

GUIDANCE

Reference:
NP-GUI-009

NATIONAL PLAN

JOINT INVESTIGATIONS GUIDANCE



Purpose of this Guidance:

This Guidance outlines the recommended practice for investigating pollution incidents, including those of unknown source in Australian coastal waters (to 3 nautical miles offshore). The Guidance covers:

- common incidents and causal factors
- the relationship between incident management and investigations
- the role of different stakeholders in the investigation process
- the Investigation Management Model
- offences and powers relevant to shipping incidents
- specific investigation guidance for different incident types

For the reference of:

This Guidance has been prepared to give guidance to all stakeholders with an interest in incident investigations.

Related documents:

Refer to:

- the National Plan for Maritime Environmental Emergencies
- GBRMPA Compliance Management and Investigation Procedures
- Australian Government Investigation Standards

Disclaimer

This Guidance is not mandatory and does not replace Commonwealth or State or Northern Territory Government and individual agency policy, procedures and legislation pertaining to investigation and prosecution. This Guidance is intended to assist regulatory investigators who carry out multi-agency/multi-jurisdictional investigations efficiently and effectively.

This Guidance should be read in conjunction with Commonwealth or State/Territory Government and individual agency policies and procedures pertaining to investigation and prosecution.

List of acronyms and terms

AIIMS	Australasian Inter-service Incident Management System	National Plan	National Plan for Maritime Environmental Emergencies
AMSA	Australian Maritime Safety Authority	NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority
CDPP	Commonwealth Director of Public Prosecutions	P&I Club	Protection and Indemnity Club
COO	Concept of Operation	PSSA	Particularly Sensitive Sea Area
EPA	Environment Protection Authority	SOLAS	International Convention for the Safety of Life at Sea, 1974
GBRMPA	Great Barrier Reef Marine Park Authority	TSI Act	<i>Transport Safety Investigations Act 2003</i>
GBRMP Act	<i>Great Barrier Reef Marine Park Act 1975</i>	VTS	Vessel Tracking Service
GPS	Global Positioning System		
IMO	International Maritime Organization		
IMS	Incident Management System		
IMM	Incident Management Model		
IMT	Incident Management Team		
IC	Incident Controller		
IO	Investigations Officer		
MARPOL	International Convention for the Prevention of Pollution from Ships		
MERCOM	Maritime Emergency Response Commander		
MSQ	Maritime Safety Queensland		

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1. Introduction

Historically, Australia's jurisdictions (Commonwealth, States and Northern Territory) have responded to incidents that have not been attributed to a source also known as 'spills of unknown origin'. In instances where the source of a spill isn't identified, the respective jurisdictions bear the responsibility for the response. Response expenses for unknown or mystery spills may be funded by AMSA in accordance with the National Plan - Claims Management Guidelines.

This Guidance recognises the importance of cooperation between relevant regulatory agencies and provides a framework for joint regulatory investigations of oil and other spills with unknown origins. It also highlights the role of investigations within the greater incident management context.

1.1. How to use this Guidance

This Guidance identifies situations where agencies may need to work in close cooperation. It is primarily aimed at assisting regulatory and law enforcement agencies with their investigations and to encourage collaboration and cooperation when trying to determine the source of pollution.

Investigators may use this Guidance as an 'aide memoir' when conducting investigations into incidents potentially over multiple jurisdictions.

The Guideline may assist to:

- identify the type of incident, key agencies with potential interest and the approach to the investigation;
- identify the relationships and needs of agencies that have an interest during an incident, including the lead agency;
- build cooperative relationships between all agencies that have an interest in major incidents;
- provide a basis for instruction to investigating officers on the approach to investigating incidents;
- guide the implementation of the Investigation Management Model within the context of the incident management framework;
- provide advice on techniques to conduct the investigation; and
- provide guidance on evidence and evidence collection.

1.2. Scope of the Guidance

This Guidance may assist investigators of incidents that occur in, or are spread over multiple jurisdictions, which generally involve a degree of complexity and legal issues. This Guidance also demonstrates how investigation works with incident management.

It is essential that the investigation be approached, planned and conducted in a professional, coordinated and timely manner and that there be full cooperation between agencies involved in the investigation, and with the Incident Controller (IC).

The Guidance includes a brief description of the Incident Management System (IMS) and explains how the investigation process should be coordinated as part of the overall management of the incident, which includes issues such as safety, minimising environmental damage, ship asset protection, cargo protection and protection of the rights of crew and offshore industry operators.

Investigations where the polluter is known will likely follow similar procedures and processes.

1.2.1. Context

Incidents may occur in sensitive areas, remote locations, bad weather and at night. Incidents may also involve valuable assets, dangerous cargo or industry. Cost recovery for an incident is dependent on identifying the source of a spill.

1.2.2. The interests of law enforcement and regulatory agencies

There is likely to be several agencies with regulatory responsibility to investigate breaches of the legislation for which each is primarily responsible. Issues include:

- the need for a collaborative approach to the investigation;
- the need for a management model to guide the investigation;
- who the lead agency will be for the investigation;
- gathering, managing and sharing evidence lawfully, access to IT systems/case management systems and cross agency appointments, etc.

1.2.3. The interests of the prosecuting body

Early advice from prosecuting agencies is essential to ensure best use of investigation resources and to identify the most appropriate approach to the investigation. Prosecuting agencies require a single point of contact within the investigation team, generally through the Investigations Officer or jurisdiction equivalent, and for that representative to disseminate case information back to the relevant parties.

1.2.4. The incident response

Liaison and cooperation is key. Incident response under the National Plan for Maritime Environmental Emergencies (the National Plan) aims to minimise the impacts of marine pollution on the Australian community, environment, economy and infrastructure. Under the National Plan, incident response is managed through an IMS.

The investigation process, however important, must be conducted in a manner that minimises interference with the incident response. Likewise, the incident response should be managed in a way that supports a successful investigation.

1.2.5. Special investigation techniques

The investigation of incidents involves the application of special techniques to ensure that the evidence gathered is admissible. The use of competent experts to gather technical evidence is often required.

1.2.6. Political sensitivities

Vessel (commercial or recreational) and offshore industries are important to the economy and have various political sensitivities that surround trade and shipping that must be considered during the investigation. This includes consideration of the potential relationships with foreign agencies and arrangements.

1.2.7. Media interest

Oil spill incidents will attract media and community interest, particularly where matters of national environmental significance are impacted (e.g. Ramsar Sites, World Heritage, Australian National Heritage sites on Australia's coastline). In the event of an incident, consideration should be given to communicating how the investigation is proceeding and what its outputs may be, as appropriate.

1.2.8. Technical issues

A number of existing technical controls are in place to minimise the likelihood of incidents occurring e.g. shipping and offshore industry regulators.

Evidence collection is likely to involve highly technical issues including navigation, ship operations and offshore operations.

The impact of incidents on Australian Waters will often be quantified in highly scientific terms.

1.2.9. Expert witnesses and evidence collection

An investigation may require input from expert witnesses. It will be necessary for samples to be collected and managed in a way that ensures admissibility as evidence in a subsequent prosecution, within the one or multiple prosecuting jurisdictions.

1.2.10. Jurisdiction and investigation costs

There are overlapping State, Territory and Commonwealth jurisdictions (defined geographically) that must be considered. An incident may trigger the investigation of offences under one or more pieces of legislation. Agreements between key investigating agencies should be established to cover jurisdictional (determining lead agency as per jurisdiction response plans) and cost issues associated with the investigation. If the investigator is unsure who should be involved or what jurisdiction the incident has occurred in (for evidence collection purposes) they should make contact with key agencies or refer to relevant jurisdiction contingency plans to clarify the following:

1. Identify jurisdictions
2. Identify the lead agency and other agencies with an interest
3. Progress evidence collection
4. Capacity for information sharing.

2. Incidents in State/Territory waters

Not all pollution incidents can be directly attributed to a known or quickly identifiable source; hence, the primary focus of the initial investigation is to detect its source and the responsible party. All spills have origin; it is the role of the Incident Controller (Investigations Unit if applicable) to ensure that the origin of the spill is thoroughly investigated. There are four general sources of pollution which are addressed in this guidance, each of which may require the involvement of a number of regulatory and law enforcement agencies to investigate:

1. naturally occurring - seeps
2. land-based pollution
3. vessel-related pollution
4. industry-related pollution

2.1 Naturally Occurring

Crude oil and natural gas naturally enter the ocean at areas known as 'seeps', where hydrocarbons leak out of fractures and sediments. Worldwide, seeps contribute around an average 20 million litres of oil to the ocean annually.

Many seeps have a long history, often thousands of years, although their rate of leaking can vary over time, and so are sometimes noted on navigation charts.

Seep oil can vary in appearance and surface extent, depending on prevailing weather and sea conditions and flow rates. The oil can form slicks large enough to spread and drift with winds and currents and be seen from the air. Eventually the oil will form tar balls and mats, either sinking or stranding along local or more distant coastlines.

Marine pollution that can't be attributed back to a source may be funded by AMSA in accordance with National Plan - Claims Management Guidelines.

2.2 Land-based pollution

Unknown slicks can also come from oil on roads, stormwater runoff or spills from local industry. Whenever there is a coastal spill all local drains and other land-based sources should be checked by relevant agencies to ensure they are not an unrecognised spill source.

For both prosecution certainty, and for National Plan cost-recovery, it is important that likely land-based sources of pollution are investigated and can be shown to be ruled out.

2.3 Vessel-related Pollution

Collisions between ships, and groundings, can all result in damage, increasing the risk of loss of cargo or fuel oil.

Vessel-sourced pollution has the potential to contaminate waters and coastal resources and these spills may result in actual or potential impacts on habitats, fauna, amenity or other socio-economic or commercial values. Harmful pollutants can also occur because of leaks or spills during normal ship operations, cargo handling, or during accidents. Illegal activities, such as bilge pumping and deck or cargo washing are also potential sources of pollution.

Occasionally ships are unaware they have been involved in a pollution incident, but some pollution incidents are deliberate, with operators trying to avoid the real cost of properly managing wastes. Illegal discharges at sea are often difficult to successfully detect, investigate or prosecute.

Legal discharges are regulated through the International Convention for the Prevention of Pollution from Ships (MARPOL), which has been incorporated into Australian law, including through relevant State and Territory law, and is aimed at preventing unauthorised or accidental discharges.

Even if the investigation is unable to identify the specific vessel from which the spill came, if the oil can be shown to have come from a ship, then National Plan cost recovery options may apply.

2.4 Offshore Petroleum Industry

Offshore petroleum facilities and activities are in both Commonwealth and state/NT (coastal) waters. Some facilities (e.g. a pipeline) or activities (seismic survey) may straddle jurisdictions.

The National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) is Australia's independent regulator for health and safety, environmental management, structural and well integrity for offshore petroleum facilities and activities in Commonwealth waters. In coastal waters the regulatory responsibility is the relevant state or Northern Territory agency, unless conferred to NOPSEMA.

NOPSEMA is established under the Offshore Petroleum Greenhouse Gas Storage Act 2006 (OPGGS Act). NOPSEMA's principal functions in relation to investigation of pollution incidents include:

- To investigate accidents, occurrences and circumstances relating to health and safety, structural integrity and environmental management
- To cooperate with other Commonwealth and state or Northern Territory agencies or authorities having functions relating to regulated operations.

Offshore petroleum titleholders must notify NOPSEMA or the relevant state/NT agency of reportable pollution incidents from their activities. Marine pollution originating in Commonwealth waters can move into state/NT waters and vice versa.

The OPGGS Act requires that offshore petroleum titleholders maintain financial assurance sufficient to meet the costs, expenses and liabilities that may result in connection with carrying out the petroleum activity, including but not limited to, expenses relating to the clean-up or other remediation of the effects of an escape of petroleum.

3. Guidance for coordinating incident and investigation management

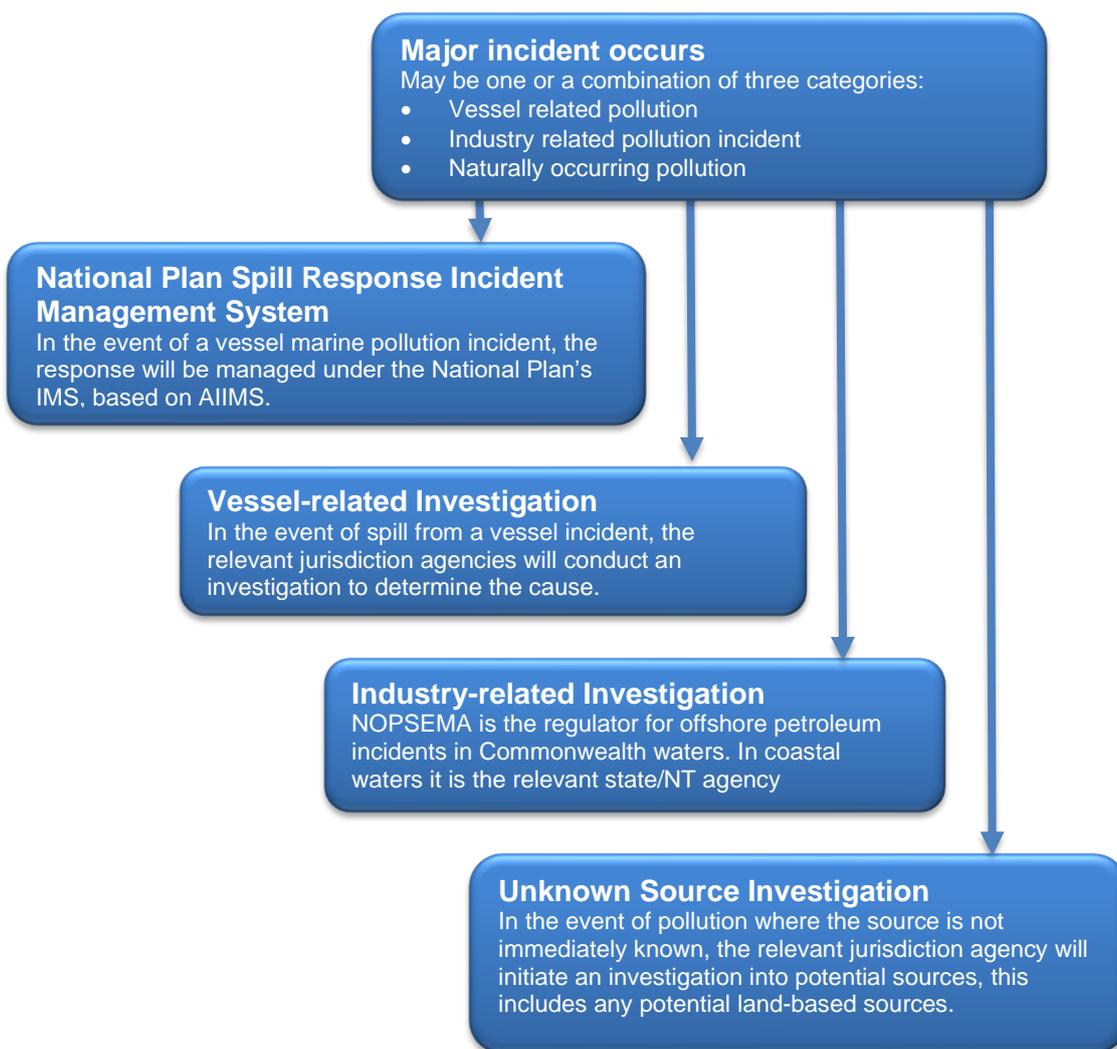
3.1 Investigation working with incident response functions

Formal agreements in advance between agencies, about how they will cooperate, share resources and fund the investigation save time and confusion when the incident investigation begins. It is important to quickly identify and agree the lead agency in the Investigation Management Model. The initial lead agency may change as the facts of the incident become clearer.

If an IMS structure is in place and the regulatory investigation commences before the pollution response is completed, the investigation must be coordinated with the IC and/or IMT.

In many cases it will be the state/NT agency that will receive the first report of a pollution incident, and so will commence both response assessment and initial regulatory investigation. The state/NT agency will also likely notify AMSA if it believes the source was a vessel, especially if it an international vessel. It will notify NOPSEMA if it believes that the source of the spill is an offshore petroleum facility in Commonwealth waters.

Figure 1. The relationship between incident response and investigation



3.2 Key stakeholders in incident and investigation management

The following table identifies the key stakeholders that may play a key role in relation to the management and/or investigation of an incident.

Each jurisdiction has their own agencies responsible for undertaking investigations and prosecutions of marine pollution incidents. Table 1 outlines key regulators that may be engaged during an investigation.

Table 1. Regulators (investigations and prosecutions) and their responsibilities

Name of Stakeholder	Responsibility
CDPP Commonwealth Director of Public Prosecutions	The Office of the Commonwealth Director of Public Prosecutions (CDPP) is the independent prosecuting authority responsible for prosecuting alleged offences against Commonwealth law. CDPP can also prosecute State offences if the primary offence is under Commonwealth legislation.
AMSA	The Australian Maritime Safety Authority has jurisdiction and responsibility to investigate shipping incidents and pollution incidents throughout Australian Waters under the <i>Protection of the Sea (Prevention of Pollution from Ships) Act 1983</i> . It works with the CDPP and State/NT jurisdictions to support prosecutions.
NOPSEMA	The National Offshore Petroleum Safety and Environmental Management Authority is established under the Offshore Petroleum Greenhouse Gas Storage Act 2006 (OPGGS Act). NOPSEMA is responsible for investigating accidents, occurrences and circumstances relating to health and safety, structural integrity and environmental management in the offshore petroleum industry in Commonwealth waters.
MSQ	The agency responsible for undertaking the investigation and Department of Transport and Main Roads Prosecutions are the unit responsible for providing legal and prosecution services
EPA Environment Protection Authority Victoria	Provides the State with expert legal representation so that the evidence against someone accused of an incident can be properly presented to the court. The EPA can also prosecute State offences if the primary offence is under State legislation.
NSW EPA	Prosecutions are undertaken by either the Port Authority of NSW or Roads and Maritime Services depending on the location and also our own internal State Enforcement Guidelines.
Other relevant stakeholders	Response Incident Controller and their IMT/ITM Jurisdiction law enforcement, regulatory and prosecutorial agencies Legal staff Technical staff Owners and operators of ships Titleholders of facilities P&I Club and insurance representatives

3.3 National Plan for Maritime Environmental Emergencies

The National Plan provides for national arrangements, policies and principles for the management of maritime environmental emergencies. The National Plan is administered by AMSA and covers actions to prepare for, respond to and recover from marine pollution incidents. It sets out specific roles and responsibilities for the management of maritime incidents in different scenarios.

Preparedness is funded by the Protection of the Sea Levy imposed on commercial shipping to ensure the potential polluter pay this cost. For ship-sourced pollution, the cost of response and recovery is generally borne by the polluter or their insurers, based on the polluter pays principle. Where such recovery is not possible, in part or in full, response agencies may seek reimbursement from AMSA. AMSA's *Claims Management Guidelines* provides further details on reimbursement of costs from AMSA.

In the event of an escape of petroleum from an offshore petroleum activity in Commonwealth waters, the titleholder must comply with the general law and the ‘polluter pays’ principle prescribed in the OPGGS Act. There is a no-fault element to the polluter pays obligations meaning that the titleholder is liable for all the costs associated with any response to an escape of petroleum, whether undertaken by the titleholder or by the Commonwealth, a State or the Northern Territory.

3.4 National Plan Incident Management System

Under the National Plan, marine pollution incidents are managed by an IMS consistent with the Australasian Inter-service Incident Management System (AIIMS4). The IMS is designed on the principles of flexibility, functional management, management by objectives, and unity of command and span of control.

Under the National Plan IMS, the Incident Controller is responsible for the management of all incident control activities and heads up functional sections forming the IMT. The number of sections and staff required for the IMT varies according to the incident classification. In a large or complex (Level 3) incident; all positions may be filled, whereas in a less severe incident some functions may be unnecessary or combined.

In general, the IMT structure follows the pattern noted below in Figure 2. More information on the IMT structure can be found in the *National Plan Incident Management System Policy*.

Some jurisdiction Control Agencies (who appoint and support the Incident Controller) use an IMT structure which includes full responsibility for the investigation function, as shown in Figure 2. Sometimes the regulatory agency requires an independent investigation role and function, so that it does not impede or inhibit the response. Either way, the Incident Controller and regulatory agencies (and their investigators) should be working together to ensure the response supports the investigation and potential prosecution, and vice versa.

Figure 2. IMT structure for a level 2/3 incident when AIIMS structure is applied.

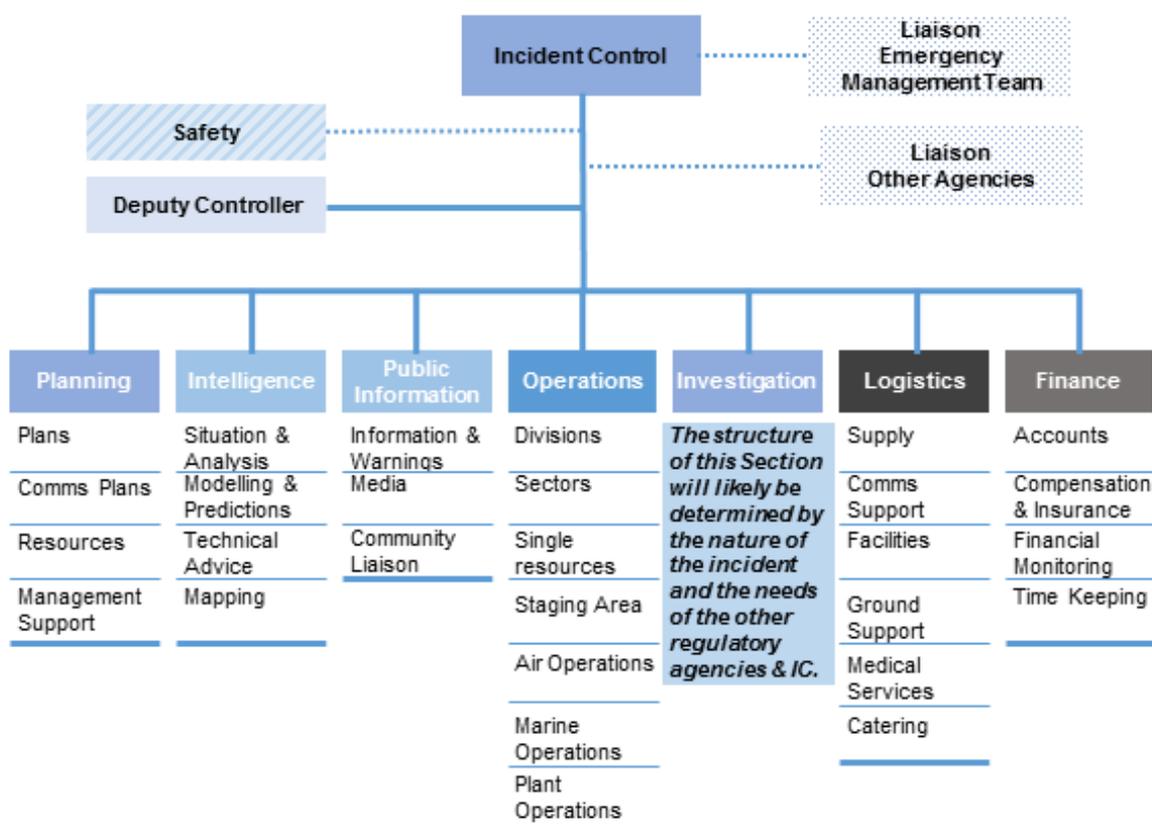


Figure 3. Incident management and investigation flowchart.



4. Cooperative framework for multi regulatory agency investigation of complex/major incidents

4.1 Joint Operations - Operation Command Methodology

When multiple agencies are involved in the regulatory investigation of a complex or major incident, it is recommended that a joint management approach be adopted based upon the Operation Command Methodology. This involves a structured and disciplined approach to planning and managing the investigation, often more so than how many agencies normally operate. However a structured approach is highly desirable when the investigation may involve multiple agencies and interests, and where resources may be constrained.

The methodology consists of a four-level command structure that clearly defines the roles and responsibilities of officers at each level. It provides for structured and detailed planning at the three command levels including detailed orders for tasking operatives (see Table 2 below). The methodology defines a clear communication and reporting process with an emphasis on the importance of effective intelligence and includes feedback through evaluation and debrief.

If this model is adopted, it will likely sit outside the response IMT structure and will engage with the Incident Controller through formal liaison and consultation processes. It is possible the investigation may take in issues, locations, processes and time beyond the response requirements.

The application of the Operation Command Methodology involves:

- Identifying the agencies with a regulatory interest in the incident
- agreeing on a joint operation and structure
- agreeing on the required resources and their source
- identifying the lead agency (generally the agency with the primary regulatory interest in the incident)
- appointing an Investigations Officer (IO) from the lead agency
- the IO identifying the Investigations Commander and Group Commanders
- planning and tasking the investigation needs to investigators in accordance with the methodology
- consulting with the response IC and IMT
- consulting with prosecutors
- conducting structured debriefs at the conclusion of the operation.

Note, this model is more likely to be required for a significant incident, and so the spiller will likely be known.

Table 2. Operations Command Structure – summary of roles and responsibilities

Role	Responsibilities
Investigations Officer To identify the need for an operation To deliver organisation outcomes in accordance with relevant policy, guidelines and SOPs	To produce an outline investigation plan To arrange Intel/Operations liaison To arrange liaison with other agencies To issue a Concept of Operation To receive and action reports Command and control the operation consisting of one or more forces
Investigations Commander	To plan operations To assign missions and tasks to investigation plan

To deliver Investigations Officer's intent as outlined in the Concept of Operation (COO).	<ul style="list-style-type: none"> To deploy groups To allocate resources and if necessary, re-allocate those resources during the conduct of an operation To command and control the force operation
Group Commander To deliver the objectives.	<ul style="list-style-type: none"> To plan the group operation To assign missions and tasks to officers in the group To deploy officers of the group To allocate resources to the officers and if necessary, re-allocate those resources during the conduct of a group operation. To command and control the group operation

4.2 Investigation Management Model for incidents

Using the IMM, the IO prepares a case management plan that embraces all legislation to be addressed, as discussed between the participating agencies. The IO is responsible for coordinating the input of the agencies, experts and physical resources as required. This needs to be both thorough and timely as the evidence may be being 'cleaned up' or be leaving (or have left) the country on the source vessel.

To assist in managing a potentially diverse range of interests, the Operational Command Methodology is used as the investigation management model. This defines the roles and responsibilities of participating agencies, is an ordered approach to achieving planned outcomes by making the best use of resources, avoiding duplication of effort and ensuring the preparation of a strong brief.

An incident may involve breaches of several legislative requirements. These may be categorised as 'primary' and 'secondary' offences. Given the range of legislation and jurisdictions that may be involved in an incident, it is quite likely that several primary offences will have occurred.

As an investigation unfolds and the full circumstances of the incident become clear, regulatory agencies may choose either to pursue, or to discontinue, their involvement in the investigation. As a result of these decisions, the level of investigation and the roles and responsibilities of participants in the investigation may vary. The IO is responsible for managing changes to the team, the approach to the investigation and adjusting the case management plan.

The level of investigation needed to support jurisdictional claims resulting from oil spills is dependent on many variables but should be commensurate with the scale of the incident.

Investigation actions should be directed by the IC and/or the IO at the time.

Regardless of the circumstance. jurisdictions should:

1. Follow the directions of the IC and/or IO
2. Keep records of those directions and
3. Report findings or actions in writing.

Further information can be found in the National Plan [Claims Management Guidelines](#) under:

- 3.4: Claims criteria guidelines
- 4.14-4.15: Strategies for claims management
- 7.6-7.7: Unidentified polluter advice

Adopting the IMM assists with:

- Notifying the IC, IMT and police as to the interests of the regulatory bodies in regard to the investigation.
- Providing a transparent management model to enable the regulatory investigation to be managed in association with other activities associated with the incident, including:
 - any law enforcement agency investigation

- salvage obligations
- safety considerations
- The preparation of a single brief of evidence (or report) to assist regulatory agencies to decide if they wish to proceed with presenting the brief to the relevant prosecuting agency.
- Supplying the prosecuting agency with a complete brief of evidence containing all the evidence and outlining the interests of all regulatory agencies.

The management of investigations requires consideration of costs associated with:

- the use of resources for example, the engagement of aircraft or vessels
- Sampling and evidence collection
- engagement of experts to conduct analysis

These issues will be addressed in agreements established between key agencies, with an interest in the investigations.

This IMM in some circumstances may be undertaken concurrently with any:

- law enforcement agency investigation
- IMT operations.

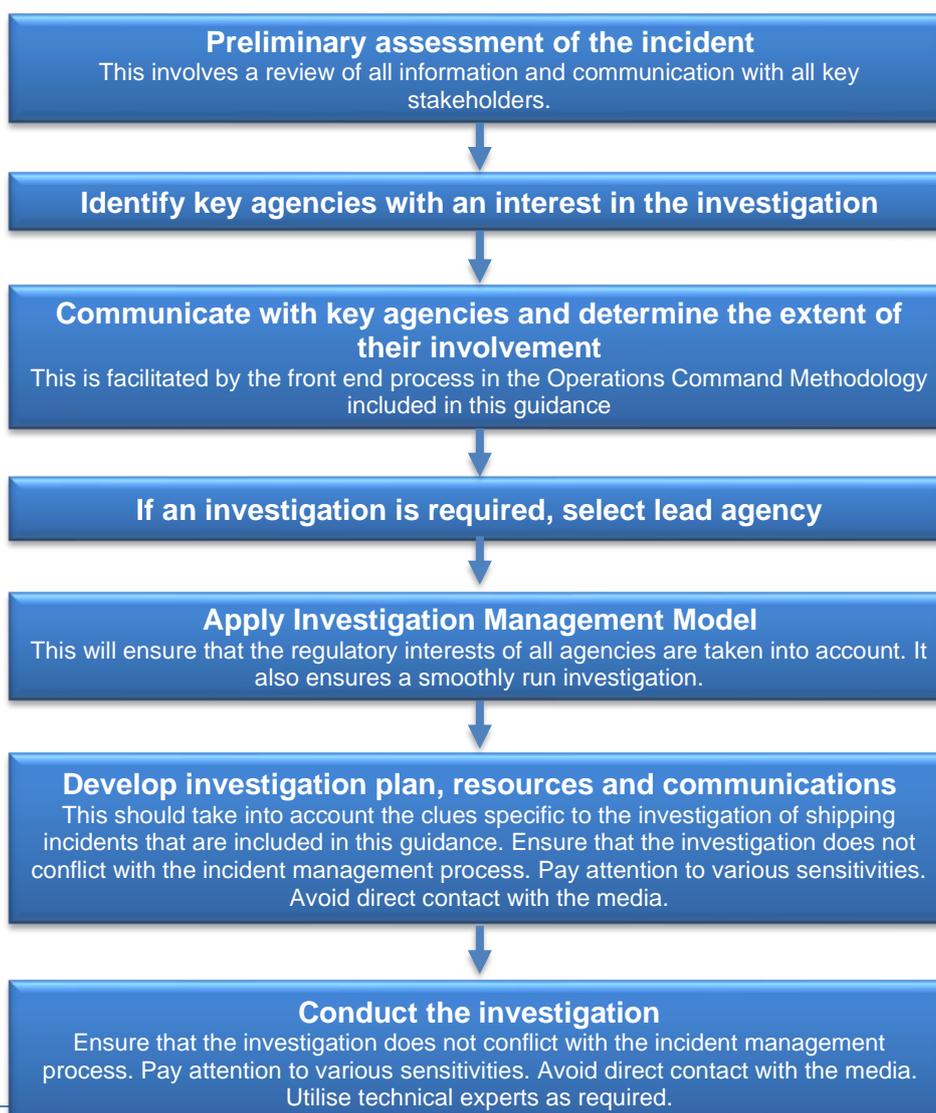
5. Generic guidance for investigations

5.1 What constitutes an effective investigation?

The key to a successful investigation of an incident involves the following: (see Figure 4):

- Expecting an incident and planning and preparing in advance for as much of the process as possible
- Making an early assessment of the incident
- Identifying the lead agency in the regulatory investigation
- Identifying the key stakeholder agencies, their legislation and their specific issues
- Communicating with the key stakeholders ensuring that all key interests are represented
- Ensuring that the investigation interests are represented in the overall incident management processes
- Agreeing between the agencies that have a primary regulatory interest on the way to proceed
- Using the IMM to manage the coordinated effort of key agencies involved in the investigation
- Ensuring that evidence is carefully collected, managed and admissible
- Using technical experts to assist with estimates of risk, damage and cost of restoration.

Figure 4. Conduct of the investigation



5.2 Known spill source versus unknown.

When the source of an incident is known then the procedure follows each jurisdiction agency's standard operating procedures. When the source is unknown the investigation can be more complex and require a greater degree of investigation to determine the source, identify which agency has jurisdiction and prove definitively who is responsible.

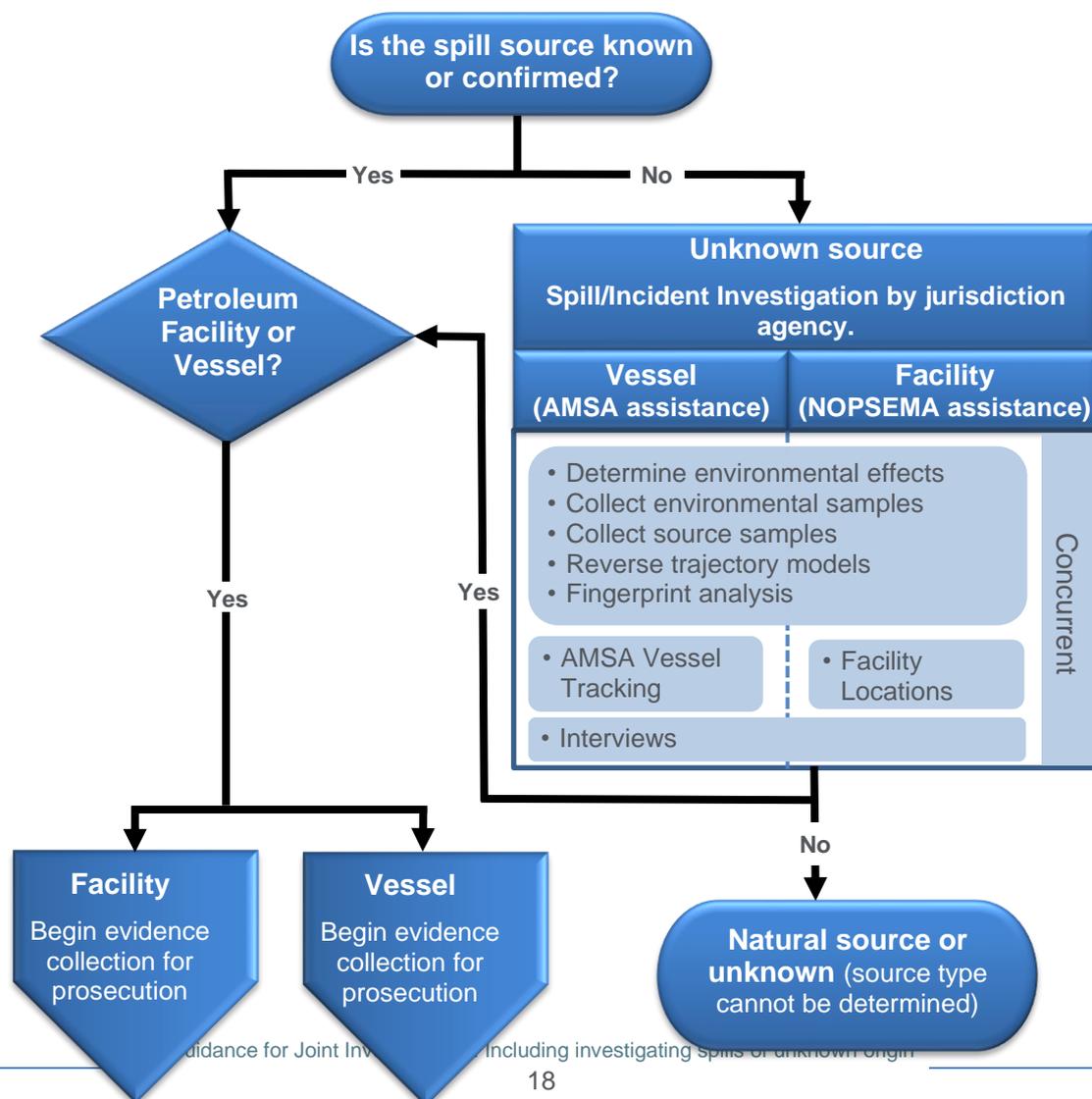
Figure 5 identifies considerations and processes for investigation into sources of unknown origin. There are four common sources of an oil spill. Other than natural seeps, the investigation into the three other types of pollution will each have a different end point.

In order to successfully prosecute a polluter, certain requirements in law are required. This may include:

1. Evidence that a spill has actually occurred, and entered the water;
2. Clear evidence of a change or effect in the natural environment;
3. Evidence that the suspected polluter is the only 'likely' or 'reasonable' source of the spill – and other possible sources have been investigated and ruled out;
4. Evidence connecting the potential polluter to the spill.

Investigators must always be aware that the cost of the investigation, the analysis and any prosecution may significantly outweigh any likely benefits. So, prior to working towards this endpoint, it is important that a decision be made by the lead agency (in consultation with other agencies) to continue an investigation.

Figure 5. Flow chart for known versus unknown spill investigation. (details below)



Sections 5.2.1 to 5.2.6 provide more detail that will assist in determining the source (first outcome) across all types of investigations for all sources of spills. Once the source is known then existing jurisdiction policies and procedures will be followed.

Appendices A. and B. are included to assist in investigations for known spill sources and shipping incidents, respectively. Note that all regulatory agencies should already have their own detailed investigation procedures, plans and manuals, and this Guideline Guidance is a generic overview only.

5.2.1 Determining if there has been a spill and any effects on the environment

Has an incident occurred?	
<p>It is necessary to seek confirmation from a reliable source as soon as possible. Confirmation may come from the Incident Controller, or a member of IMT or an expert.</p> <p>Note: In most situations an IC will not be appointed until confirmation that the incident has occurred.</p>	<p>Contact IC. Contact responsible IMT member. Contact pollution expert.</p>
Why is it urgent to preserve evidence?	
<p>Confirmation of a pollution incident may take some time due to remote locations and weather conditions.</p> <p>Investigators may pre-empt the confirmation and commence preparations for the investigation. The level of preparation will depend on individual circumstances.</p> <p>Response to a spill, by its very nature or clean up, destroys evidence of the spill.</p>	<p>Commence planning and put experts on notice. Make preliminary arrangements and contact relevant agencies.</p>
Who are suitable site assessors and evidence gatherers?	
<p>Obtain first-hand information as soon as possible after the event, which will assist in determining the response to the incident.</p> <p>Gather evidence to meet specific requirements in the evidence matrix including:</p> <ul style="list-style-type: none"> ▪ Position of the assessor and any relevant expertise they have in evidence collection ▪ Location and description of the scene – both at source and at effected locations, including visible or discernible damage or effects ▪ persons of interest at the site and in proximity <p>Obtain a more detailed assessment of damage, including systematic photography of the site and more specific spatial measurements.</p> <p>Collect and curate suitable samples (evidence) of the spill (e.g. oil?) and of effects (e.g. dead oily bird).</p>	<p>Contact IC</p>
When was the pollutant first observed?	
<p>The time when the pollutant was observed will assist in determining a first observation time to determine when and where the spill occurred and where it has travelled.</p> <p>The exact times the pollutant was observed/reported and by whom, can usually be obtained from staff involved in the management of the incident.</p> <p>Obtaining a statement from the witness(s) is critical to the investigation.</p>	<p>Identify and corroborate critical times. Obtain witness statements.</p>
Where does the spill start and finish?	
<p>It is essential to determine the geographic area the pollution has covered, as it may be difficult or impossible to establish the actual discharge point.</p> <p>In a moving vessel, a discharge may cover many kilometres, e.g. an overboard discharge from a sludge tank cleaning operation. Initially, an Investigator may not be able to confidently determine:</p> <ul style="list-style-type: none"> ▪ where the pollutant discharge took place ▪ what direction the offending ship was travelling at the time of the incident <p>All ships moving through the area and all offshore industry facilities in the vicinity of the spill should be investigated to eliminate some suspects and focus on others.</p>	<p>Determine location of pollution from point of discharge, track and determine final destination. Determine jurisdictions. Establish what ships are to be investigated. Engage expert assistance.</p>

<p>Ship movement data (e.g. AMSA's AIS) will assist to determine track, time and vessel identification. It also assists to determine jurisdiction.</p> <p>Assessing the spill volume and type can add additional information and assist in determining if other investigations are required. These could be aboard a vessel or facility, or in port, or in the environment, otherwise not yet identified.</p>	
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5.2.2 Collecting Environmental Samples

Critical points to consider	
<p>It is a requirement of the offence to prove that the pollutant (as defined by type) or character) entered the water. This requires a source and a receptor (the water or environment). This can come from expert opinion, other evidence such as photographs of the spill, or by obtaining matching samples of the source and the pollutant.</p> <p>Where multiple sources are possible, an environmental sample of the pollutant will be required to complete a match with samples from suspect sources (e.g. ships). This can also help determine what samples should be collected from these sources, such as ships' fuel, waste, or cargo.</p> <p>Note: Only experienced staff and experts that are skilled in collecting samples and conducting examinations should do this sampling. It is very easy to ruin evidence with cross-contamination and inappropriate care and curation.</p>	<p>Refer to the offence matrices to establish the elements of offence and the legal definition of pollution.</p> <p>Determine what samples are to be collected.</p> <p>Determine who is to collect samples.</p> <p>Determine how the samples are to be collected, stored and analysed.</p>
Sample type and collection points from environment	
<p>Examples of pollution evidence and collection points can include:</p> <ul style="list-style-type: none"> ▪ Slicks off the water ▪ Oiled shorelines and debris ▪ Oiled wildlife, including birds, invertebrates and fish ▪ Look for different types of sample based on what might be relevant (oil, oily water, tar balls, moussed oiled, etc.) ▪ Oiled sorbents or other materials used on the response ▪ Oiled sediments 	<p>Seek advice from technical experts and use them to identify and collect samples.</p> <p>Identify collection points.</p> <p>Use oil sample or evidence kits.</p> <p>Record location data.</p> <p>Build a comprehensive picture of the area affected and the type of pollution.</p>
Photographic evidence	
<p>Photographic evidence may include:</p> <ul style="list-style-type: none"> ▪ the pollutant in the water or on other objects (wildlife and shoreline) ▪ broad location images of the pollution (including aerial images) ▪ damage to the surrounding environment ▪ samples collected ▪ suspect vessel ▪ parts of the environment that is not impacted to eliminate possible sources 	<p>Ensure all activities and evidence collected is photographed and treated as exhibits.</p> <p>Photographic data can now also include significant electronic metadata.</p>
Weather conditions	
<p>The actual on-site weather and sea state conditions are to be recorded.</p>	<p>Record weather conditions from alternate sources such as the Bureau of Meteorology and witnesses.</p>
Scene location evidence	
<p>Location evidence will be required of where the:</p> <ul style="list-style-type: none"> ▪ incident took place ▪ impact points ▪ the exact positions where samples were taken. <p>Records of detailed GPS coordinates with correct datum will be required.</p>	<p>Determine the exact location by alternate means.</p> <p>Determine exact location where samples collected.</p> <p>Maintain detailed records.</p>
Rationale for scene assessments	
<p>Scene assessments are required to connect the ship to the primary scene.</p> <p>Proving there was a collision with another vessel or object.</p> <p>Establishing if there was any environmental impact to local environments and resources.</p>	<p>Identify the key factors that link the ship to the primary scene.</p> <p>Establish the fact that there was a collision.</p>

	<p>Identify and interview witnesses including other vessels.</p> <p>Engage specialists to undertake site assessment as required.</p>
Sediment samples	
<p>Potential collection of sediment samples for paint or debris or antifouling analyses from any impact location on a vessel or in the field as these may tie the two together.</p> <p>Note: This action may be relevant in the event of a ship making contact a reef or other structure.</p>	<p>Identify exact location.</p> <p>Connect to the vessel.</p> <p>Label evidence carefully.</p> <p>Identify the impact area and that there is no similar pollution elsewhere at the scene.</p>

5.2.3 Identifying the potential source

Knowing the oil type and character can assist in determining the source however, this is only one element of the investigation. It is rare the oil type and analytical character will be known early in the investigation – most laboratory procedure takes days to produce evidential quality results. However, less rigorous expert assessment and analysis can provide insight into where the spill may have come from, at least at a gross sector level (i.e. originated from a vessel, offshore industry or seep). There will be different processes involved to determine what the origin might have been.

The jurisdiction can seek AMSA assistance if the potential source may be a vessel. AMSA can do analysis of electronic vessel tracks to determine what was in the area, what they were carrying, what fuels they may use, how any oil may have travelled and/or weathered, and obtain samples from interstate or international vessels. AMSA also has powers that can assist in detaining vessels or accessing them once they have left state or Australian waters.

Where NOPSEMA is notified of a reportable incident that may be from an offshore petroleum industry source and no report has been received from a titleholder, NOPSEMA will determine whether to commence an investigation based on the likely impacts and risks and if there is sufficient information to proceed. NOPSEMA's Investigation Policy (N-03000-PL1697) provides the framework for consistent decision-making on when to conduct investigations and assists stakeholders in understanding the principles that NOPSEMA follows when deciding on a particular course of action. A NOPSEMA investigation will seek to determine what went wrong, share lessons learned and, where necessary, hold the responsible parties to account through enforcement action up to and including prosecution.

If the potential source is from a naturally occurring seepage then there will potentially be a historical record of other spill or oiling reports or incidents occurring in the area, or local or corporate knowledge of oil sources. If the source is from identified as naturally occurring then the relevant jurisdiction will be responsible for the clean-up operations and no further investigation/prosecution will be required.

GIS experts can assist with:	
<ul style="list-style-type: none"> ▪ Adding location data collected to maps ▪ GPS coordinates of vessel tracks (noting appropriate datum's) ▪ site/scene locations ▪ pollutant movement and trajectory models ▪ overlay of satellite and photographic imagery 	<p>Contact IC, AMSA or State/Territory Control Agency.</p>
Sample analysts can assist with:	
<ul style="list-style-type: none"> ▪ pollutant from the water or substrate ▪ samples from ships compared with spill sample ▪ paint sampling from collisions and groundings ▪ animal and plant samples ▪ prepare reports on analysis undertaken 	<p>Identify an authorised/approved laboratory with the appropriate analytical and evidence handling capability.</p>
Other Technical Expert assistance	

<p>Technical experts may be required to undertake a series of tasks during an investigation including:</p> <ul style="list-style-type: none"> ▪ assessments at the scene or site of an incident including detailed site assessments & sample collection ▪ assessments on board ship such as inspection of the ships navigational systems, machinery, plumbing, mapping and miscellaneous documents ▪ analyses of samples collected such as oil samples ▪ analyses and configuration of data collected such as depicting GPS coordinates onto mapping <p>Need to plan the involvement of the experts. Ensure that their involvement is consistent with the rules of evidence.</p>	<p>Identify expertise required; a ship surveyor or industry engineer is normally required to accompany an investigator on board the vessel or industry site.</p> <p>Source the available experts.</p> <p>Task the experts (Formal assessment of suitability and briefing of experts required when requesting opinion).</p>
Location where pollutant initially occurred	
<p>Establishing the pollution discharge point may be more critical in some circumstances than others.</p> <p>In some circumstances, establishing the pollutant discharge point is required to determine what jurisdiction(s) apply, as this may be an offence element in one or more pieces of legislation.</p> <p>Location evidence assists in narrowing down the number of suspect ships that may be responsible for the pollution discharge.</p>	<p>Know the elements of the offence/s.</p> <p>Determine the location as accurately and as quickly as possible.</p> <p>Identify the location by alternative means if available and obtain witness statements</p>
Locations where the pollutant travelled in the water and may have been backtracked to where the pollution originated.	
<p>An oil spill trajectory model, used in tandem with local and expert knowledge, can project where a pollutant has travelled and will travel in the water. The projections include time frames, which take into account the type of pollutant, winds and tides. AMSA can produce a modelling run as part of the clean-up response to a spill.</p> <p>This process can be reversed to model the location where the pollutant travelled prior to being first reported.</p> <p>This knowledge is critical as it assists in determining what ships may have transited through the pollutant discharge point and to what jurisdictions/legislation may apply.</p>	<p>Consider a series of aerial photos to illustrate the drift.</p> <p>Seek advice from AMSA regarding availability of commercial providers of oil spill trajectory modelling.</p> <p>Corroborate track data by alternate sources such as proximate vessels</p>
Determine when the scene was last free from pollution	
<p>Rarely is the time when the scene was last observed free of pollutant readily available to an investigator at the commencement of an investigation.</p> <p>Examples of inquiries that could be made include other ships, trawlers, recreational vessels or aircraft.</p> <p>Investigators should not be satisfied with obtaining evidence from witnesses alone.</p> <p>The knowledge of what time the pollution occurred is critical to the investigation. The knowledge of the before and after time frames are required to determine what ships were in the vicinity and should be immediately investigated.</p> <p>Technical experts can give some indication of how far the pollutant may have drifted or have been in the water, but this evidence is not always readily available.</p> <p>Efforts should be made to contact someone who transited the immediate impacted area, prior to the time of the initial report.</p>	<p>Identify when site was last observed free from pollution.</p> <p>Take witness statements.</p>
Rationale for use of resources	
<p>The need for the use of resources can include the initial confirmation of an incident.</p> <p>Resources are needed to enable an informed assessment to be made, dependant on the category of the incident, and to determine a response strategy.</p> <p>Collect initial evidence including photographs of the scene and location evidence.</p> <p>Use the vessel platform for staff and technical experts to undertake examination and remediate tasks at a scene/site.</p> <p>Where there is no incident response, an investigator may need a vessel platform to board a ship to conduct investigations.</p> <p>Seek the assistance of technical experts where required to make this judgement.</p>	<p>Identify need for resource.</p> <p>Select appropriate resource.</p> <p>Confirm resource capability.</p> <p>Commission resource.</p> <p>Task resource.</p> <p>Record costs.</p>
Weather conditions	

The weather and sea conditions should be recorded	Record weather conditions from alternate sources such as the Bureau of Meteorology as well as witnesses
Scene location evidence	
<p>Location evidence will be required of where the:</p> <ul style="list-style-type: none"> ▪ incident took place ▪ impact points ▪ the exact positions where samples were taken <p>Records of detailed GPS coordinates with correct datum will be required</p>	<p>Determine the exact location by alternate means.</p> <p>Determine the exact location of damage.</p> <p>Determine exact location where samples collected.</p>

5.2.4 Conducting Analysis of Samples

Several techniques can be used to determine what the pollutant is – from basic field analysis to determine it is oil and its type, through to laboratory-based fingerprinting of collected samples. Early assessment is useful to determine the type of oil or hazardous pollutant, both for more thorough evidence collection and for investigator/sampler safety.

Key specialists will be able to assist in the determination of oil type and source and interpretation of the analysis.

Each jurisdiction should have predetermined procedures and access to technical specialist advisors who can undertake sampling, modelling and analysis to help determine type and source of the spill.

Sampling should only be undertaken by trained and appropriately authorised personnel who are able to maintain the proper chain of custody procedures, use correct sampling and curation methods, and prevent evidence contamination or decay. To ensure full coverage the ‘a reasonable doubt defence’ samples should be collected from the site (and source) of the spill and from all other potential sources (ships, pipelines, facilities) under investigation. Where possible, fresh samples should be collected, as weathering processes cause the loss of lighter fractions, making the identification of the oil and matching of samples more difficult.

A suitable equipped and accredited laboratory must be used for sample analysis. The laboratory analyst may be called upon to give evidence in court. Analysis is often completed in a staged approach, due to increasing complexity and expense of more precise analysis. This starts with generating a hydrocarbon profile using gas chromatography. If further precision is required, biomarker analysis can be undertaken. The relative abundance of these in a sample creates a fingerprint that can be used to compare samples from the source and the field, with sufficient certainty to enable an analyst to determine a match or not.

5.2.5 Conducting interviews with potential witnesses

Interviews will need to be conducted by the jurisdiction to form part of the evidence brief for an investigation. In some cases, it may be useful to coordinate these through AMSA, otherwise the local state/NT agencies will undertake these. When offering interviews to suspects, they are under no obligation to take part in an interview. It is also critical to identify the legal owner of the suspect ship to ensure that the correct suspect is identified prior to conducting interviews.

Negating involvement of other ships in the area	
<p>All ships/offshore facilities and other sources that could be reasonably implicated in the incident, and may offer reasonable doubt defences, should be identified and be included in any investigation.</p> <p>To undertake such a task the following will have to be established:</p> <ul style="list-style-type: none"> ▪ the time of the incident ▪ the location of the incident ▪ the identity of all ships/industries that transited the area where the incident occurred during the relevant time frames 	<p>Identify the presence and the track of all vessels/offshore industries in the vicinity.</p> <p>AIS Records</p>

5.2.6 Closing out of the investigation

If all of the above has been investigated and there is still no identifiable source then the Incident Controller is to be informed that the spill has originated from an unknown source and that no further actions can be undertaken to determine the source.

The decision to prosecute should be guided on the basis of the evidence available and the likelihood of a successful prosecution in the relevant court.

Factors to be considered include:

- (a) The seriousness or, conversely, the triviality of the alleged offence or that it is of a 'technical' nature only
- (b) the harm or potential harm to the environment caused by the offence
- (c) any mitigating or aggravating circumstances
- (d) the degree of culpability of the alleged offender in relation to the offence
- (e) the availability and efficacy of any alternatives to prosecution
- (f) whether the offender had been dealt with previously by non-prosecutorial means
- (g) whether the breach is a continuing or second offence
- (h) whether the issue of Court orders are necessary to prevent a recurrence of the offence
- (i) the prevalence of the alleged offence and the need for deterrence, both specific and general
- (j) the length of time since the alleged offence
- (k) the age, physical or mental health or special infirmity of the alleged offenders or witnesses
- (l) whether there are counter-productive features of the prosecution
- (m) the length and expense of a court hearing
- (n) the likely outcome in the event of a conviction having regard to the sentencing options available to the court
- (o) any precedent which may be set by not instituting proceedings;
- (p) whether the consequences of any conviction would be unduly harsh or oppressive; and
- (q) whether proceedings are to be instituted against others arising out of the same incident.

(Note: each jurisdiction will likely already have a list of these within their own specific investigation policy manuals or procedure advice)

Prosecuting authorities should be aware that adverse costs orders may be made if a prosecution is dismissed or withdrawn. The court will only make a court order against a prosecuting authority acting in a public capacity if the prosecution was substantially un-founded (e.g. by been based on an unreasonable investigation or brought in bad faith).

Appendix A. Known Source Investigations

The following considerations and sensitivities must be addressed (in no particular order) for any shipping incident:

A.1. Incident management and investigation hierarchy

Incident management	
<p>Objectives of incident management are:</p> <ul style="list-style-type: none"> ▪ safety of life ▪ management of the exclusion zone ▪ prevent or contain environmental damage ▪ minimize further environmental damage ▪ recover ship, fuels and/or cargo 	<p>Organisation responsible:</p> <ul style="list-style-type: none"> ▪ IC. ▪ MERCOM.
Impeding incident response	
<p>Investigators must not impede any corrective action being undertaken. The priorities are to protect human life and minimise damage to the environment.</p> <p>Where there is potential conflict between the investigation and incident response, the investigator must use discretion and common sense on how best to preserve the crime scene.</p>	<p>Plan management of crime scene in collaboration with Incident Management Plan.</p>
Relationship with Incident Management Team	
<p>Investigators must keep the Incident Controller informed of investigations activities.</p> <p>Communication protocols with the Incident Controller should be agreed and implemented.</p>	<p>Establish and manage relationship with IMT.</p> <p>Establish and implement communication protocols.</p>

A.2. Media coverage

Media interest & incident control media role	
<p>There may be significant media interest.</p> <p>IMT includes a public information section.</p> <p>Coordinated response between agencies is required.</p> <p>Inappropriate contact with media may compromise the investigation.</p>	<p>The regulatory agency leading the investigation is to take the lead with regards to media enquiries and releases relating to the investigation.</p> <p>Agencies to refer media enquiries to lead agency media/communications section.</p> <p>Law enforcement agencies and ATSB will be managing their own media enquiries.</p>
Restriction on release of certain information	
<p>Information released to the media may compromise the case.</p> <p>The agency leading the investigation should coordinate media inquiries and liaise directly with the IMT Public Information Officer.</p>	<p>Avoid contact with media.</p> <p>Lead agency media officer to liaise with IC.</p>
Briefing experts about the investigation	
<p>Experts are highly trained in their respective field and may be involved for the purposes of investigation. Several other experts may be involved in the incident control process or taking remediation action.</p> <p>The investigator should remind these experts involved in an incident:</p> <ul style="list-style-type: none"> ▪ that an investigation is being conducted ▪ what evidence is required to be collected ▪ to keep relevant records of who collected what evidence and from where ▪ that the continuity of evidence is critical 	<p>Brief the experts early in the investigation processes.</p> <p>Ensure the experts understand evidence collection procedures and standards.</p>

A.3. Assistance of technical experts

Technical/scientific experts and tasks	
It is almost certain the assistance of a technical, scientific or analytical expert will be required to assist during an investigation.	Seek advice as to what technical experts can be utilised and assess what services may be required.
Assistance of technical experts at a scene	
<p>Dependant on the type of incident the assistance of a technical expert will have to be engaged to perform a range of tasks.</p> <p>Many of the technical experts are staff from a variety of agencies and investigators have no direct authority in engaging their services or giving directions.</p> <p>Contact the IMT to establish what technical experts may be required and are available.</p> <p>Contact the agencies where the technical experts are employed and request their services. Agree on the form of engagement e.g. tasking.</p>	<p>Identify technical assistance required.</p> <p>Identify technical experts available.</p> <p>Put technical experts on notice of their impending involvement.</p> <p>Engage and task experts.</p>
Expert's competencies	
<p>Members of the IMT at the scene may have specific training, technical skills or areas of expertise required to collect evidence for the investigation.</p> <p>Field staff of management agencies have received continuous and extensive training in evidence collection procedures including:</p> <ul style="list-style-type: none"> ▪ sample identification and security ▪ sample custody ▪ storing the samples ▪ requesting laboratory analysis ▪ shipping samples to the laboratory ▪ recording all their actions ▪ preparing reports for investigation court briefs 	<p>Confirm that selected experts have the necessary competencies.</p> <p>Monitor the continuity of evidence.</p> <p>Prepare experts for their role as witness.</p>
Using expert assistance to compile search warrant & investigation plans	
<p>Investigators can seek guidance from the technical experts as to what areas on board the ship they need to access. This information is important for a variety of reasons, including the information required to ground a search warrant and to develop an investigation plan.</p> <p>Make considerations for safety.</p> <p>Need to ensure ship remains navigable and operational</p>	<p>Identify experts.</p> <p>Check competence and availability.</p> <p>Engage experts early in the planning process.</p>
Specialist equipment	
<p>It is highly probable the experts involved in the pollution incident management will be in possession of the necessary equipment, tools and kits to collect all the evidence required by the investigator.</p> <p>Inquiries with the IMT may assist in acquiring additional resources.</p>	<p>Identify that specialist equipment is available and in a State of operational readiness.</p> <p>Collaborate with IC on equipment usage.</p>
Scientists	
<p>Undertake scientific site assessments such as:</p> <ul style="list-style-type: none"> ▪ detailed scientific assessment of the site including assessment of damage in ecological and biological terms ▪ assessment of restorative actions required to restore the site and estimated cost of restoration ▪ collection of samples and analysis of results 	<p>Contact relevant State Environment and Heritage Protection Agencies in conjunction with other experts</p>

A.4. Access and use of specific resources: aircraft and vessels

Avoid duplication of resources	
<p>Do not duplicate the use of resources. Resources may already have been used or are already out in place to manage the incident response.</p> <p>One agency may be taking a lead role in organising flights or vessels.</p> <p>Field staff involved in incident management on site may have the necessary training and skills to assist in collecting evidence.</p>	<p>Contact the IMT and establish what resources are in place to manage any incident response.</p> <p>Use resources in place to manage the incident response if suitable.</p>

A.5. Information sharing between agencies (a pre-existing MOU will also assist with this)

Ability to share investigation information with other stakeholder agencies	
<p>Information pertaining to the investigation may be shared between investigating agencies.</p> <p>Information sharing may also occur between agencies if the agencies wanting to share information have an agreement to cover information sharing and privacy issues.</p> <p>Note: There may be limitations on information sharing in terms of confidentiality requirements in legislation.</p>	<p>Ensure that an agreement exists between your agency and the agency requesting the information.</p> <p>Ensure that the agency requesting the information has the required information handling standards.</p>

Appendix B. Investigations and evidence collection in relation to ships

B.1. Ship considerations

Negating involvement of ships in vicinity	
<p>To conclusively establish if one ship is responsible for an offence it is a requirement to negate the involvement of all ships that could have possibly been involved or be responsible for the pollutant discharge. It is just as important to eliminate suspect ships as it is to determine the ship source.</p> <p>Regardless of the level of suspicion associated with any particular ship, to negate the involvement of other ships and crews it may a requirement to repeat the same evidence collection procedures on board all the suspect ships in question e.g. collection of oil, bilge samples.</p> <p>Total reliance on positively matching water pollutant samples tests to one particular vessel should never be a consideration.</p>	<p>Identify all ships in the vicinity at the critical period/s.</p> <p>Plan a process of negation involving all vessels of interest.</p> <p>Ensure evidence is admissible e.g. sample collection by experts.</p>
Immediate and consistent sample collection from ships	
<p>Need to expedite sample collections from all suspect ships.</p> <p>The possible loss of evidence increases the longer the delay between the time of the offence and the time the ship is boarded for sample collection.</p> <p>Events may occur which will significantly devalue the weight of evidence collected or have it rendered totally useless. For example, if a ship re-enters a port and re-fuels this will create a different mix to the fuel on the ship and this will significantly impact the sampling process, ensuring that samples of the fuel are taken prior to re-fuelling, will also impact upon oil fingerprinting technology.</p>	<p>Locate the suspect ships as quickly as possible.</p> <p>Organise for samples to be taken from suspect ships before their status changes e.g. refuelling of ship – this may involve ships that have sailed to another Australian port or to an overseas port (AMSA assistance).</p> <p>It is best practice to have a qualified maritime person collect samples on-board a ship to ensure that samples are handled in accordance with evidence handling procedures.</p>
On board assessment	
<p>Examples of specific locations on a ship the expert may need to access:</p> <ul style="list-style-type: none"> ▪ engine rooms ▪ auxiliary machinery rooms ▪ pump rooms ▪ chart tables ▪ officers' and crew accommodation ▪ bridge ▪ exterior of the ship ▪ electronic recording devices and computers <p>The evidence collected may show the possible cause of the incident, for example failure of equipment.</p>	<p>Use input from experts to:</p> <ul style="list-style-type: none"> ▪ identify areas to be assessed ▪ plan the assessment ▪ examine the selected areas ▪ take photographs and video evidence. <p>Arrange corroboration of identifying causes.</p>
On board investigations	
<p>Investigation on board ships may give indications of the cause of a pollutant discharge. Collection of evidence on a ship may include:</p> <ul style="list-style-type: none"> ▪ charts/shipboard documentation (ships logs, maintenance logs and certificates) ▪ data from GPS units and other navigational equipment ▪ ship's drawings (tanks, pumps, piping etc.) ▪ the condition of equipment and machinery on board the ship ▪ maintenance and operational records and management plans ▪ bilges, waste oil or slop tanks ▪ oil filtering equipment (e.g. oily water separators) ▪ all relevant tanks (fuel tanks, settling tanks, cargo tanks) ▪ photographs on board the ship ▪ information from the ship's crewmembers. 	<p>Develop a collection plan taking into account the elements of offence and the proofs required.</p> <p>Take into consideration the impact of seizing key items such as charts.</p> <p>Conduct witness interviews.</p> <p>Take photos, videos.</p>

<p>Investigations or collection of evidence on a ship may include or involve:</p> <ul style="list-style-type: none"> ▪ charts ▪ shipboard documentation (ship's logs, record books, maintenance documentation, manuals for operation of equipment) ▪ navigational equipment such as GPS units and plotter <p>Note: If the voice component of a voyage data recorder is classified as and 'On-board recording' under the <i>Transport Safety Investigation Act 2003</i> then it cannot be downloaded unless covered by exceptions in subsection 53(3)</p>	
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B.2. Multiple incident categories

Multiple incidents	
<p>One incident may trigger a series of events such as a collision causing one or more vessels sinking or grounding resulting in:</p> <ul style="list-style-type: none"> ▪ pollution ▪ damage to the environment ▪ creating navigational hazards 	<p>Establish all the possible breaches that may require investigation.</p> <p>Include all possible breaches in the investigation plan.</p> <p>Investigate all breaches.</p> <p>Seek advice from relevant prosecutors.</p>
Multiple agencies multiple investigations	
<p>Where multiple incidents occur agencies may commence the investigation of offences of interest to their agency.</p> <p>This could lead to several investigations being undertaken at the same time causing duplication in evidence collection tasks and the use of resources. It is important to coordinate the interests of all agencies into the one investigation.</p> <p>Agree early, in case planning phase, on the interests, roles and responsibilities of agencies.</p>	<p>Contact all relevant agencies to agree interests and way forward.</p> <p>Implement the IMM.</p> <p>Seek advice from relevant prosecutors.</p> <p>Plan a coordinated investigation.</p>
Powers to board ships	
<p>A decision has to be made as to what authority or powers are exercised to board ships to conduct investigations.</p> <p>The powers under one piece of legislation cannot be used in isolation to collect evidence required to prove offences under other legislation.</p> <p>The use of <i>Crime Act 1914</i> warrants will overcome this problem, however, all relevant legislation and offences should be used to ground the warrant.</p>	<p>Board ships using the powers of relevant statutes if possible (a Compliance Officer may have powers under multiple legislation).</p> <p>Obtain legal advice from:</p> <ul style="list-style-type: none"> ▪ prosecuting body ▪ agency administering the respective legislation <p>Obtain and serve a warrant under the Crimes Act.</p>
Powers to board ships in remote areas	
<p>Powers to board ships and collect evidence in remote areas may be complicated. An officer may not be authorized to board ships in remote areas under all the legislation that is being investigated.</p> <p>Collecting evidence under one authority may compromise its use for investigating other offences.</p> <p>The situations will have to be managed on a case-by-case basis and advice should be sought from prosecutors to avoid later complications.</p>	<p>Clarify powers officers prior to allocating investigation tasks.</p> <p>Seek advice from prosecutors.</p>
Powers to conduct search other than on board ships	
<p>It may be necessary for investigators to search shipping offices for business records and related documents.</p> <p>A search warrant would be required unless there is an authority under a statute or unless police are empowered to undertake these tasks.</p>	<p>Obtain a search warrant where required ensuring:</p> <ul style="list-style-type: none"> ▪ The complaint is first scrutinised by prosecuting agency ▪ Police execute the warrant where required

B.3. Identification of ships/operators/crews

Name of ship – IMO Ship number	
<p>The name of the ship is generally displayed in large writing and can be identified during aerial surveillance flights.</p> <p>IMO permanent marking on ship, a unique number, can be found on the registration certificate and other ship documentation.</p> <p>The name of the ship and the IMO number is required to trigger the below searches.</p>	<p>Contact AMSA or Lloyds register to obtain further details relating to the identity and owners of the ship.</p>
Owners of ship – IMO registered owner number	
<p>Companies normally own ships. Many of the companies are overseas entities. IMO unique number for the registered owners will be found on certain ship documentation.</p> <p>The owner of a ship can be liable for prosecution in addition to the master</p>	<p>Contact AMSA to obtain further details relating to the identity and owners of the ship.</p>
Ships operators – IMO Company number	
<p>The operator may differ to the owner of the ship. Many of the operators are from overseas-based companies.</p> <p>IMO unique number for the company operating the ship will be found on certain ship documentation.</p> <p>The operators of a ship can be liable for prosecution in addition to the master.</p>	<p>Contact AMSA to obtain further details relating to the identity and owners of the ship.</p>
Cargo on board ship	
<p>Dependant on the incident the cargo can be an avenue that requires exploring during the investigation, cargo may be related to the type of discharge.</p> <p>The information is also relevant for OH&S reasons.</p> <p>Dependant on the nature of the cargo it may be reasonable to delay certain action until the cargo is unloaded.</p> <p>The description of the ship can lend assistance in determining what type of cargo is on-board, for example container ship, coal ship, bulk carrier, chemical tanker</p>	<p>Contact the shipping agent or port authority to determine the nature and any specific actions to be taken in regards to the cargo.</p> <p>Coordinate with IMT.</p>
Ships routes and intended movements	
<p>It is essential to determine the ships route. This will assist to establish if the ship was in the area of the incident.</p> <p>Knowledge of the ships intended movements and next ports of call may be required to develop an investigation plan. Important to note is what port the ship will be visiting, for how long, estimated departure times & dates.</p>	<p>Contact AMSA to obtain the route submitted by the ship operators.</p>
Ship agents	
<p>Agents acting on behalf of the companies/ships manage much of the logistics involved.</p> <p>Usually the agents are agreeable to assist with any investigation and can supply vital information in regards to the ships ownership, operator, intended movements & cargo.</p>	<p>Identify and make contact with the shipping agent.</p>
Master/captain of ship	
<p>This master of the vessel is usually the person held accountable for actions of the ship.</p> <p>The nationality of the master/captain can be a sensitive media issue and may affect the way the investigation is conducted e.g. they may not be able to communicate adequately in English.</p>	<p>Identify the master/captain of the ship using information supplied by:</p> <ul style="list-style-type: none"> ▪ AMSA ▪ shipping agent ▪ port authorities
Pilots	
<p>A pilot is any appropriately-qualified person not belonging to the ship who has conduct of the ship. The relationship between the pilot and ship's master is prescribed by national and State laws. Three pilot companies service the Great Barrier Reef: Australian Reef Pilots, Torres Pilots and Hydro Pilots.</p>	<p>Identify the pilot on-board the ship using information supplied by:</p> <ul style="list-style-type: none"> ▪ AMSA ▪ shipping agent

	<ul style="list-style-type: none"> port authorities. <p>Consider all interests before making an arrest.</p>
Crew on board ship	
<p>In some circumstances crew, such as the first mate or engineers, may be offenders or witnesses.</p> <p>The nationality of the crew can be issues as some are from an ethnic background such as their inability to communicate in English.</p>	<p>Identify the crewmembers of the ship using information obtained from:</p> <ul style="list-style-type: none"> Immigration records AMSA shipping agent port authorities.
Ship's history	
<p>It is of interest to determine if the ship is on any alert system.</p> <p>Has the ship been involved in a similar incident?</p> <p>Has the ship visited Australia or the World Heritage Area previously?</p>	<p>Contact AMSA for details of port State control infringements.</p> <p>Various databases provide information on the history of the vessel (Equasis, Lloyds etc).</p>

B.4. Detention, delaying and seizure of ships and documents

Right of passage	
<p>Ships have the right of innocent passage under the United Nations Convention on the Law of the Sea (UNCLOS). However, there are some limited circumstances where the right of innocent passage does not apply.</p> <p>In some circumstances such as when a ship was not intending to enter an Australian port but was exercising its right of innocent passage in transit to another country there may be some complications on what powers can be used.</p> <p>It may be necessary to obtain legal advice from the prosecuting body prior to taking any action.</p>	<p>Identify the intention and type of voyage of the vessel.</p> <p>Contact AMSA for details.</p> <p>Seek advice from prosecuting body to identify any limitations to detention - these relate to the jurisdictional issues and type or magnitude of the offence.</p>
Power/authority to detain or seize a ship	
<p>There will be occasions when a ship will have to be detained/seized.</p> <p>Once detained/seized, there are significant obligations on the agency responsible for administrating the legislation. For example, compensation may be payable for unduly detained ships.</p> <p>Power to detain must be related to the offence.</p> <p>If the AFP is case managing an investigation, the obligations still rest with the administrating agency.</p>	<p>Seek legal advice from prosecuting body regarding the proposed action.</p> <p>Seek legal advice from the agency responsible for administering the legislation.</p> <p>Issue notifications.</p>
Considerations of cargo on board when a ship is detained	
<p>Complications may arise if the ship is carrying a cargo that:</p> <ul style="list-style-type: none"> requires ongoing treatment presents a future risk may be dangerous or hazardous <p>Failure to take these considerations into account could lead to litigation against the investigating body.</p> <p>Shipping agents and Port Authorities may be able to assist with the logistics involved for advice.</p>	<p>Seek expert assistance.</p> <p>Identify the cargo on board the ship.</p> <p>Establish if there are any sensitivities or special requirements relating to the cargo.</p> <p>Choose the most appropriate time to board a ship for example, as soon as the ship berths and prior to re-fuelling when investigating pollution matters.</p>
Removal of charts from a ship	
<p>Ships require nautical charts or other positioning equipment in order to operate.</p> <p>The removal of charts from a ship may prevent it being lawfully navigated. The removal of certain charts may void a ship's insurance.</p> <p>Consider replacing or taking copies of the charts.</p>	<p>Ensure that the ship remains legally navigable, operational and do not cause for its insurance to be void.</p>

Advice can be obtained from technical experts as to what contingencies should be put in place to reduce any inconveniences to the ships operations.	Take copies and leave originals of key documentation like navigation charts.
Removal of original records/documents on board ships	
Because ships often travel between multiple jurisdictions, the retention of the original records/documents on board the ship is the primary method of attesting to their compliance.	Only in exceptional circumstances should the records and/or documents be removed and replaced by certified copies and a receipt should be left on board stating the reason for the removal.

B.5. Detention, removal or arrest of crewmembers from ships

Role of crew in incident management	
The master and some crewmembers are required to be on board for a ship to enable it to be operated. The removal of key persons from the ship may render it inoperable and this may impact on the incident response.	Seek advice from the MERCOM/Incident Controller prior to removing any staff from the ship to ensure there is no conflict with the incident response. Contact the shipping agent so they can arrange for possible contingencies like the replacement of a master.
Crew's understanding of English	
Crew and masters/captains may be from different ethnic backgrounds and the use of interpreters may be required.	Establish if the master or crew can speak fluent English. Engage an official interpreter to conduct investigations and interviews with master and crew.

B.6. Roles of technical experts

Use of experts	
Technical experts will be required to undertake the investigation in regard to all ships and vessels involved in a pollution incident. Experts could include: <ul style="list-style-type: none"> ▪ qualified marine surveyors ▪ experts in ships navigation (pilots) ▪ experts that can down load data 	Plan the use of expert assistance.
Marine Surveyors	
Conduct on board ship investigations and evidence collection in connection with: <ul style="list-style-type: none"> ▪ ships piping & diagrams ▪ engine room & machinery operations ▪ ship samples ▪ navigational equipment ▪ charts etc. 	Contact Regional agency or AMSA Note: For incidents involving a significant response, AMSA may appoint a marine surveyor to be the Maritime Casualty Officer. This individual is not to undertake any investigatory functions as this may compromise his/her primary response role. Arrangements for an additional marine surveyor will need to be made.
Navigators/pilots International Safety Management Code (ISM Code)	
Advise on and assist in the collection of evidence in the form of navigational equipment, crew competency and watch keeping. Give expert opinion on the overall operations of a ship and assist in the interpretation of charts and maps, crew competency and watch keeping.	Contact relevant State Transport Safety Authorities or AMSA.

Computer experts	
<p>Transcribe, download and analyse data from equipment on board ships such as plotters.</p> <p>Prepare reports on data analysis.</p>	<p>Engage the services of appropriately skilled experts that can access and extract computer files.</p> <p>Identify professional navigators able to interrogate and interpret data.</p>

B.7. Conducting interviews

Types of interview	
<p>Interviews that may take place include:</p> <ul style="list-style-type: none"> ▪ interviews aboard the ship that may result in the collection of statements ▪ official electronic records of interviews being conducted as a result 	<p>Obtain statements from all witnesses.</p> <p>Interview all possible suspects.</p> <p>Use best practice Guidance and procedures when conducting interviews including electronic recording.</p>
Who to interview	
<p>Be aware of the chain of command on-board the ship usually begins with the master being responsible for all actions that take place on board and should be interviewed.</p> <p>There are occasions when a ship is involved in an incident and the master is not operating the ship at that specific time, for example the master may be sleeping.</p> <p>Depending on the type of incident, other crewmembers may have taken actions connected to the incident, for example the ships engineer may be of interest in relation to pollutant discharge.</p> <p>An important stakeholder is the P&I club who although not a party will often be heavily involved in advising the owner, appointing on the spot representatives. It will usually have a direct financial interest in the situation because of its obligation to reimburse the ship owner under their insurance policy for clean-up costs, fines and liability claims incurred by the Owner.</p>	<p>Interview the master of the ship.</p> <p>Establish who was operating the ship at the time of the incident and conduct the necessary interview.</p> <p>Seek advice from technical experts as to what crewmembers undertake a role that could be linked to the respective incident.</p>
Authority to interview	
<p>legislation provides it with powers to interview the master and the crew.</p> <p>There is normally a high level of cooperation between all parties, and this is relied upon in setting up interviews.</p> <p>In some circumstances the AFP have powers of detention and arrest.</p> <p>Investigators should be mindful that an attempt might be made to fly the ship's captain or other crew out of Australia to avoid interview and any subsequent action.</p> <p>The shipping company may engage a solicitor who may be present on-board the ship during the investigation.</p> <p>The shipping company usually through its P&I Club may engage a solicitor</p>	<p>Be sensitive to the situation wherein there may be an attempt to subvert the investigation.</p> <p>All parties suspected of being involved in an incident should be given the opportunity to take part in an interview.</p> <p>All parties who were witness to the incident should be interviewed and a statement taken.</p>
Arranging the interview	
<p>There may be circumstances where the investigator cannot be in direct contact with the suspect, in which case arrangements can be made through:</p> <ul style="list-style-type: none"> ▪ the shipping agent ▪ the appointed solicitor <p>The suspect taking part in an interview is entitled to have someone present, including legal representation.</p> <p>Interviews should be electronically recorded.</p> <p>Interviews should be done at a time that is convenient to the incident response.</p> <p>Assistance may be required when a suspect cannot speak clear English.</p>	<p>Make requests for direct interview.</p> <p>Use alternate communication channels if necessary.</p> <p>Do not interfere with any critical responses activities.</p> <p>Use the services of an interpreter if required.</p> <p>Advise suspect of entitlements.</p>

Present at interview	
<p>The suspect has the right to legal advice.</p> <p>Support may be required from a technical expert to clarify any responses given by a suspect.</p> <p>The following may be present at an interview:</p> <ul style="list-style-type: none"> ▪ investigator (Case Officer) ▪ corroborator ▪ suspect (e.g. ship's captain) ▪ solicitor ▪ interpreter ▪ P&I correspondent 	<p>Ensure interviews take place with participants that are entitled to be there.</p> <p>Organise technical expert to attend the interview as required and to assist in the development of certain technical questions.</p>
The interview	
<p>The interview location will be determined by the location of incident and the facilities available.</p> <p>All interviews should be recorded electronically.</p> <p>Planning for the interview should take place. Logistics may include:</p> <ul style="list-style-type: none"> ▪ exhibits ▪ reference materials ▪ maps ▪ photographs ▪ tape recorder 	<p>Plan for the interviews.</p> <p>Identify suitable location.</p> <p>Gather support materials such as maps, photos, and exhibits.</p> <p>Electronically record all interviews.</p>
Questioning	
<p>The line of questioning will be dependent on the incident category and the evidence collected.</p> <p>The usual standards relating to admissibility apply.</p> <p>If the interviewee is of a foreign nationality, it will be necessary to take this into account.</p>	<p>Apply normal cautions when interviewing.</p> <p>Use interpreters as required.</p>

B.8. Evidence collection at the scene

Sample from outside ship	
Hull paint scrapings and sediment samples.	<p>Identify where samples taken.</p> <p>Link to samples on the reef.</p> <p>Negate other vessels.</p>
Photographic evidence	
<p>Photographic evidence may include:</p> <ul style="list-style-type: none"> ▪ ship's hull where it has impacted with the vessel or object ▪ location the collision took place (including aerial images) ▪ any vessels once recovered after sinking ▪ damage to the reef and surrounding marine environment if resulted after the collision ▪ samples collected ▪ route taken by the ship prior to the incident. 	<p>Use experts.</p> <p>Record location, time of day.</p> <p>Photograph the site and the vessel before and after removal.</p>
Drug and alcohol testing	
<p>When suspicion is raised that the person in charge of the vessel is under the influence of drugs or alcohol or was so at the time of operating the vessel, breath, saliva and blood testing may be necessary.</p>	<p>Arrange for assistance by an authorised officer, for the collection of breath, saliva and blood samples.</p>

B.9. Considerations – collision incidents involving more than one ship or vessel

Determining which vessel is at fault	
<p>Noting that fault is not normally an element of collision offences:</p> <p>Develop an informed opinion as to which ship may have taken what actions through investigation.</p> <p>Similar examinations of ships/vessels and investigation of crew should take place in the first instance using the relevant guidance and procedures.</p>	<p>Gather information on the track of each vessel.</p> <p>Identify, photograph and video the damage.</p>

	Engage a forensic expert to assist with the analysis of the evidence.
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B.10. Investigations and evidence collection in relation to ships

Use of experts	
<p>It is almost certain the assistance of a technical expert will be required to undertake the investigation in regard to ships and vessels involved in the collision.</p> <p>Experts could include:</p> <ul style="list-style-type: none"> ▪ qualified marine surveyors ▪ experts in ships navigation such as pilots ▪ information and technology experts ▪ divers to examine the outside areas of a ship for damage 	<p>Plan the use of expert assistance.</p> <p>Access the list of accredited experts.</p>
On board assessment	
<p>Examples of specific locations on a ship the expert may need to access include:</p> <ul style="list-style-type: none"> ▪ engine rooms ▪ auxiliary machinery rooms ▪ chart tables ▪ captain's quarters ▪ Bridge ▪ exterior of the ship ▪ electronic recording devices and computers 	<p>Use input from experts to identify areas to be assessed. Plan the assessment.</p> <p>Examine the selected areas.</p> <p>Take photographs and video evidence.</p> <p>Arrange corroboration.</p>
On board evidence	
<p>Investigation or collection of evidence on a ship may include:</p> <ul style="list-style-type: none"> ▪ charts ▪ shipboard documentation such as ship's logs ▪ data from GPS units and other navigational equipment ▪ ship's drawings (engineering, piping and pumps) ▪ the condition of equipment and machinery on board the ship ▪ maintenance and operational records ▪ liquids samples if required ▪ photographs on board the ship ▪ information from the ship's crew members ▪ data from computers <p>Note: If the voice component of a voyage data recorder is classified as an 'On-board recording' under the <i>Transport Safety Investigation Act 2003</i> then it cannot be downloaded unless covered by exceptions in subsection 53(3).</p>	<p>Plan the collection of evidence.</p> <p>Take into consideration the impact of seizing key items such as charts.</p> <p>Conduct witness interviews.</p>