Minimal interaction between responders, except for tactical teams in the field. Risk of spreading the virus is reduced, by reducing face to face interaction to field teams only. May align with government response strategy.	No in-country presence may be perceived by the governmental stakeholders as "disconnection" from the incident. No in-country presence may be perceived by the public as "disconnection" from the incident.

Core elements required to support these alternative IMT operating models include the following:

- A minimalised central in-person IMT (e.g., no more than ~15 persons) or completely virtual IMT (with functional teams and individuals supporting outputs virtually), supporting operational teams and FOBs that follow the same social distancing rules.
- Fit-for-purpose IT capabilities, in particular adequate internet bandwidth/signal, appropriate video conferencing/meeting software such as Zoom, MS Teams, etc, and the ability collaborate online using file-sharing and action tracking platforms such as OneNote, IAP Software etc;
- Ensuring inter-organisation firewalls/IT security issues have been resolved, to allow the use of communication/information sharing platforms across organisations. THs should also consider redundancy to cover IT failures, such as including deputy section chiefs and backup liaison officers on the main calls to take over should IT issues occur.

- Strong IMS familiarity – (functional designation/accountabilities/outputs (functional swim lanes), understanding of the planning/response process).
- Strong subject matter expertise, as it's far more difficult to 'learn on the job' in a virtual IMT setting;
- Establishing protocols for formal and informal communication, to ensure key information is distributed to appropriate parties and less essential 'chatter' doesn't hinder the response effort.
- Establishing protocols to appropriately manage fatigue, concentration levels, stress and well-being, as level of concentration required in a virtual IMT is much higher compared to the face-to-face environment. THs should consider ensuring appropriate structures are built into operational cycles to ensure people have time to take screen breaks, development of wellbeing management guidance and consideration of a buddy-system or other mechanisms for people to indicate if they need support, to assist in managing fatigue and stress on IMT personnel.
- Facilitation and information management – THs should consider establishing a dedicated facilitator in a virtual IMT. This enables everyone to focus on their roles. Ensure people have alternates who can monitor what is happening whilst they brief a team / take a break, so individuals don't become bottlenecks or attempt to do too much multitasking.

In contrast to Figure 5, a distanced (or virtual) IMT has most or all elements separated from one another, similar to what is displayed in Figure 6, where each box represents a separate location (e.g. office, home, FOB).

These alternative IMT models are considered broadly applicable for use in any scenario which present challenges to the traditional/centralised IMT model.

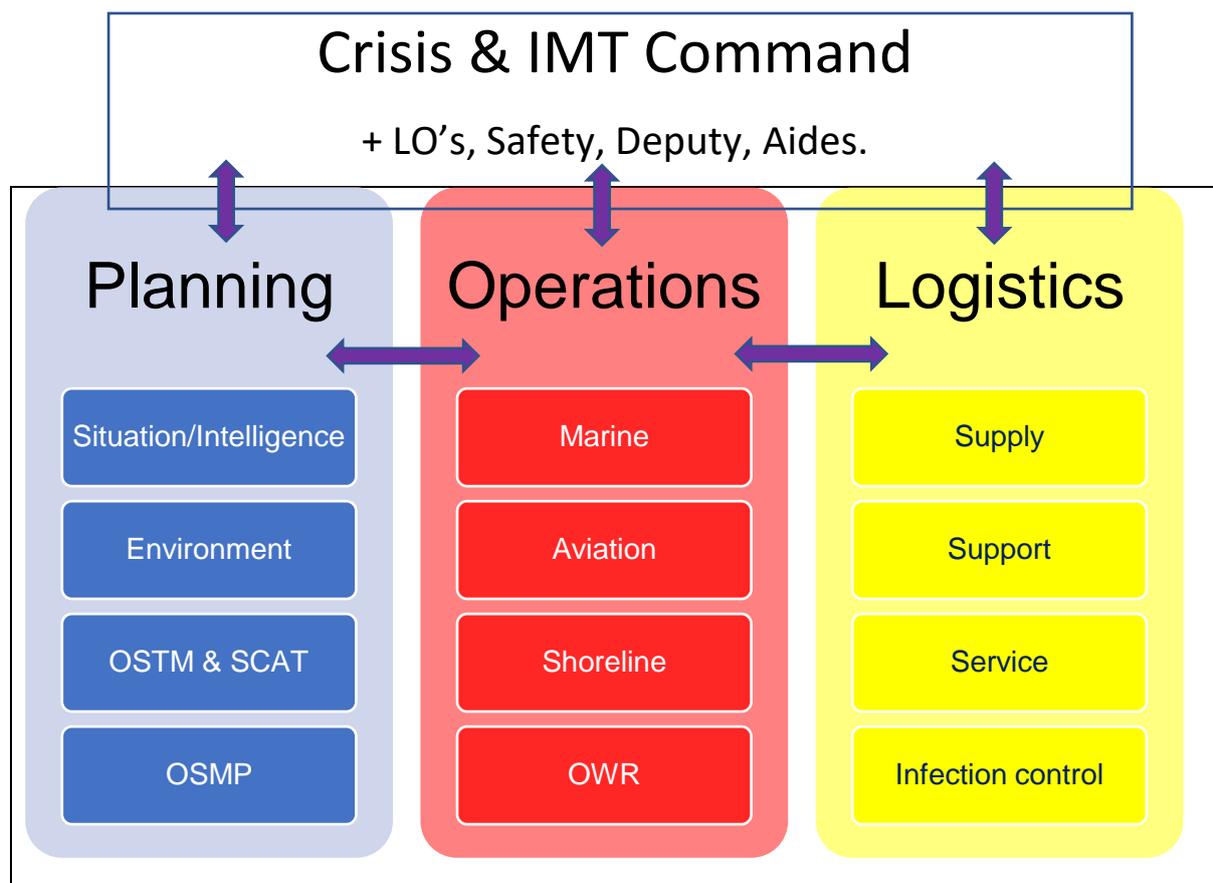


FIGURE 6: REMOTE/VIRTUAL IMT – CONCEPTUAL STRUCTURE AND INFORMATION FLOWS

8. EP Implementation

Key Concepts:

OPGGS E Regulations 14(5), 14(8) and 14(8AA, B & C) and NOPSEMA Oil Pollution Risk Management Guidance Note 1488 (GN 1488) states that within a TH EP/OPEP, the TH must:

- identify a chain of command and roles and responsibilities of oil pollution response personnel.
- include measures to ensure that oil pollution response personnel are aware of their responsibilities and have appropriate competencies and training.
- include arrangements for testing the response arrangements in the OPEP.
- set Environmental Performance Outcomes (EPOs), Environmental Performance Standards (EPSs) and Measurement Criteria related to the above requirements.

This section provides guidance to the TH on how to link this IMT training guidance document to their EP/OPEP, to assist in achieving the IMT training related outcomes required of the NOPSEMA GN1488.

As stated in Section 1, the purpose of this document is to provide guidance to THs on a set of defined 'knowledge requirements' for IMT personnel responding to an oil spill. In addition, by the offshore petroleum industry maintaining appropriate and consistent levels of oil spill training, this facilitates the sharing of TH IMT personnel, to optimise the Australian offshore petroleum industries mutual aid capability.

This section provides guidance on the types and context of EPOs and EPSs a TH should consider, and how to bridge to this document, to assist with ensuring their IMT capability and training meet the requirements of the OGPSS E Regulations and associated GN1488.

IMT Incident Management System and organisational structure

Within the EP, it is recommended the TH should ensure they have adequately identified and described their selected IMS and defined their IMT organisational structure (refer Section 2, 3 and 4 regarding IMS, and Appendix A for examples of the IMS approaches and standard ICS and AIIMS IMT organisational structures).

The TH should define the arrangements they have in place for the availability, activation and associated timeframe to mobilise/establish the initial IMT capability. The IMT capability must consider redundancy for factors such as personnel on leave, shift rotations (e.g. day shift vs night shift) and rotational leave rosters during a protracted response.

The TH should also ensure they have evaluated and defined in the EP, their IMT structure, and identified which personnel will fulfill the oil spill specific functions displayed in Figure 3. Certain THs with large IMT capabilities may fill all oil spill functions from internal/TH IMT personnel. Other THs may choose to utilise OSRO/Contractor/Mutual Aid IMT capabilities to fulfill certain oil spill functions. Refer the sub-section below (Mutual Aid Capability, Arrangement and Testing) for further information on this subject.

If a titleholder does not have a process to evaluate and define the size and structure of their required IMT, an example process is provided in Addendum 1.

IMT all hazards training

Within an EP, it is recommended the TH should define the arrangements it will use to impart and maintain all-hazards training to all nominated in-house IMT personnel.

These arrangements should be consistent with the selected IMS the TH IMT will utilise, and also include arrangements for the ongoing maintenance and testing of the all-hazards skills (such as those examples provided in Section 4).

A set of example EPSs for an IMT all-hazards training program is provided below:

- *Titleholder XX IMT Leaders (all) will have completed the TH tailored, nationally accredited course - PMAOMIR418 – Coordinate incident response.*
- *Titleholder XX IMT personnel (all) will have completed the TH tailored, nationally accredited course - PMAOMIR322 - Manage Incident Response.*
- *Titleholder XX IMT personnel (all) will practice and maintain their all-hazards training/skills via the following:*
 - *Attend IMT handover meetings (on nominated roster weeks). IMT handover meetings will include a rotation of 'engage the brain desktop exercises' designed to practice/refresh IMT all-hazards processes and skills.*
 - *Undertake a 1 day all hazards refresher training course every year (½ day theory, ½ day desktop practical exercise)*
 - *Attend/participate in a full-day IMT activation exercise once every 2 years.*

IMT oil spill training

Within an EP, it is recommended the TH should define the arrangements it will use to impart and maintain the oil spill 'knowledge requirements' defined in Table 2 and Table 3 of this document, to the relevant TH in-house IMT personnel (those personnel selected to undertake functions defined in Figure 3).

Oil spill training and skills maintenance pathways have been discussed in detail in Section 6. What-ever training pathway the TH selects, the TH should ensure their training pathway:

- Addresses the TH OPEP specific requirements.
- Is mapped to demonstrate alignment with the requirements of Table 2 and 3 of this document.
- Provides for ongoing skills testing/maintenance (refer list of potential options presented in Section 6).

As per the purpose of this document, an example EPO for an IMT oil spill training program is provided below:

- *Maintain an Incident Management Team capability trained to the knowledge requirements of the APPEA/AMOSC Incident Management Teams Knowledge Requirements for Responding to Marine Oil Spills - Guidance Document, to enable inter-operability between TH IMT and mutual aid personnel.*

A set of example EPSs for a TH IMT externally run oil spill training program is provided below:

- *TH XX IMT Leaders (XX# of personnel) will undertake initial oil spill training via an IMO-3 oil spill response training course. This training will also be mapped to demonstrate the inclusion of the 'general' and 'function specific' knowledge requirements of the APPEA/AMOSC Incident Management Teams Knowledge Requirements for Responding to Marine Oil Spills - Guidance Document.*
- *TH XX IMT other personnel (nominated to undertake oil spill functions) will undertake initial oil spill training via an IMO-2 oil spill response training course. This training will also be mapped to demonstrate the inclusion of the 'general' and 'function specific' knowledge requirements of the APPEA/AMOSC Incident Management Teams Knowledge Requirements for Responding to Marine Oil Spills - Guidance Document.*

An example EPSs for a TH IMT bespoke/in-house oil spill training program is provided below:

- *TH XX IMT personnel nominated to undertake oil spill functions will undertake initial oil spill training via an in-house TH OPEP bespoke training course. This training will also be mapped to demonstrate the inclusion of the 'general' and 'function specific' knowledge requirements of the APPEA/AMOSC Incident Management Teams Knowledge Requirements for Responding to Marine Oil Spills - Guidance Document.*

A set of example EPS for TH IMT oil spill ongoing skills maintenance/verification is provided below:

- *TH XX IMT personnel nominated for oil spill roles/functions, will maintain their oil spill specific training/skills via the following:*

- *Attend IMT handover meetings (on nominated roster weeks). IMT handover meetings will include 'desktop discussion scenarios' designed to test/practice IMT processes and skills. Oil spill scenarios will be part of the rotational desktop discussion scenarios.*
- *Every 1 year, undertake the TH XX OPEP Overview E-Learning Course or undertake a ½ day in-house oil spill refresher course. Objectives of the exercise/training are to re-fresh personnel on the TH OPEP arrangements and core roles/outputs required of each function.*
- *Every 3 years, repeat the initial IMO-2/3 aligned TH XX bespoke oil spill training, OR every 3 years, participate in the relevant functional position/role, within a multi-TH/OSRO/government agency oil spill exercise (e.g. AMOSC Core-Group mgt stream exercise, or joint industry/government exercise). Objectives of this exercise/training are to demonstrate the ability of the person to fulfill their functional in a 'live' IMT setting.*
- *TH XX will conduct an annual (1 per calendar year) in-house 1-day IMT exercise, utilising a scenario based on a worst-credible spill scenario, from a NOSPEMA accepted EP/OPEP. The IMT will comprise the full TH IMT, including both all-hazards only, and oil spill trained personnel. Objectives of the exercise will be to verify the IMT's ability to:*
 - *Conduct all relevant stakeholder notifications within OPEP specified timeframes*
 - *Identify and activate (notionally) all first strike actions within OPEP specified timeframes*
 - *Develop a Common Operating Picture*
 - *Evaluate situational awareness information, to inform the development of an Operational SIMA and IAP*
 - *Develop an IAP including secondary response strategies, including appropriate response strategy monitoring requirements, and termination criteria.*
 - *Lessons learned from the exercise will be tracked to completion within a suitable action tracking register.*

IMT mutual aid capability, arrangements and testing

Within an EP, it is recommended the TH should evaluate their worst credible spill risk scenarios and in-house IMT capability, to determine if they may require surge capacity (internal and external) to address a Level 2/3 spill event. If OSRO support/mutual aid capability may/will be required, the TH should ensure adequate capability and arrangements are in place for the OSRO capability which the TH is reliant upon.

The TH should define the surge capacity capability (where are the additional resources are coming from – internal company or external, such as OSRO) and for which functions (refer Figure 3) and define the arrangements in place to activate the surge capacity.

Note, if the TH is using internal company resources (e.g. TH XX global oil spill support network), an appropriate regime of verification and testing should be considered/adopted.

Within an EP, it is recommended the TH should also define the key elements of any remote IMT models/capabilities the TH may have in place, (refer Section 7), especially as it relates to utilisation/expansion of the IMT with mutual aid/OSRO IMT personnel, in a remote/virtual IMT setting.

Within an EP, it is recommended the TH should define the arrangements it has in place to verify the mutual aid organisation maintains an adequate oil spill training program, for the personnel whom the TH IMT is reliant upon. For international OSROs or global response teams, their training will not be Australian oil spill/regulatory regime specific. Therefore, appropriate onboarding/induction processes should be established, to enable the smooth transition of international support personnel to operate within the Australian TH IMT.

Therefore, within an EP, it is recommended the TH should define the arrangements it has in place for the rapid onboarding/induction/integration of the mutual aid capability into the TH IMT. Specifics of the onboarding/induction should include:

- TH specific activities/risks/overview of oil spill event
- TH geographic locations (or spill specific geographic overview)
- TH specific response strategies available/activated
- TH specific spill response and logistics capabilities available (or already activated)
- TH specific IMS, IMT organisation structure and overview of IMT processes
- Jurisdictional Authority, Control Agency and cross-jurisdiction response arrangements
- Role/function the personnel joining the IMT will be undertaking

Within an EP, it is recommended the TH should define the arrangements it has in place regarding activities/exercises to test the inter-operability of the OSRO/mutual aid capability with the TH IMT, and the objectives of these activities/exercises.

The example EPOs and EPSs within this sub-section, related to mutual-aid/OSRO capability and arrangements has not been provided in this revision of the document.

Consultation is ongoing with AMOSC – the peak Australian OSRO – in relation to developing example EPOs and EPSs for this sub-section.

Upon completion of that consultation, this section of the document will be updated, and a new revision published.

9. Document review

This guidance note will be reviewed on a 5-yearly basis.

The purpose of the review will be to ensure the guidance document remains:

- aligned with the OPGGS (E) Regulations and any associated NOPSEMA oil spill guidance documents
- aligned with the National Plan, as related to upstream/offshore petroleum spill response
- aligned with IPIECA best-practice oil spill IMT training recommendations

The 5 yearly review will be conducted by the APPEA EHS committee, with an independent peer review also conducted by a suitable OSRO.

Appendix A – Comparative organisation structures of ICS and AIIMS

The two most common incident management systems (IMS) structures utilised in the upstream Australian O&G industry are ICS and AIIMS.

The AIIMS IMT organisation chart has some slight differences compared to the ICS structure. For comparative purposes, the ICS IMT structure is presented in Figure 7 and the AIIMS IMT structure is presented in Figure 8.

Despite the differences, there is considerable overlap between the two IMS structures.

The IMT provides the organisation, planning and logistics required to support the execution of operational activities, which are the tasks undertaken by the resources in the field.

Sitting above the IMT are crisis management arrangements and sitting outside of the IMT are State/Territory and Commonwealth government emergency response arrangements, the media, other stakeholders and the general public. An IMT needs to be cognisant of, and actively engage with external agencies and other organisations/stakeholders, the media and the general public.

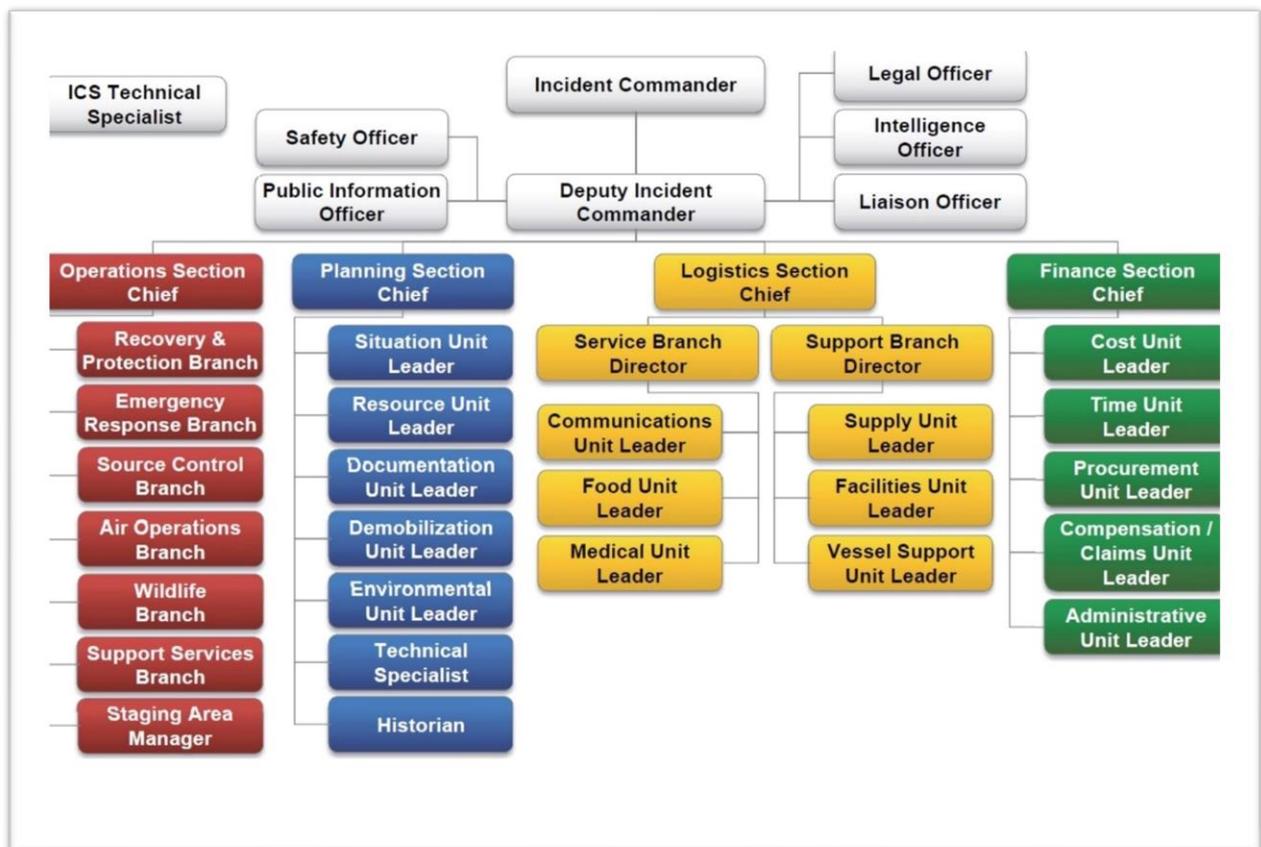


FIGURE 7: FULL ICS HIERARCHY. FROM THE RESPONSE GROUP, EIMH C. 2019

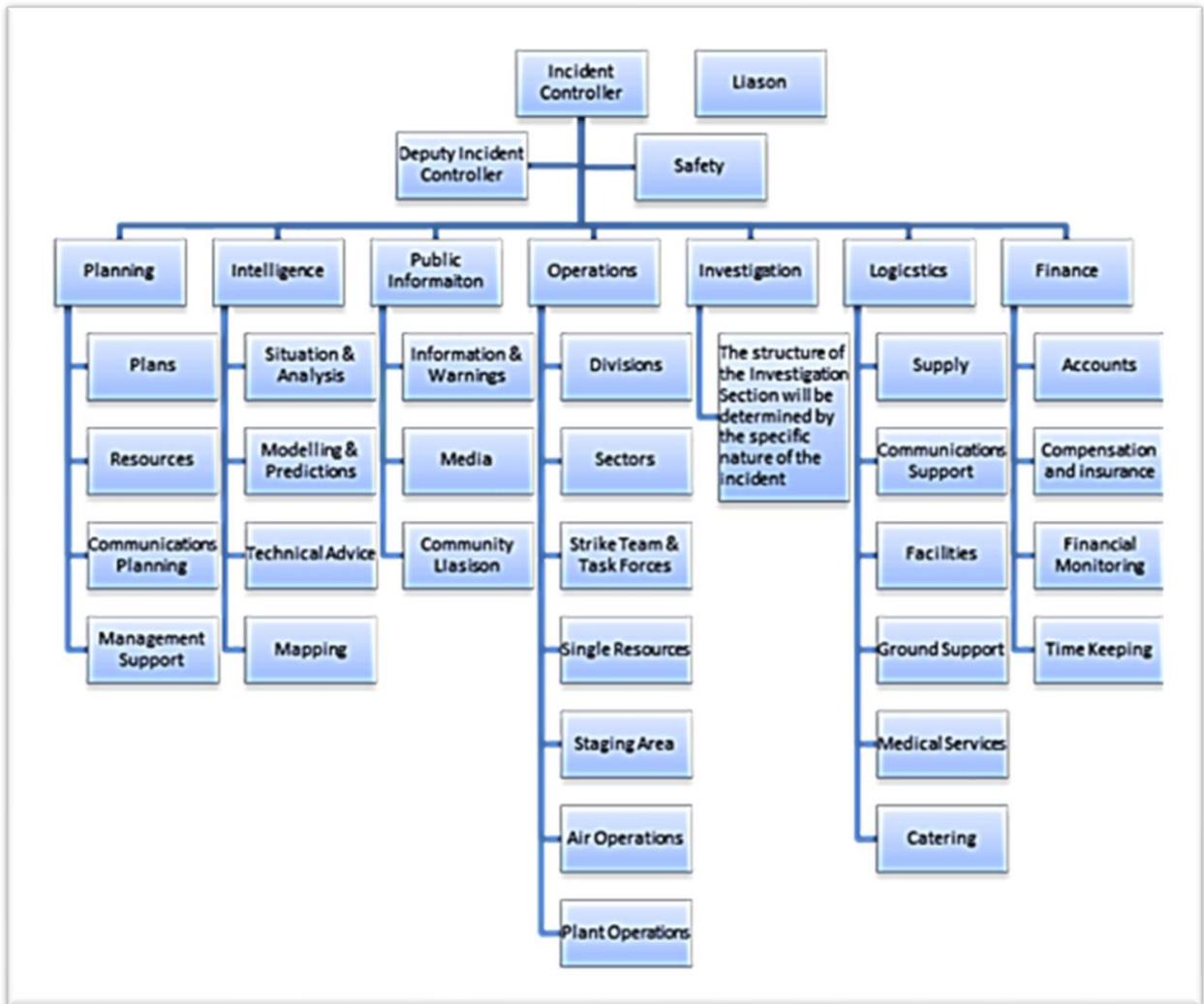
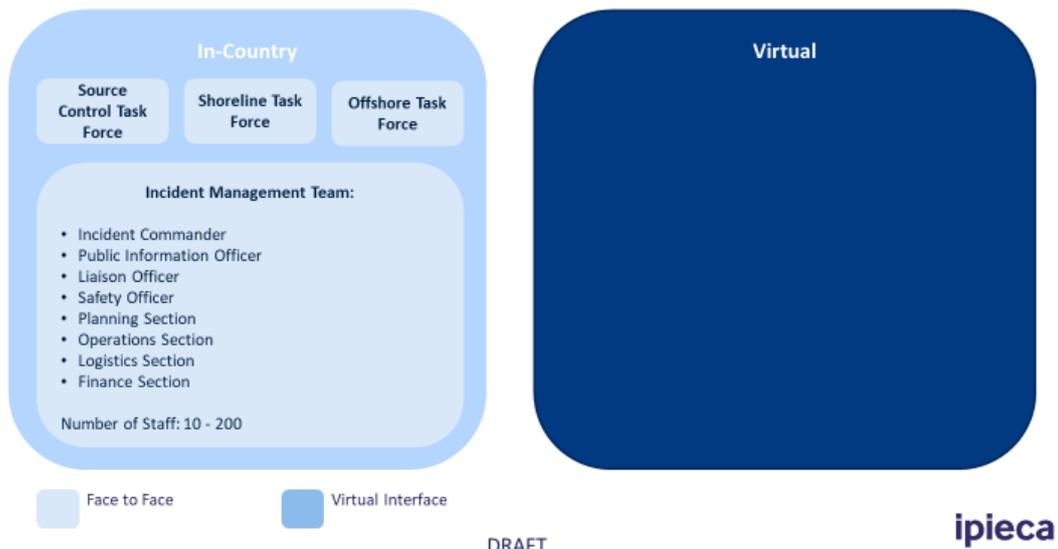


FIGURE 8: FULL AIIMS HIERARCHY. FROM NATIONAL PLAN GUIDANCE NP-POL-003

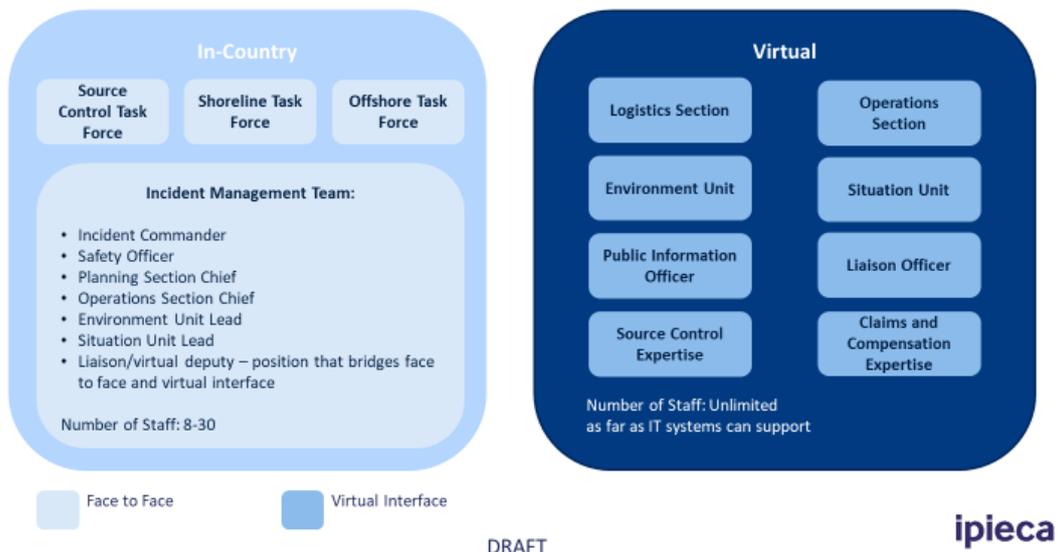
Appendix B – IPEICA oil spill group IMT operating models

As discussed in Section 7 of this document, the IPEICA Oil Spill Group have ‘drafted’ a number of IMT operating models, in response to the COVID-19 pandemic. These draft models (not formally endorsed by IPEICA at the time of preparation of this guideline) are presented in the figures below, for contextual purposes.

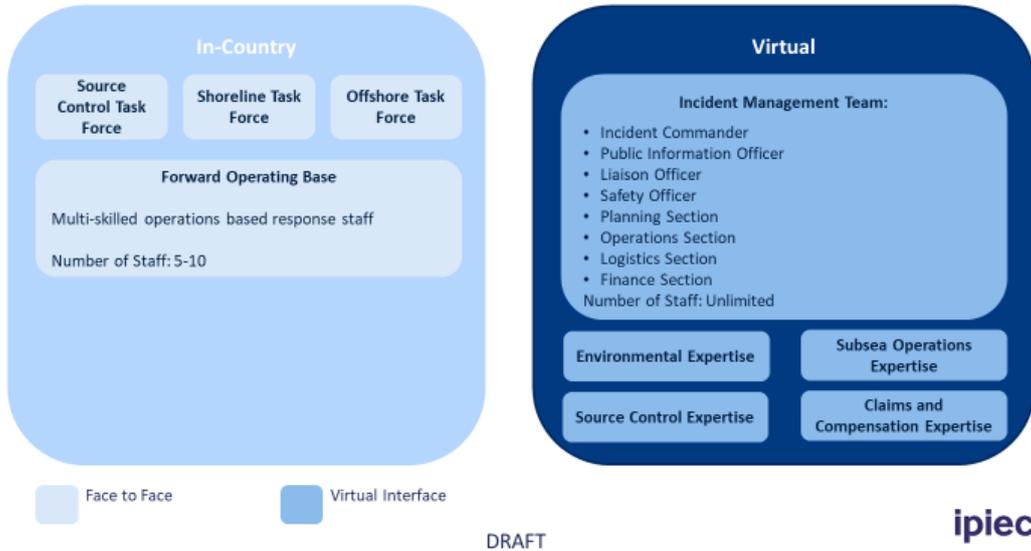
Operating Model: Face to Face



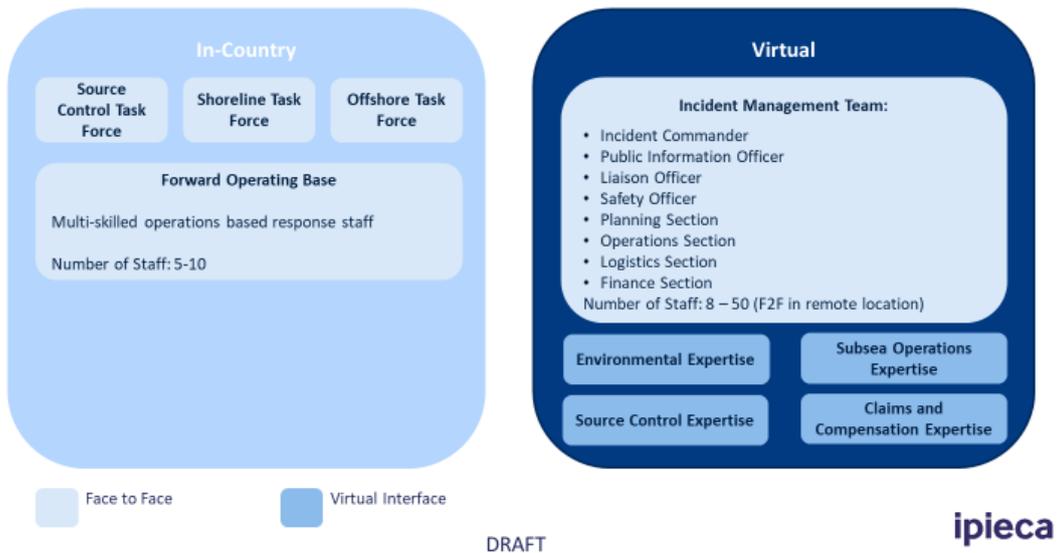
Operating Model: Local IMT with Virtual Support



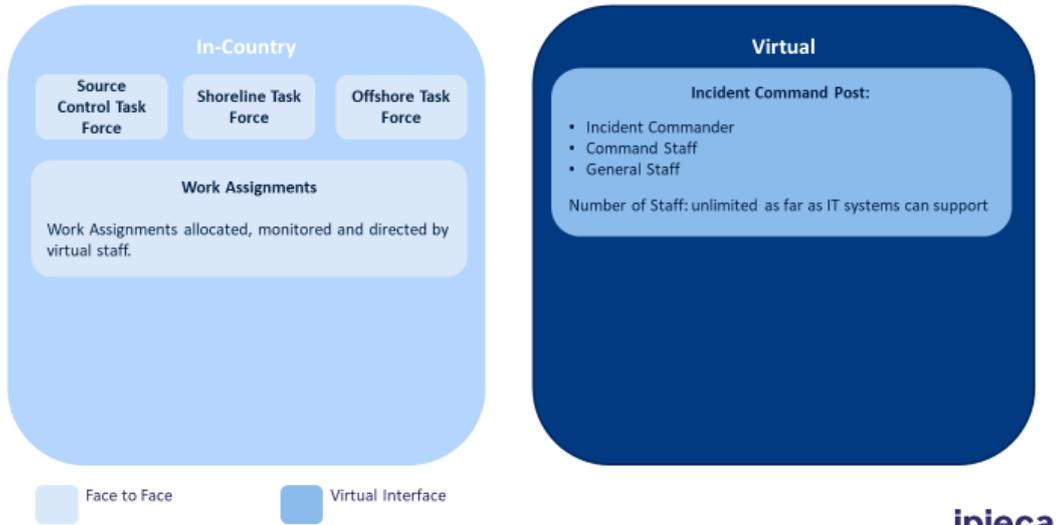
Operating Model: Forward Operating Base with Virtual IMT



Operating Model: Forward Operating Base with Remote IMT



Operating Model: Full Virtual



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Appendix C – Assessment of knowledge requirements against available oil spill training courses

Table 6 provides an examination of the Nautical Institute’s accreditation standards for equivalency to the *IMO II Course in Oil Spill Response* and the *PAUOIL404 Australian Nationally Accredited Unit of Competence*, against the OSPR knowledge and skills recommendations from this document.

TABLE 6: ASSESSMENT OF KNOWLEDGE REQUIREMENTS AGAINST AVAILABLE OIL SPILL TRAINING COURSES

Topic	Specific Knowledge	Assessment against IMO-2 and PUAOIL404 course materials	Comments regarding identified gaps in IMO II and PUAOIL404 equivalency
Regulatory context and stakeholder engagement	National Plan	partial / y	IMO-2 course is generic - course needs to be customised for the Australian jurisdiction including NatPlan/AMSA role. PUAOIL provides an Australian maritime/shipping perspective including AMSA/NatPlan.
	State/Territory OSCPs and other key documents (OWRPs, Tactical Response Plans etc)	n / n	IMO-2 course and PUAOIL are generic - courses needs to be customised for the relevant Australian State/Territory jurisdictions and plans and TH interfaces including cross-jurisdictional arrangements.
	OSROs	partial / n	IMO-2 course is generic and need to be customised for the Australian / SE Asian OSRO context. PUAOIL does not address Australian/SE Asian OSROs.
	Other spill response/logistics support contractors	partial / partial	Generic contractor types covered through the IMO/PAUOIL. However, TH should contextualise to their specific 3rd parties, contractors and other support organisations.
Oil Spill Response Strategies	Surveillance, modelling and visualization (SMV)	y / y	nil
	Offshore surface dispersants (including operational and scientific monitoring requirements)	y / n	PUAOIL does not cover the use of dispersants.
	Offshore subsea dispersants	n / n	IMO-2 and PUAOIL both do not cover SSDI. If this is a response strategy used by the TH, TH should ensure it is appropriately addressed in TH oil spill training.
	Controlled in-situ burning (ISB)	y / n	PUAOIL does not cover ISB. If this is a response strategy used by the TH, TH should ensure it is appropriately addressed in TH oil spill training.
	At-sea containment and recovery (C&R)	y / y	nil
	Protection of sensitive resources	y / y	nil
	At-sea mechanical recovery	y / y	nil
	Shoreline and inland assessment (SCAT)	y / y	No specific deficiencies, however depth of SCAT teaching varies between training organisations. TH should evaluate their risks and associated capability requirements, to determine course content for SCAT.
	Shoreline clean-up (shoreline response programme)	y / y	nil
	Response alternatives	y / n	PUAOIL does not cover response alternatives.
	Oiled wildlife response	y / n	PUAOIL does not cover OWR as a strategy. If this is a response strategy used by the TH, TH should ensure it is appropriately addressed in TH oil spill training.
	Waste management	y / y	nil
	Operational and scientific monitoring	n / n	All THs should ensure OSMPs are appropriately addressed in TH oil spill training.
	Safe and efficient use and limitations of logistical assets needed to support spill response operations	y / n	PUAOIL does not cover logistics. THs should ensure course content appropriately covers all logistics for all response strategies, including remote operating requirements/logistics and basin specific weather/met-ocean considerations
	Detailed information on the specific tactics/techniques, equipment limitations, consumables and other considerations for the successful execution of the response strategies.	y / n	(PUAOIL – does not define specific training requirements)
Waste management considerations of the response strategies.	y / n	(PUAOIL – does not define specific training requirements)	

Fate and environmental effects of spills	Characteristics of different oil types.	y / y	nil
	Weathering properties/process of spilt different oil.	y / y	nil
	Different effects different oil types can have on environmental and socio-economic values and sensitivities	y / y	nil
TH specific oil spill preparedness and response arrangements	TH specific activities - risks, environmental values/sensitivities, OPEP activation triggers, first strike actions, NEBA/SIMA / response strategy selection process and secondary response capabilities and arrangements	partial / partial	Generic processes will be covered by the stock IMO and PUAOIL courses. TH need to ensure that their specific oil types and risks (environmental sensitivities and values) and planning/response strategy selection processes are utilised within the TH IAP planning framework/process. TH specific response strategy capabilities and arrangements must also be addressed.
Dynamic IAP planning and implementation	Environmental risk assessment - generic	y / y	nil
	Use of situational awareness tools including <ul style="list-style-type: none"> • Vector analysis • Oil spill trajectory modelling • Visual surveillance • Satellite tracker buoys • Satellite imagery 	y / n	(PUAOIL – does not define specific training requirements))
	Common Operating Picture / GIS systems	partial / n	IMO-2 course provides some high-level discussion on the set-up and use of GIS/COPs. (PUAOIL – does not define specific training requirements))
	IMS system	partial / n	IMO-2 course include some IMS - participants need to apply learnings to their own TH specific IMS. PUAOIL has no IMS learnings, however it does include IAP outputs. However, TH All Hazards training should have addressed the fundamentals of IMS.
	NEBA / SIMA & resources at risk assessment	y / y	nil
	Termination Criteria	partial / n	TH should ensure their training addresses termination criteria, align with the TH defined strategies and potentially affected values and sensitivities.
	Planning 'p' process - field tasking assignment development	y / y	nil
Safety during spill response	Specific hazards associated with spill response <ul style="list-style-type: none"> • hydrocarbon contact • atmospheric risks associated with on water and shoreline response activities, as related to oil types and weathering • operating environments (marine, aviation, shoreline, wildlife, waste) • hazards specific/unique to the range of response strategies. 	partial / partial	Both IMO-2 and PUAOIL courses include 'appreciation ' of WHS risks. TH should consider their specific oil types, operating environment, logistical platforms and internal risk mitigation processes, and ensure these processes are discussed from an IMT / oil spill response perspective. Neither IMO-2 or PUAOIL address the full suite of available oil spill specific HSE guidance documentation. TH should ensure their training includes the consideration of relevant oil spill safety specific guidance documents. IMO-2 and PUAOIL include requirement to consider these processes, as they apply to WHS risks above. TH should ensure specific risk processes to manage atmospheric risks are addressed within training courses
	Oil Spill specific safety documents and guidelines followed – e.g. AMSA/National Plan, AMOSC and, IPIECA health and safety guidance documents.	partial / partial	
	Modelling tools and capabilities available to inform atmospheric risk assessment associated with on water response activities	partial / partial	

Addendum 1 – IMT capability assessment process (example)

All Titleholder OPEPs should include a process to evaluate the size and structure of their required IMT, for the worst-credible oil spill scenario (an IMT capability assessment process).

This addendum provides an example IMT capability assessment process, which could be used, if required.

Example IMT Capability Assessment Process

The example IMT capability assessment process recommends the TH define IMT objectives and IMT outputs required to mobilise and/or maintain the required oil spill response field capability (required for the worst-credible spill scenario(s)), at different time steps during the ramp-up of the IMT capability.

An evaluation of the IMT outputs is then conducted to determine the number of personnel required within each IMT Function.

The IMT Functions are those defined in Figure 3 of this document.

The IMT capability assessment process is undertaken utilising the following steps:

1. Define the IMT objectives for the first week (or until peak IMT capability would be required) for response to a WCSS.
2. Define the IMT outputs required at defined periods during IMT ramp-up. An example set of periods could be:
 - a. 0 – 24 hours
 - b. 24 – 72 hours
 - c. 72 hours onwards (peak/steady-state).
3. Define the number of personnel required in each IMT Function, to manage the workload/outputs during the defined periods.
4. Define the number of titleholder in-house IMT personnel and mutual aid/OSRO IMT personnel (if needed), required to fulfil the IMT capability requirement.

An example IMT objectives template (including example set of oil spill objectives, aligned with the typical AMOSC IMT objectives) is presented in Table 1.

An example IMT capability assessment template is presented in Table 2.

Table 1- Template and example IMT spill response objectives

Operational period	IMT spill response objectives	Rational/justification
0 – 24 Hours	<ol style="list-style-type: none"> 1. Establish/maintain an IMT with appropriate oil spill response trained personnel including mutual aid capabilities for specialist oil spill roles. 2. Gain situational awareness of spill trajectory, weathering, and potential environmental impact (use of response strategies/tactics including OSTM, visual surveillance, satellite imagery, SCAT surveys, and use of IMT tools including SIMA, resources at risk evaluation, and common operating picture (COP). 	<ol style="list-style-type: none"> 1. Establishing and maintaining an IMT is required to ensure that field response activities are undertaken consistent with THs regulatory obligations and are appropriately scaled to the spill scenario at the time. 2. This is the primary spill response needed for the first 24 – 96 hours, and then acts as a foundation/principle objective for the duration of the spill. It enables all other decisions to be made in regard to field or actions around the spilt hydrocarbon, on the basis of

Operational period	IMT spill response objectives	Rational/justification
	<ol style="list-style-type: none"> 3. Establish forward operational Bases (FOBs)/Staging Areas for aviation, shore and marine response strategies. 4. Pre-deploy shoreline assessment/response capabilities including SCAT, OWR, resource protection and shoreline clean-up resources to FOB in anticipation of future deployment. 5. [Crude oil / Group IV spill only] – Mobilise/activate at sea response strategies, including: <ul style="list-style-type: none"> • Activate in-field, vessel-based dispersant and commence dispersant spraying • Mobilise FWAD capability to a nominated airfield along the coastline • Mobilise C&R capability at a nominated port. 6. [Well blow-out only] – Mobilise SSDI spread to FOB. 7. Undertake risk assessments and develop health, safety and environment (HSE) plan(s). 8. Activate and mobilise OSRO's and mutual aid organisations. 9. Conduct regulatory and other stakeholder notifications. 	<p>predicted and observed environmental and other impacts, and weathering of the spill.</p> <ol style="list-style-type: none"> 3. Establishment of FOBs is required to support the mobilisation/deployment and execution of marine, aviation and shoreline response strategies. 4. These strategies may be required to be executed early in the response (depending on the scenario). Noting the long-lead times for deployment of these response strategies, pre-deployment of equipment and personnel to a FOB will reduce timeframes between 'need identified' and 'response strategy deployed'. 5. These response strategies can (under the right circumstances) be used to reduce the environmental impact of a Crude oil / Group IV spill. Rapid deployment provides the highest likelihood of successful use of these strategies. 6. SSDI likely required for any well-blowout, both to assist in reduction in surface expression of the oil, and under certain circumstances, to reduce VOC risks for debris clearance/capping stack deployment activities. Early mobilisation of SSDI spread ensures this activity is not on 'critical path' for other source control activities. 7. A risk assessment and HSE plan is required to be prepared, in order to assess the particular HSE risks associated with each relevant response strategy for the spill scenario. 8. OSROs and mutual aid organisations provide expertise and additional manpower into the IMT and field response capability. 9. It is important to maintain regulatory and stakeholder relationships.
24 – 72 Hours	<ol style="list-style-type: none"> 1. Maintain and reinforce an IMT with appropriate oil spill response 	<ol style="list-style-type: none"> 1. As above – ongoing. 2. As above – ongoing.

Operational period	IMT spill response objectives	Rational/justification
	<p>trained personnel including mutual aid capabilities for specialist oil spill roles</p> <ol style="list-style-type: none"> 2. Maintain situational awareness of spill trajectory, weathering, and any potential environmental impacts. 3. Support the mobilisation/deployment of response strategies/field capabilities through FOBs. 4. Continue the pre-deployment of shoreline assessment/response capabilities including SCAT, OWR, resource protection, and shoreline clean-up resources to FOB in anticipation of future deployment. 5. [Crude oil / Group IV spill only] – Mobilise/activate at sea response strategies, including: <ul style="list-style-type: none"> • continue in-field vessel based dispersant spraying • continue mobilisation and/or commence FWAD spraying from a nominated airfield along • continue mobilisation of C&R capability from port – commence operations in the field if possible. 6. [Well blow-out only] – Continue mobilisation of SSDI spread to FOB. 7. Review hazard assessments and execute HSE plans for operational activities. 	<ol style="list-style-type: none"> 3. The IMT objective has shifted from establishing the FOBs to the operational activity taking place from these locations. 4. As above – ongoing. 5. Ongoing at sea response strategy operations should continue, based on a positive demonstrable environmental outcomes and weather conditions conducive to safe operations. 6. As above – ongoing. 7. The IMT objective now includes the ongoing conduct of risk assessments and preparation of a HSE plans, as well as the execution and ongoing review of the HSE plan for operational response strategies.
72 – onwards	<ol style="list-style-type: none"> 1. Maintain an IMT with appropriate oil spill response trained personnel including mutual aid capabilities for specialist oil spill roles. 2. Maintain situational awareness of spill trajectory, weathering, and potential environmental impacts. 3. Support the mobilisation/deployment of response strategies/field capabilities through FOBs. 4. Continue the pre-deployment of shoreline assessment/response capabilities including SCAT, OWR, resource protection and shoreline clean-up resources to FOB in 	<ol style="list-style-type: none"> 1. As above – ongoing. 2. As above – ongoing. 3. The IMT objective has shifted from establishing the FOBs to the operational activity taking place from these locations. 4. As above – ongoing. 5. The pre-deployment of resources to the FOB is ongoing. The relevant State/Territory Control Agency will determine the timing for actual activation of shoreline assessment and response capabilities from the FOB to the field.

Operational period	IMT spill response objectives	Rational/justification
	<p>anticipation of future deployment. As directed by the relevant State/Territory Control Agency, commence deployment of shoreline assessment/response capabilities into the field.</p> <p>5. [Crude oil / Group IV spill only] – Mobilise/activate at sea response strategies, including:</p> <ul style="list-style-type: none"> • continue in-field vessel-based dispersant spraying. • continue mobilisation and/or commence FWAD spraying from a nominated airfield. • commence/continue with C&R activities in the field. <p>6. [Well blow-out only] – Continue mobilisation of FOB.</p> <p>7. Review hazard assessments and execute HSE plan for operational activities.</p>	<p>6. As above – ongoing.</p> <p>7. As above - ongoing.</p>

Table 2 – Template for IMT Capability Assessment

IMT Function	IMT Outputs 0-24 hours	IMT composition 0 – 24 hours	IMT Outputs 24 – 72 hours	IMT composition 24 – 72 hours	IMT Outputs 72 hours – steady-state	IMT composition 72 hours – steady-state
Control / Leadership Function						
Liaison Function						
Safety Function						
Media & Public Information Function						
Planning Function						
Situation Unit (including COP/GIS)						
Environment Function						

IMT Function	IMT Outputs 0-24 hours	IMT composition 0 – 24 hours	IMT Outputs 24 – 72 hours	IMT composition 24 – 72 hours	IMT Outputs 72 hours – steady- state	IMT composition 72 hours – steady-state
(Including OSTM, Resources at Risk specialist)						
SCAT Function						
Shoreline Response Program Function						
OSMP Program Coordinator						
Operations Function Lead						
Aviation Function						
Marine Function						
Shoreline Response Function						
Oiled Wildlife Response Function						
Waste Function						
Logistics Function						
Finance & Admin Section Chief						

Addendum 2 – Implementation program

As defined in Section 8 of this document, it is recommended that each TH should define arrangements to impart and maintain all—hazards and oil spill training for their selected in-house IMT personnel.

At the time of preparation of this document, the majority of Australian upstream petroleum titleholders (TH) utilised a range of in-house and external training providers, to deliver all-hazards and oil spill response training to TH IMT personnel. There is variation in each THs IMT training course content and structure, with various elements of all-hazards vs oil-spill content taught within the range of course structures.

As this document has proposed a new set of knowledge requirements and skills, it is not possible to expect all THs to be able to instantaneously convert their current all-hazards and oil spill training courses to incorporate the new materials presented in this document and train their IMT personnel.

Both APPEA OSWG member and non-member THs were asked to provide an evaluation of time required to complete the three tasks listed below, to understand the likely time/duration required for THs to achieve fully implementation the oil spill knowledge requirements of this document (Table 2 & 3) to each TH's IMT personnel:

1. Mapping of THs current IMT oil spill training course to the APPEA IMT training document knowledge requirements (timeframe required for the TH to complete a review of current TH IMT oil spill course content against the Table 2/3 content, to identify gaps in TH's current training materials).
2. Updating of TH's IMT oil spill training course (timeframe required for the TH's development of new training materials, development of updated oil spill exercises and competency assessment processes, update to HR/training records systems to accommodate the change etc).
3. Roll out of updated IMT oil spill training course to IMT personnel (timeframe required for the TH to re-train/update the oil spill training for the TH's IMT personnel, noting most THs have several IMT 'shifts' or 'teams' which need to be provided updated/new oil spill training).

The results of the above questions have concluded that on average, THs would require approximately 3 months to complete task #1 and task #2 (combined 6 months) and 15 to 18 months to complete task #3, depending on the size of the THs IMT team. Therefore, THs will typically require 24 months to complete the full course assessment, re-development and roll-out of revised oil spill training to all required TH IMT personnel.

It is recommended that all THs should develop a TH specific work program/project plan, for the development and roll-out of upgraded IMT oil spill training, aligned with this document. The TH work program/project plan should define the THs target timeframes to complete each of the three tasks described above.

THs should maintain relevant evidence to demonstrate progress against their work program/project plan.