Appendix F

Shipboard Oil Pollution Emergency Plan

Striker
RESOURCES N.L.
A.B.N. 86 009 153 119

GULF FREIGHT SERVICES – N.T.

SHIPBOARD OIL POLLUTION EMERGENCY PLAN

M.V. BRISK

JANUARY 2002

Document Title:	SHIPBOARD OIL POLLUTION EMERENCY PLAN						
Document No:	STR-SOPEP-PER-APP-F				Copy No:		
Type: (Tick box)	Controlled ☐				Uncontrolled ☑		
Revision (Tick box)	A:	☑	B:		C:		For Use:	
Authorised:					Date:		

FORWARD

Article 8 and Protocol 1 of the MARPOL 73/78 Convention require the notification of any actual, threatened or probable oil discharges to the nearest coastal State Authority without delay. This document, designed to satisfy regulatory requirements, was prepared by Riverside Marine for Gulf Freight Services – NT, operators of the Barge *MV Brisk*. The document is an uncontrolled copy. It should be read in conjunction with the Western Australian Marine Oil Pollution Emergency Management Plan (West Plan – MOP) and the Oil Spill Contingency Plan (OSCP) both of which are the responsibility of WA Transport.

The WA Transport OSCP applies to all oil spills in

- State coastal waters extending (3) nautical miles seaward from baseline
- Enclosed waters
- Inland waters

It excludes waters within designated Port Limits. Response to spills in these areas is the responsibility of the relevant Port Authority.

CONTENTS

1. INTRODUCTION

This plan is written in accordance with the Requirements of regulation 26 of Annex I of the International Convention for the Prevention of Pollution from Ships (1973) as modified by the Protocol of 1978 relating thereto.

The purpose of the Plan is to provide guidance to the master and officers on board the ship with respect to the steps to be taken when a pollution incident has occurred or is likely to occur.

The Plan contains all information and operational instructions required by the Guidelines. The Appendixes contain names, telephone numbers, facsimile numbers etc of all contacts referenced in the Plan, as well as other reference material.

1.1 Preamble

The aim of this Oil Pollution Plan is to outline a sequence of events that should take place to minimise damage to the environment while holding paramount the safety of the crew and other personnel should an unexpected discharge of oil occur. While no incident ever complies verbatim to a proposed plan, general steps outlined in this Plan will remove some of the demand to recall explicit detail in a situation where action, not reaction is required. In this way all actions can be taken in a sequential manner towards a successful conclusion, which satisfies all parameters. The Plan is also designed to remove some of the unknown and grey areas of contacting and reporting incidents to local and federal authorities.

The Plan is in five sections, of which the two most important are:

Section 2 Reporting Requirements

This section describes the **"who", "why", "when" and "what"** of reporting procedures. The Master or next most capable person should try to follow the reporting requirements procedure as close as possible.

Section 3 Steps to Controlling Discharge
This section describes, with the aid of flowcharts and diagrams, procedures envisaged given several scenarios.

From experience it can be said that no 'incident ever follows a plan precisely because of the number of variables involved. However, the advantage of using this plan is that the personnel concerned can concentrate more on rectifying the situation at hand than recalling procedural parameters, processes and protocol.

All members of the crew on the vessel should be fully versed with the concept, structure and implication of all sections of this plan before employment commences. In this way, any crew member onboard the vessel can implement the control, mitigation and reporting of an oil pollution incident in the absence of the Master.

1.2 Definitions

Casualty: Anything that is lost, damaged or destroyed as a result of an accident.

Collision: Any incident involving the undesired contact of the vessel with an object resulting in deformation of the hull or fittings above and below the waterline excluding grounding.

Cargo Shifting: Any situation where the movement of cargo has the ability to compromise the stability, trim or list of the vessel.

Grounding: Any incident whereby the hull comes into contact with the seafloor or other obstruction beneath the water surface excluding man made structures.

Fire: Any combustion of material which has the possibility of being uncontrollable.

Explosion: Any rapid combustion of hydrocarbon vapour creating a possibility of structural deformation or fire.

Structural Failure: Any event whereby the elastic limit of the structure has been exceeded and the material has yielded and or fractured.

Flooding: Any substantial ingression of water extraordinary to the usual operating parameters of the vessel.

Structural Integrity: The vessel is sound to continue the voyage or to make way to the nearest safe haven.

Muster: To collect as a group all personnel on the vessel.

Perforation: Where a contained area is opened abnormally to a surrounding compartment or space (usually involving the yielding and fracture of material).

Stability: The vessel's ability to stay upright.

Containment: The physical restraint of the dispersal rate or area of spread of the discharged oil.

Mitigation: To make or become less severe. To moderate.

Chemical Dispersant: Any chemical specifically designed to disperse or break up petroleum based liquid compounds.

GBRMPA: Great Barrier Reef Marine Park Authority.

Local Port Authority:	The administrative authority at the closest major port to the vessel's present location.
External Response:	Any action, physical, taken by person or persons not employed by the parent company.
Oil Spill Size:	**Tier 1** - up to 10 tonnes - small spill, local response. **Tier 2** - 10 to 1000 tonnes - medium spill, regional and interstate response. **Tier 3** - above 1000 tonnes - large spill, national and possibly international assistance.
RCC	Response Co-Ordination Centre
AMSA	Australian Maritime Safety Authority

2. REPORTING REQUIREMENTS

2.1 When to Report

A report to the Rescue Co-ordinator Centre, coastal State and parent company is to be made if any of the following occurs:

a. A discharge or probable discharge of oil or chemicals resulting from damage to a ship.

b. A discharge or probable discharge of harmful substances in packaged form- and

c. A discharge, during the operation of the ship, of oil or noxious liquid substances in excess of the quantity or instantaneous rate permitted under the present convention (15ppm). Note: **"The Great Barrier Reef World Heritage Area is designated a particularly sensitive area" by the International Maritime Organisation and no operational discharges of any kind are permitted.**

The criteria as to whether a report is made for probable discharge are as follows:

a. If the direct and immediate preventative action of a crew member had not been taken on a system, a discharge of oil would have occurred. This includes, but is not restricted to:

   i. equipment failure e.g. hose burst,
   ii operational management,
   iii hazards to shipping,
   iv near collision/collision

b. If the rectification of a situation or condition in the near future does not occur, the probability of an oil discharge is increased. This includes but **is** not restricted to:

   i loss of structural integrity of the hull due to wasting, and
   ii navigational hazards.

When making a judgment as to whether a report for probable discharge should take place, the following factors should be taken into account:

   i the nature of damage, failure or breakdown of machinery or equipment,
   ii the ship's location and proximity to land or other navigational hazards,
   iii weather, tide, current and sea state,
   iv implications of failure or breakdown of machinery or equipment.

When reporting a probable oil spill, it should be recognised that the aim of the report is to provide feedback to management and authorities to prevent an oil discharge in the future. Any navigational hazards should also be reported to the nearest coastal radio station so that they may be included on the next navigational and safety schedule.

When considering whether a probable discharge warrants a report, the Master's discretion should be used.

However, certain factors and incidents which may not have caused a discharge of oil, warrant, by the implied severity, a probable discharge report to be made. These include, but is not restricted to:

i. collision (whether with another vessel or with a structure)
ii grounding
iii explosion
iv fire
v structural failure
vi flooding
vii cargo shifting
viii crushed discharge hose (during fuel transfer)
ix incorrect calibration of tanks
x failure or breakdown of steering gear, propulsion plant, electrical generating system, and essential shipborne navigational aids.

2.2 Information Required

There are two parts to this section which need to be addressed at different points in time.

a. At the time of the incident

Information required by:
i. State and Federal Authorities
ii. Ship's Owner.

b. After the incident has been resolved:

Information required by:

i. State and Federal Authorities
ii Ship's Owner.

The two reports have different objectives and although both reports will contain some of the same information, the context will be different.

The first report needs to contain any relevant information which the authorities can use or act upon to ensure the safety of the crew and reduce environmental impact. The information required by the Authorities is laid out in the summarising flow chart "Reporting During the incident" Appendix E and a "shipboard oil pollution emergency plan reporting" form is at Appendix D. When communicating, information should be sequential, clear and succinct. The ability to give people who are remote from the situation an idea of the gravity of the situation is necessary, but an objective view should always be taken to avoid unnecessary flourish in the report.

Once the incident has been resolved, remembering that final resolution may occur after the vessel has left the vicinity, a follow up report is to be written and submitted to both the Local and Federal Marine Administration and to the parent company, Riverside

Marine. The main aim of this report is to document the incident so that actions may be analysed, plans revised and corrective measures implemented. This report should be in chronological order and should include observations, interpretations and comments regarding effectiveness of the actions taken. The report is to be written jointly by the Master and Engineer so that each may include job specific comments to give an overall picture of the event. Opinions in this report are strongly encouraged as feedback is a powerful tool.

Corrective action after the event may be in the form of an iterative process between the three parties (crew, parent company, authorities). Each party will more than likely have a different and possibly, conflicting opinion on what changes need to be impressed to reduce the probability of the event occurring again.

2.3 Who to Contact

Actual Spill

In the event of an incident, the primary consideration is the safety of the crew. Once this parameter is satisfied, the next priority is to put into action the assessment, control, mitigation and reporting of the oil spill. If an oil spill occurs, the protocol for reporting the situation is determined by the severity and implications of the particular oil spill. For example, if 5 or 10 litres of distillate were to be accidentally discharged overboard whilst in open waters, then obviously the Master should not contact State and Federal Marine Authorities and Oil Pollution Response teams to deal with the situation. However, this point is not to diminish the legal requirement of the Master to report all discharges and probable discharges (see section 2.1 "When to Report") in the format of Appendix D. Furthermore, reporting must not be underestimated. If 5 or 10 litres of sump oil were to be discharged in a local port, containment and removal of said oil must be coordinated with the appropriate authority. From these examples, it can clearly be seen that assessing an oil spill quantity is not the only parameter that needs deliberation but that the nature of the spill must also be considered.

When reporting an incident, it should be remembered that ships' radios are not a particularly secure form of communication and that when communicating, information may be eavesdropped and distorted. The topic of oil pollution is particularly sensitive and, as such, any report should follow the correct protocol to avoid communications being corrupted or taken out of context.

Protocol

1. Contact nearest relevant Government Marine Department available. Obviously this criteria is dependent on the location of the vessel and its position relative to different Port Authorities. The following criteria would be standard procedure.

   a. Contact the **Local Port Authority** by VHF radio or by mobile telephone (see Appendix A) if the vessel is within port limits.

   b. Contact the relevant **Regional Harbour Master** by VHF radio, telephone or by sea phone or HF via nearest coastal radio station (see Appendix B).

c. Contact **RCC Canberra** by telephone or through coastal radio stations VIT, VID on distress and safety frequencies if the safety of the vessel or crew is at risk (2182, 4125, 6215, 8291, 12290, 16420 kHz). (See Appendix B). If the area of responsibility defines that Local Port Authority or on WA Transport – Hazard Management Agency (HMA) be notified, RCC should be notified without unnecessary delay in respect to interference with essential navigational duties. For the Kimberley Region within WA waters the First Response Role has been delegated to the Broome Port Authority.

Before contact is made, the report contact form should be filled out so that expedient relay of relevant information can take place. (see Appendix D).

2. **Inform Riverside Marine Management.** (see Appendix B).

3 . A full report shall be written by the Master and Engineer of the vessel as soon as possible after the incident. Photographs should be taken if the situation permits. The report should include action to prevent recurrence, opinions, contributing factors etc. Reports are to be sent to the Manager, Environment Protection Standards and any local or state authorities contacted or involved during proceedings. Reports should include copies of contact reports (Appendix D) that were made during the event.

Probable Spill

An actual spill is the culmination of a set of incidents which may or may not have been avoided with foresight. An actual spill is intrinsically associated with a number of preceding probable spills, therefore addressing and rectifying probable spill incidents is a major step in the prevention of an actual spill. It is for this reason that all probable oil spills as outlined in Section 2.1 are to be reported to the parent company and subsequently to the relevant government marine department. The importance reporting probable oil spills should not be underestimated eg. our vessels have the capability of loading distillate at the rate of 150,000 litres per hour. If a transfer line were to be crushed and rupture, the line would discharge approximately 42 litres per second. As can be seen if the crew were not alert this incident could turn very serious in a short space of time. And so it can be seen that a transfer hose being crushed between the vessel and wharf would constitute a probable spill and thus require a report. In this case the report would be accompanied by recommendations as to removing the possibility of the event occurring again. If the event occurred because say, a pile did not have the required stability and this cause a pinching of the hose then it can be seen that the local port authority also needs to know of the situation so that preventative action can be taken on their behalf.

As with the reporting of an actual spill the inherent limitations of the alternative communication methods should be considered.

Protocol

1. Contact **Riverside Marine** (see Appendix B)

2. After consultation with Riverside Marine:

a) Contact the **Local Port Authority** with a verbal report (this report may be the redirection of the initial report to the engineering services by management) (See Appendix A)

b) Contact **"Regional Harbour Master"** with a verbal report (this report may be the redirection of the initial report to the engineering services by management). (See Appendix A)

c) Contact RCC **"Attention Manager, Environment Protection Standards"** Appendix B.

3. A full report shall be written by the Master and Engineer of the vessel as soon as possible after the incident. Photographs should be taken if the situation permits. The report should include action to prevent recurrence, opinions, contributing factors etc.

*** MEDIA RELEASES ARE TO BE ATTENDED TO BY THE GENERAL MANAGER OR ENGINEERING MANAGER. NO OTHER PERSONNEL ARE TO RELEASE INFORMATION TO THE MEDIA.**

- **IF THE SAFETY OF THE CREW OR THE STRUCTURAL INTEGRITY OF THE VESSEL IS AT RISK, THEN RCC (see Appendix B) SHOULD BE CONTACTED IN CONJUNCTION WITH THE NEAREST <u>REGIONAL HARBOUR MASTER.</u> FOR CONTACT LISTINGS REFER TO APPENDIX A & B.**

3. STEPS TO CONTROL DISCHARGE

3.1 Spill Type

For simplicity, this Control Plan uses the following six (6) types to classify all spills:

1) Oil product spillage as a result of ship to ship or ship to shore transfer.

2) Oil product spillage as a result of bilge water discharge (whether by failure or bilge pump discharge).

3) Grounding resulting in hull perforation and subsequent oil product discharge.

4) Collision resulting in hull perforation and subsequent oil product discharge.

5) Fire on board vessel which may compromise the ships integrity and possible sinking.

6) Structural failure of vessel resulting in hull perforation and subsequent oil product discharge.

These six types of spill are classified into two (2) groups, **Operational Spill** or **Casualty Spill** and the Control Plan in the following pages provides suggested methods of dealing with either group.

Types 1 & 2 are grouped together as **Operational Spills** as they could occur at anytime during the operation of the vessel. While an operational spill is most likely to be less severe than a spill resulting from a casualty, there is a greater possibility that the spill will occur in a sensitive area, eg. harbour. The area of the spill could mean that there is, at hand, specialised equipment to deal with the incident and that the equipment can be deployed in a rapid and efficient manner. There are some drawbacks with a spill occurring in these areas, some examples of which are:

a. Other parties trying to assist but not coordinating with vessel crew or the Local Port Authority.

b. Traffic in the vicinity dispersing the slick at a higher rate than would normally occur.

c. Sensitivity of the surrounding region.

Clearly, although the spill may be smaller, the need for quick and efficient co-ordination of the cleanup operation is essential.

Parts 3, 4, 5 and 6 have been grouped together because they constitute a spill resulting from a **casualty.** The incident creating the spill can be in a very mild form such as a fine crack in the hull to an explosion and fire contributing to the sinking of the vessel. With this large scope to which the plan must try and conform, it is impossible to cover every scenario in detail and as such guidelines are given. Further, small incidents have, through mismanagement, a habit of becoming full scale emergencies. It is the aim of this plan to reduce the possibility of this event occurring. As stated previously, the main priority of

the plan is to ensure the safety of the crew and other personnel. The second priority of the plan is, as the section title suggests, to control the discharge of oil. The main aims of control are minimising discharge quantity and then containment and mitigation of oil discharged.

3.2 Operational Spills

While it is assumed that every precaution is taken to avoid an oil spillage during the normal operating regime of the vessel, the statistics confirm that oil spills do occur. Although the most important aspect is to recognise potential problems to reduce the frequency of the occurrence, it is also important for the crew to deal with an operational spill, if it should occur, in an efficient manner.

For this to occur, several tasks must be carried out in sequential order to ensure conformity and flow. These tasks are set out in the following pages.

SHIPBOARD OIL POLLUTION EMERGENCY PLAN

OPERATIONAL OIL SPILLS

1. Carry out crew and passenger muster

a. passengers/crew are to be mustered at the designated muster point
b. once all personnel are accounted for delegation of duties begins

2. Implement priority actions

Priority Actions

a. Safety of Personnel

i. During all Hazardous duties crew are to work in pairs
ii. Each pair are to be in constant communication with the Master
iii. The Safety and well being of personnel will be paramount

b. Prevent Escalation of Incident

i. Close all valves that could allow further discharge of oil
ii. Stop transfer pumps and machinery that could further discharge oil
iii. Determine cause of oil discharge and ensure position is rectified
iv. Contain oil if possible and store in appropriate receptacles

DO NOT APPLY CHEMICAL DISPERSANT UNTIL NOTIFIED TO DO SO BY THE APPROPRIATE GOVERMENT MARINE DEPARTMENT. (See Appendix A)

c. Prevent Fire and/or Explosion

i. Close all valves that could allow further discharge
ii. Close down non essential air intakes
iii. **Remove sources of ignition**
iv. Prevent flammable vapours from entering cabins
v. Contain any fuel/oil possible

d. Dealing with Fire

i. Restrict, Stop flammable source if possible
ii Start fire pumps and apply to bulkheads, decks etc. Remember it may not be possible to extinguish the fire but the **important** thing is to keep the six (6) sides of the fire cool
iii. Utilise chemical/vapour fire extinguishers as deemed necessary this includes $C0_2$, Dry chemical and Foam extinguishers
iv. Constantly evaluate the safety of the vessel and personnel. If necessary abandon vessel, call for assistance if available
v. If in port request Assistance immediately

e. Move Vessel to Safer Position

i. Can the vessel make it to a **Safe haven** or away from fire risk
ii. Vessel should not be moved if it will inhibit oil recovery or increase the risk to crew or vessel

f. Report to Authorities

The type of information required to be reported is set out in convenient form in the following table.

i. **Local Port Authority**
contact on Ch. 16 or the mobile telephone (see Appendix A) should only be contacted when vessel is within Port limits

ii. **Regional Harbour Master**
contact on Ch. 16, mobile telephone, or through coastal radio (see Appendix A), should be contacted if within Aust coastal waters

iii. **Air Sea Safety Canberra**
should be contacted if within the Gulf of Carpentaria (see Appendix A) coastal radio stations may be a problem to contact and relay information

iv. **Riverside Marine**
- should be contacted second if an actual oil spill occurs
- should be contacted first if a probable oil spill occurs

g. Written Report and Recommendation

INFORMATION REQUIRED WHEN REPORTING TO AUTHORITIES

Vessel Information

- Name of vessel
- Ships call sign
- Course and speed
- Type of vessel
- Position (long/lat)
- Closest landmark
- Date and time

Incident Information

- Nature of oil spill

e.g.
- Oily water separator Fire
- Explosion
- Grounding
- Collision

- Quantity of oil discharged
- Type of oil discharged
- Size of oil slick
- Characteristics of oil slick
- Wind speed/direction
- Swell height/direction
- Approximate speed of oil slick
- Is the oil slick alight
- Has the discharge stopped
- What is the approx. discharge rate
- Is the discharge rate increasing
- Max quantity of oil discharged

Current Action

Controlling fire
Controlling oil discharge
Carrying out stability checks
Medivac crew members
Transferring oil internally
Ballasting/Deballasting
Deploying booms
Anchoring
Monitoring situation
Requested vessel to transfer oil

3.3 Casualty Spills

This area of the maritime industry is one in which outcomes are not predictable, however, the probability of a successful outcome is wholly dependent on the direct action taken by crew members and external response teams. Outcomes may, in some instances, be compromises of original proposals and this plan, brought about by the practical circumstances at the time of the event.

Spills resulting from casualties can sometimes be catastrophic and lead directly to loss of life. However, the chance of loss of life or injury can be considerably reduced by the appropriate action of the crew members. The intent of this plan is to assist the crew in providing this action in a timely fashion. As with contingency plans for operation spills, there is a need for setting priorities and ensuring work is carried out to meet the priorities. For example, if a vessel were to go aground it would not be prudent to consider removing the vessel from the obstruction before structural and stability analysis had taken place, that is preventing escalation of the incident.

As stated previously, the first priority is human safety, the safety of the crew and other personnel is paramount. The next two priorities are of near equal importance. These are the prevention of escalation of the incident and the prevention of fire or explosion. It can clearly be seen that these two priorities affect the first.

Apart from the severity of the incident, the other main difference between operational spills and spills resulting from casualties, is the process of reporting. With operational spills, reporting can be done in a broad range of time frames dependent on local conditions and with a clear cut protocol. The Master of a vessel suffering major structural damage or fire may have conflicting protocols due to safety of the crew versus the potential environmental hazard the incident is creating. Further, the number of variables associated with an oil spill resulting from casualties far outnumber those associated with operational spills.

As minimum the actions below should be taken:

a. Grounding

Crew Responsibility

- Mustering crew & passengers
- Inspection for the extent of damage
- Inspection for stability
- Minimise oil spill if any
- Transfer fuel oil if necessary
- Ballasting/Deballasting
- Inform Authorities
- Inform Riverside Marine
- Abandon the vessel if necessary

Company's Responsibility

- Continuous contact with the vessel if possible
- Inform Authorities
- Organise materials or rescue body if necessary

b. Fire or Explosion

Crew Responsibility

- Mustering crew & passengers
- Inspection for the extent of damage
- Inspection for oil spillage
- Minimise oil spill if any
- Transfer fuel oil if necessary
- Inspection for stability
- Controlling the fire if possible
- Inform Authorities
- Inform Riverside Marine
- Abandon the vessel if necessary

Company's Responsibility

- Continuous contact with the vessel if possible
- Inform Authorities
- Organise materials or rescue body if necessary

c. Collision

Crew Responsibility

- Mustering crew & passengers
- Inspection for the extent of damage
- Inspection for oil spillage
- Minimise oil spill if any
- Inspection for stability
- Ballasting/Deballasting
- Inform Authorities
- Inform Riverside Marine
- Abandon the vessel if necessary

Company's Responsibility

- Continuous contact with the vessel if possible
- Inform Authorities
- Organise materials or rescue body if necessary

d. Hull Failure and Stress

Crew Responsibility

- Mustering crew & passengers
- Inspection for the extent of damage
- Ballasting/Deballasting
- Inform Authorities
- Inform Riverside Marine
- Abandon the vessel if necessary

Company's Responsibility

- Continuous contact with the vessel if possible
- Inform Authorities
- Organise materials or rescue body if necessary

e. Stability

Crew Responsibility

- Mustering crew & passengers
- Inspection for the extent of damage
- Ballasting/Deballasting
- Inform Authorities
- Inform Riverside Marine
- Abandon the vessel if necessary

Company's Responsibility

- Continuous contact with the vessel if possible
- Inform Authorities
- Organise materials or rescue body if necessary

4. COORDINATION

In the event of an actual spill, once contact has been made to the local Port Authority, the hazard Management Agency or RCC Canberra, some of the decision making will be taken from the Master i.e. the Authorities will co-ordinate response teams, assessment and possibly mitigation of the spill. A harmony with the response teams and government marine department is essential for effective control and mitigation of an oil spill. This however does not remove the Master's right to question a decision made. This is especially the case where the Master believes that the action being taken by the Authority compromises the safety of the crew or vessel.

It should also be remembered that response teams will, more than likely, have greater experience or exposure to these situations and hence will have a broader outlook on the ramifications of a particular oil spill. In this regard actions taken may seem obscure to the Master of the vessel at the time.

If at any stage the Master of the vessel has problems communicating with relevant personnel, the Master should contact Riverside Marine Management who will try to clarify stances and re-open communication so that a successful result is attained.

5. TRAINING REQUIREMENTS FOR CREW MEMBERS

From the preceding pages of this report, it can clearly be seen that the process of dealing with oil spills, whether they be operational or casualty, is a complicated one with several sets of priorities and procedures to be implemented. It is not expected that any crew member memorise this plan. However, **every crew member** must have read and understood the process and implications of this plan before employment commences. Appendix C is a list for crew members to fill out, date and sign when they have read the plan. This list is to be kept up to date at all times and is to become integral with the record keeping of the vessel. From reading the plan it must also be conceived that for the plan to function adequately crew members must be proficient with fire-fighting response and the location of particular items of machinery on the vessel.

All crew members will know:

- how to start and engage the fire pump.
- how to shut down and close discharge valves.
- where emergency fuel shut offs, generator shutdown switches and air intake closures are located and how to operate them.
- where chemical dispersants are kept and under what conditions they are to be used.

As well as:

- have an understanding of the internal tank structure of the vessel and how fuel may be transferred internally.
- have an understanding of the stability of the vessel and why careful consideration of the ships stability needs to be maintained during a casualty.

For this action to be implemented it is imperative that the Master and Engineer communicate with crew members and share knowledge and experience. This action is not to try and make redundant the master or engineer but to allow for the possibility that the Master or Engineer may, during the occurrence of the spill, be incapacitated or unable to implement sections of the plan.

The training requirement must also include at least one (I) annual practical exercise.

This plan is to be kept in the wheelhouse at all times and is to be open to inspection for any person who wishes to peruse it. The plan will be updated on an annual basis and this will be signified by a date of publication on the front cover of the plan. It is to be the Master's responsibility to inform Riverside management of this annual occurrence so that the concerned parties may collaborate to update any information which has become redundant or could be improved. Updates of the plan are to be implemented poste haste and this is to be reflected in the Amendments Section of the plan. (Page 1). A corresponding signature from each crew member is to be added to Appendix C after reading of the Amendment. A review must be undertaken following any incident involving discharge of oil, to evaluate the effectiveness of the Plan.

APPENDIX A
Regional Harbour Masters and Local Authorities

LOCATION	WORK PHONE	FACSIMILE	AFTER HOURS/MOBILE
PERTH:Dept Planning & Infrastructure			
Maritime Division-Marine Environmental Unit ERG Coordinator – J Brooker C Sappelli P Raitt	 (08) 9216 8982 (08) 9216 8233 (08) 9216 8867	 (08) 9216 8982	 0417 038 157 0408 924 143 0438 916 223
DARWIN			
Port Corporation	(08) 8992 0660	(08) 8992 0666	(08) 8999 3974 (24 H) 0416 167 163
Duty Officer-East Arm Port	(08) 8992 0675	(08) 8992 0666	0416 167 163
Department of Transport & Works State Marine Pollution C. Biggs	(08) 8924 7038	(08) 8924 7937	0411 110 268
WYNDHAM			
Port Manager – S Forrest	(08) 9161 1203	(08) 9161 1244	(08) 9161 1229 (24 H)
DAMPIER			
Regional On Scene Co-Ordinator Regional Harbour Master L. Copeman	(08) 9159 6565	(08) 9159 6557	0429 937 623 or 0427 937 877

APPENDIX A
Regional Harbour Masters and Local Authorities

LOCATION	WORK PHONE	FACSIMILE	AFTER HOURS/MOBILE
BROOME			
Regional On Scene Co-Ordinator Port Manager – S Frodsham	(08) 9192 1304	(08) 9192 1778	0407 443 667

Derby-West Kimberley Shire Council Chief Executive Officer	(08) 9191 1433	(08) 9191 1431	(08) 9191 1184 (24H)
Torres Shire Council Chief Executive Officer	(07) 4069 1336	(07) 40691 845	
Aurukun Shire Council Shire Clerk	(07) 40606 144	(07) 40 606 191	
Carpentaria Shire Council Shire Engineer	(07) 47451 166	(07) 47451 340	
Mornington Shire Council Shire Clerk	(07) 47457 200	(07) 47457 275	

APPENDIX A
Regional Harbour Masters and Local Authorities

	WORK PHONE	FACSIMILE	MOBILE
Response Co-ordination Centre (RCC) 24 Hours	(02) 6230 6811	(02) 6230 6868	FREECALL 1800 641 792
South Australia	(08) 8347 5025	(08) 8347 5088	0417 805 730
Queensland	(07) 3224 2809	(07) 3221 0164	0419 300 152
Tasmania	(03) 6233 6366	(03) 6233 6800	0418 526 242
New South Wales	(02) 9563 8601	(02) 9563 8437	0411 261 086
Northern Territory	(08) 8922 0646	(08) 8941 2039	0419 840 041
Western Australia	(08) 9216 8999	(03) 5226 6341	
Victoria	(03) 6235 1061		

APPENDIX B
RIVERSIDE MARINE MANAGEMENT

	WORK PHONE	HOME PHONE	FACSIMILE	MOBILE
Marine Manager Hume Campbell	(07) 3358 2122	(07) 3720 8872	(07) 3358 3386	0418 660 296
General Manager - Engineering Services Ian Thomson	(07) 3358 2122	(07) 3378 3589	(07) 3358 3386	0418 739 693
General Manager -Commercial Operations Ralph Vaughan	(07) 3358 2122	(07) 3893 1502	(07) 3358 3386	0418 748 676

WA AGENCIES

	WORK PHONE	HOME PHONE	FACSIMILE	MOBILE
BUREAU OF METEOROLOGY	**FORECASTER**	(08) 8920 3800		
	DURING CYCLONE ONLY		1 800 061 438 1 902 935 730	-
CALM D Coughran	(08) 9334 0339		(08) 9334 0295	-0419 947 708
DEP	(08) 9222 7123 or 1 800 018 800 (24H)		(08) 9222 7099	-
Dept Mineral & Petroleum Res. Environment Dangerous Goods	 (08) 9222 3097 (08) 9222 3281		 (08) 9325 2280 (08) 9222 3525	
State Emergency Services	1 300 1300 39			
Royal Flying Doctor Service	1 800 625 800			

APPENDIX C

ACKNOWLEDGEMENT OF OIL POLLUTION PLAN

Name	Position	Signature

APPENDIX D

SHIPBOARD OIL POLLUTION EMERGENCY PLAN

AA Ships Name: _____

Call Sign : _____

Flag : **AUSTRALIAN**

BB Date : _____ (**D D M M Y Y**)

Time : _____ (**H H M M**)

CC Position *LAT* _____ (**D D M M**) **N S**

LONG _____ (**D D D M M**) **E W**

DD Bearing from landmark : _____ (**D D D**) **T C**

Distance from landmark : _____ Nautical Miles

EE Course : _____ (**D D D**) **T C**

FF Speed : _____ (**Kn Kn 1/10**)

LL Intended Track :

MM Radio Stations Guarded: _____

NN Next report: *DATE* _____ (**D D M M Y Y**)

TIME _____ (**H H M M**)

PP Cargo: *TYPE* _____

QUANTITY _____ Litres

Bunkers: TYPE _____

QUANTITY _____ Litres

QQ Brief details of Defects / Damage / Deficiencies

RR Weather: WIND Dir | | | | **T** | **C** |
D **D** **D**

Speed | | Beaufort

SWELL Dir | | | | **T** | **C** |
D **D** **D**

Height | | Metres

TT Contact details of Ships owner **RIVERSIDE MARINE**

UU Vessel :

LENGTH				metres
BREADTH				metres
DRAUGHT				metres
TYPE				metres

XX Additional information

Details of incident :

Need for outside assistance :

Actions being taken :

Number of crew and details of any injuries :

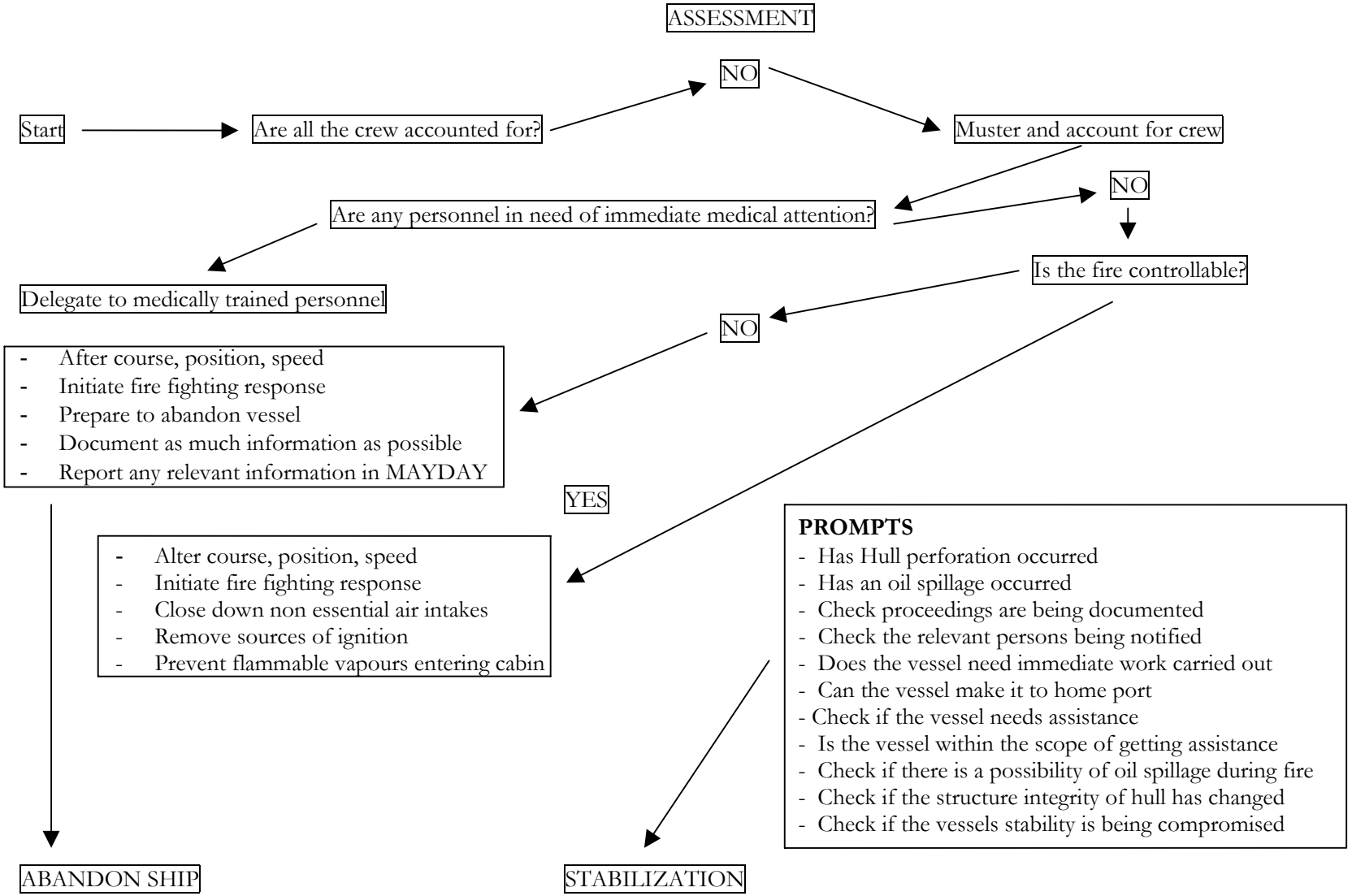
Other relevant points :

** All reports sent to RCC should be made for the attention of:

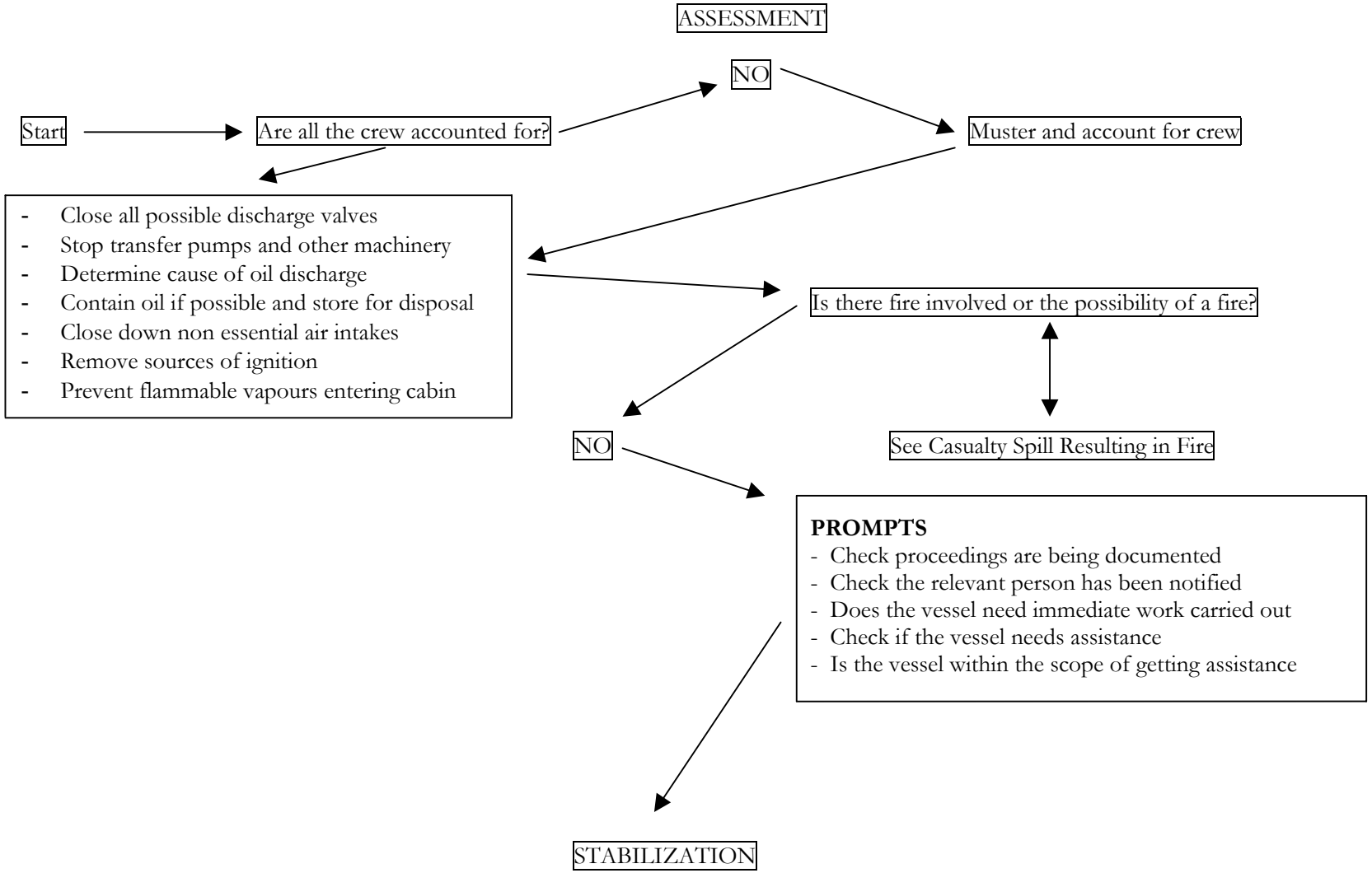
MANAGER, ENVIRONMENT PROTECTION STANDARDS,
MARINE ENVIRONMENT PROTECTION SERVICES

APPENDIX E

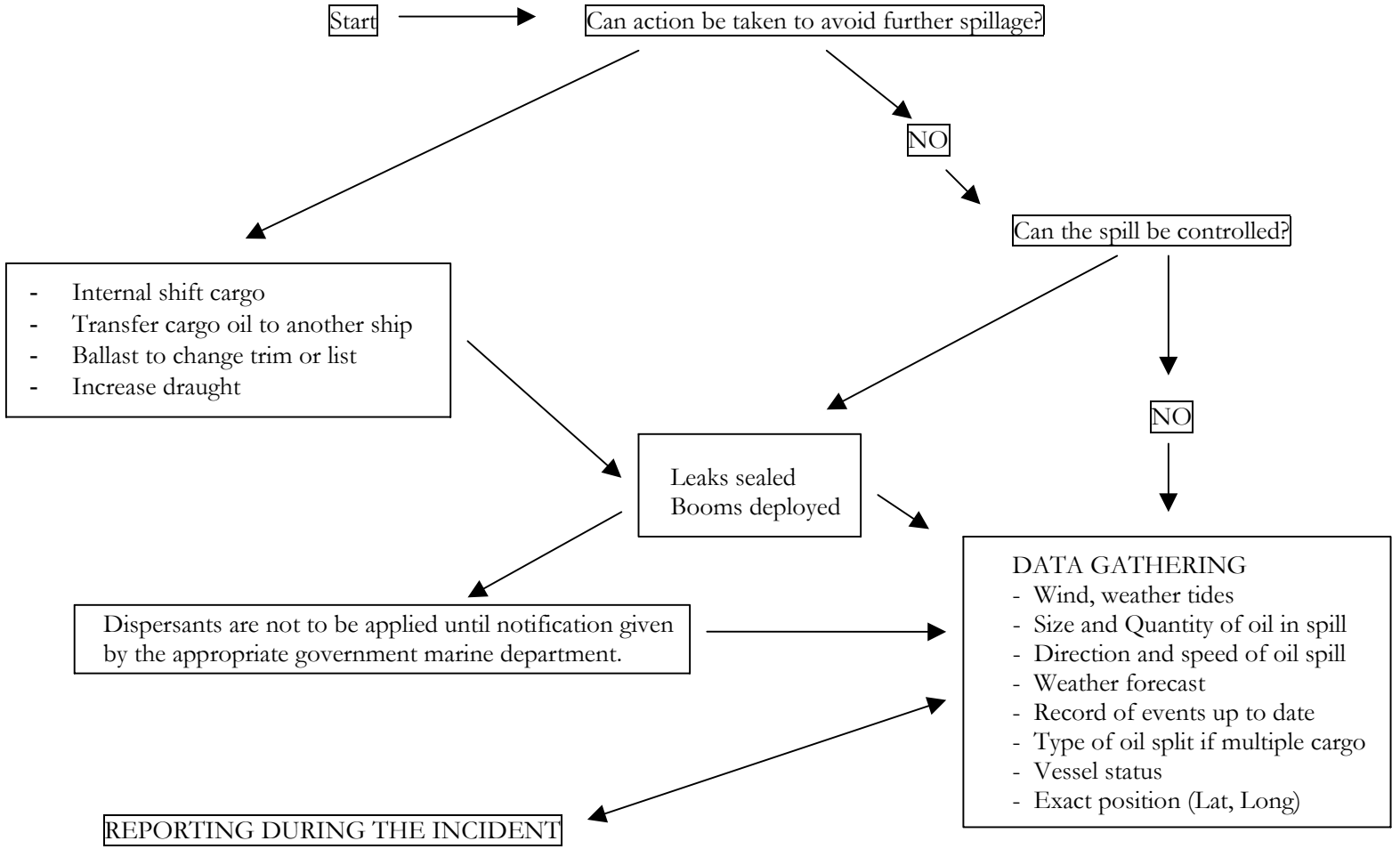
APPENDIX E: FLOW CHARTS – SPILL ASSESSMENT
CASUALTY/SPILL RESULTING IN FIRE



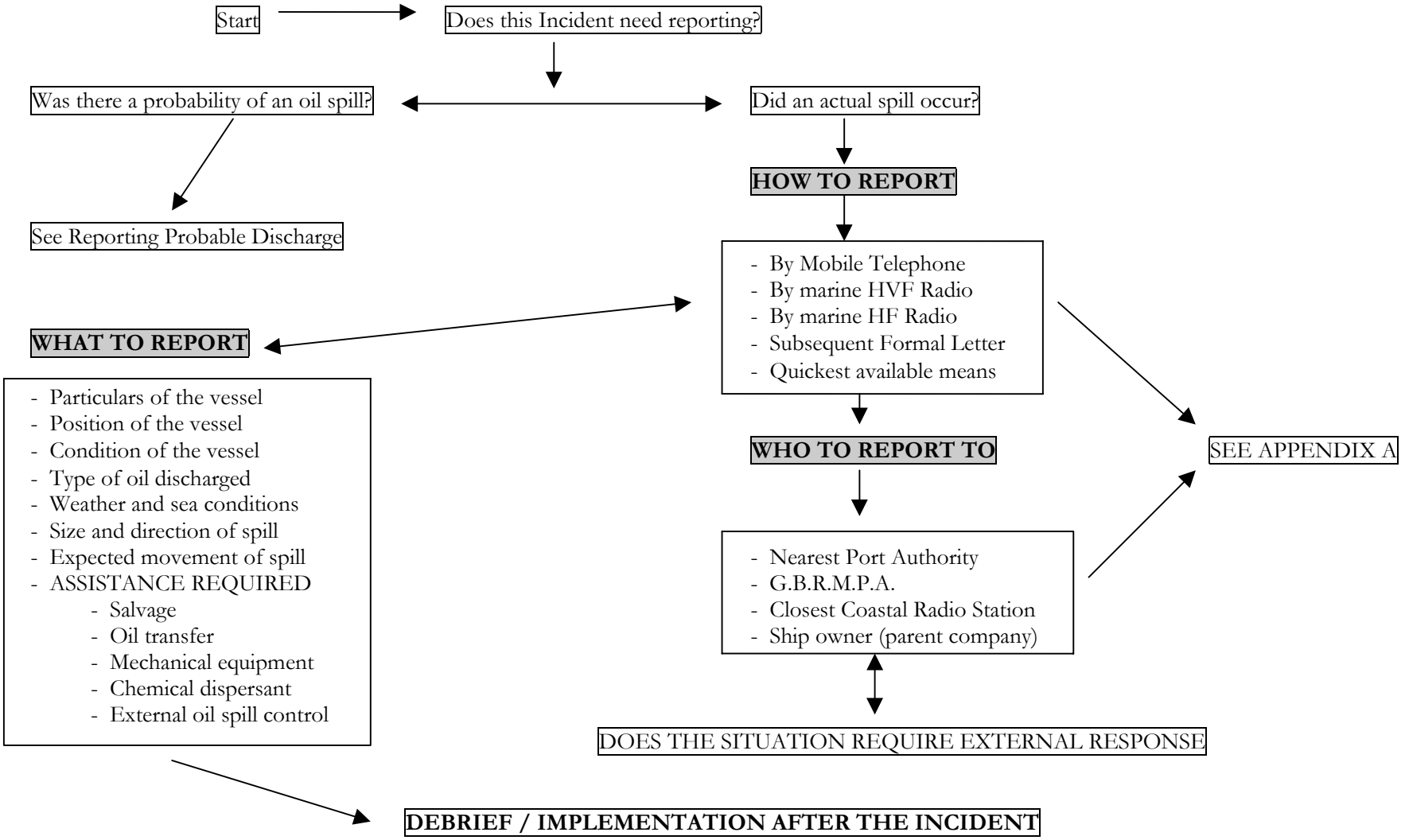
OPERATIONAL SPILL



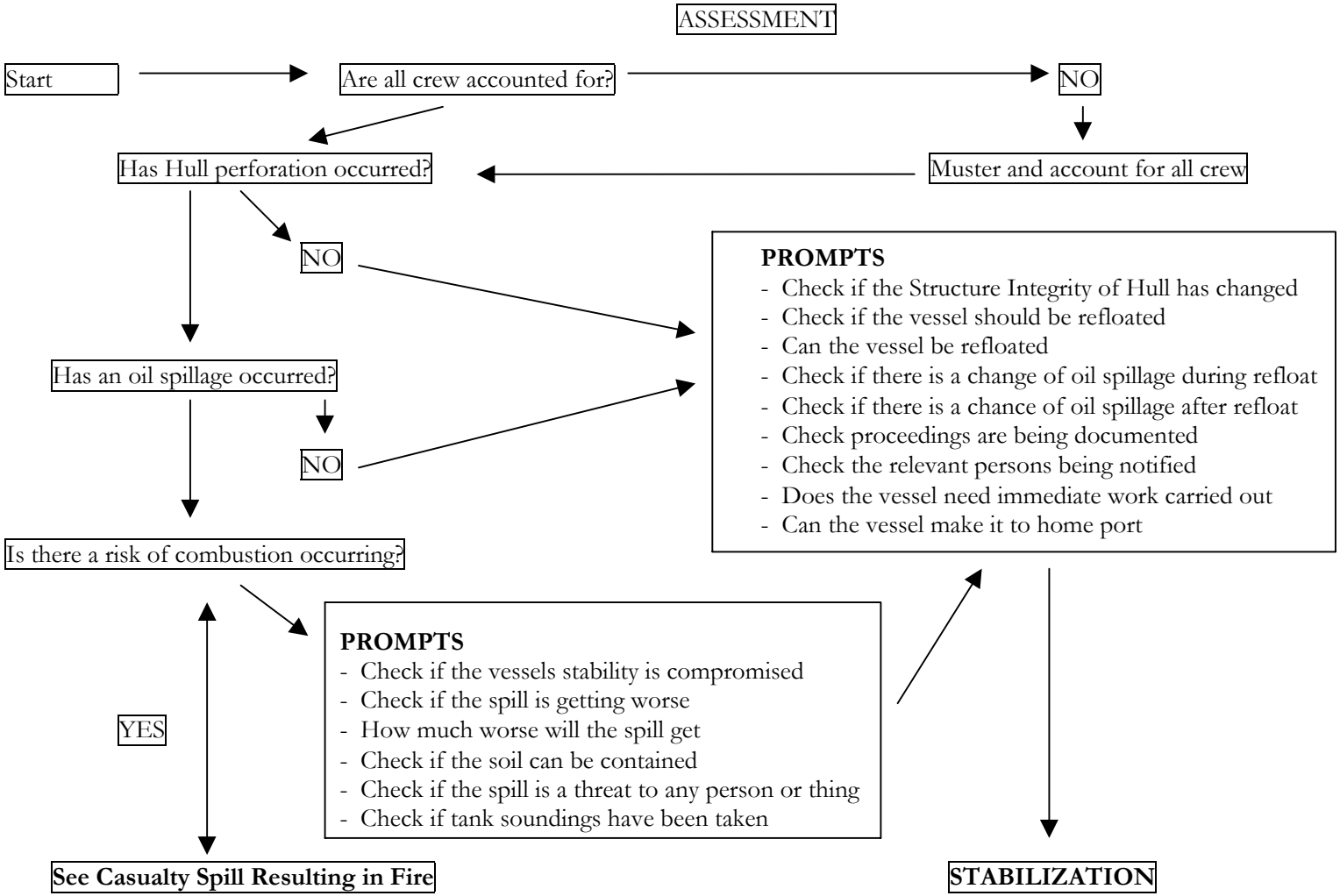
STABILIZATION



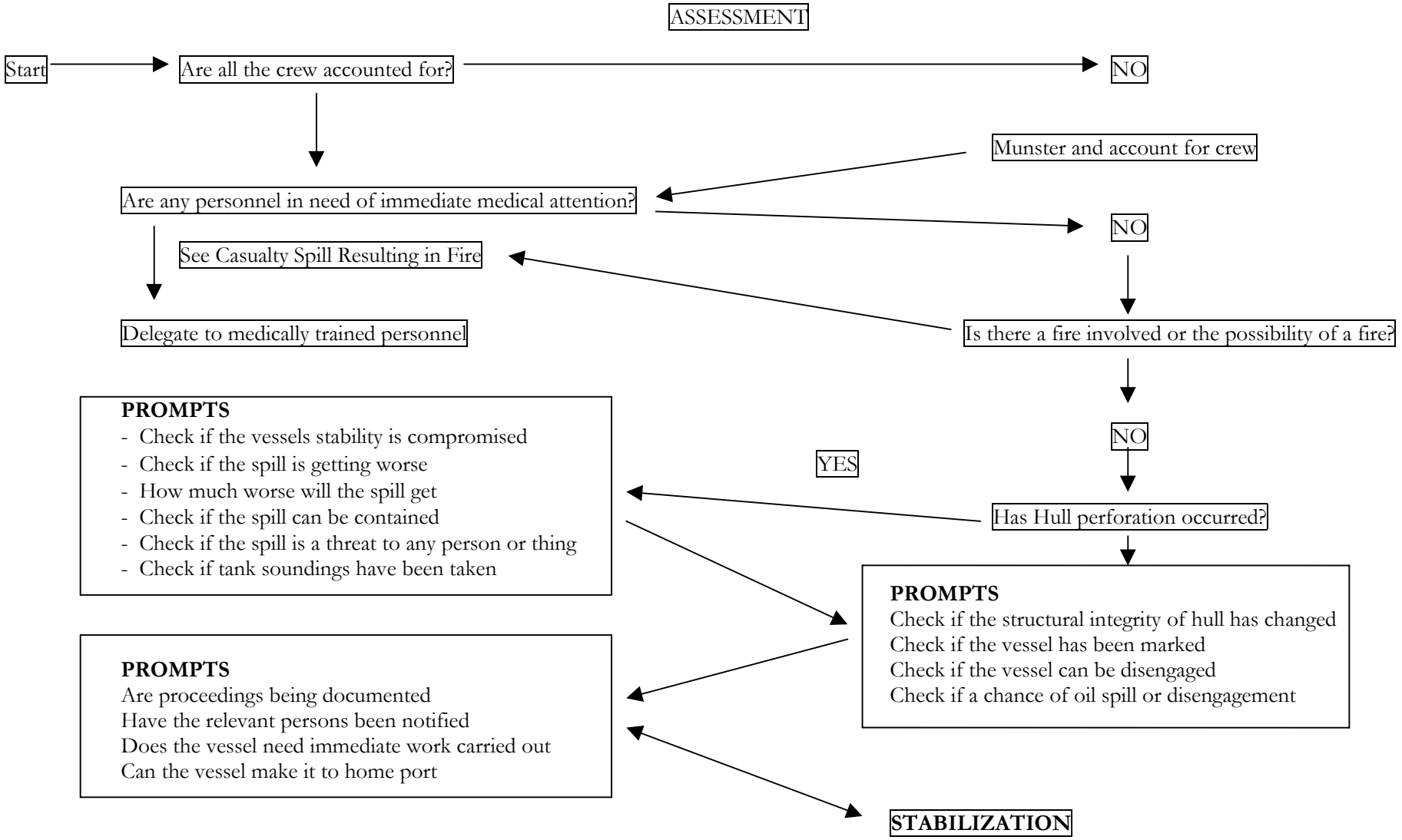
REPORTING DURING THE INCIDENT



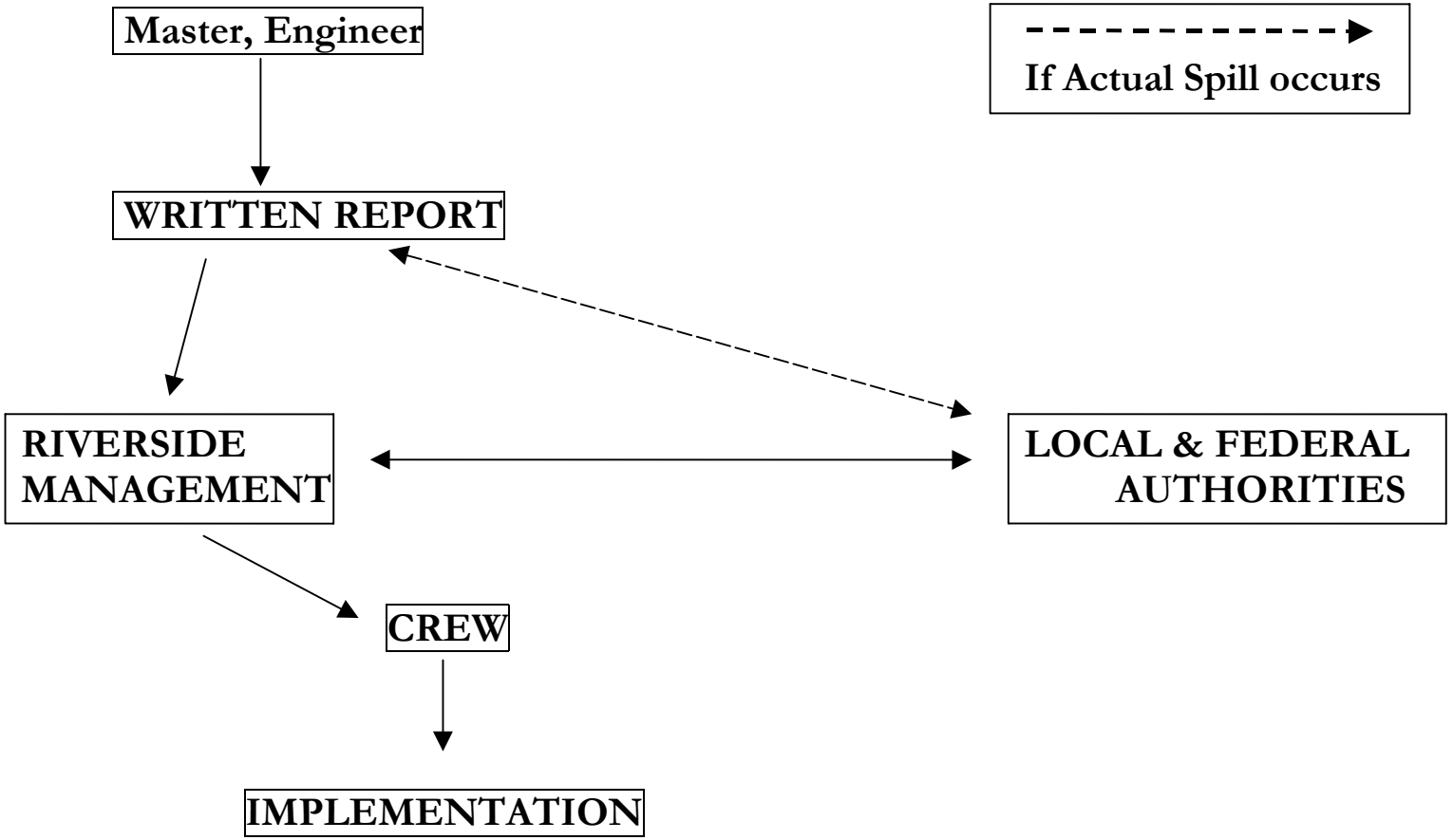
CASUALTY/SPILL RESULTING FROM GROUNDING



CASUALTY/SPILL RESULTING FROM COLLISION



DEBRIEF / IMPLEMENTATION AFTER THE INCIDENT



APPENDIX F

- ***Fact Sheets – Small Diesel Spill***

FACT SHEET: Small Diesel Spills (500-5,000 gallons)

- Diesel fuel is a light, refined petroleum product with a relatively narrow boiling range, meaning that, when spilled on water, most of the oil will evaporate or naturally disperse within a few days or less. This is particularly true for typical spills from a fishing vessel (500-5,000 gallons), even in cold water. Thus, seldom is there any oil on the surface for responders to recover.

- When spilled on water, diesel oil spreads very quickly to a thin film. Even when the oil is described as a heavy sheen, it is 0.0004 inches thick and contains about 1,000 gallons per square nautical mile of continuous coverage. The volume of oil in areas covered by streamers would be much less. Silver $been only contains about 75 gallons per square nautical mile.

- Diesel has a very low viscosity and is readily dispersed into the water column when winds reach 5-7 knots or sea conditions are 2-4 foot.

- Diesel oil is much lighter than water (specific gravity is about 0.85, compared to 1.03 for seawater). It is not possible for this oil to sink and accumulate on the seafloor as pooled or free oil.

- However, it is possible for the oil to be physically mixed into the water column by wave action, forming small droplets that are carried and kept in suspension by the currents.

- Oil dispersed in the water column can adhere to fine-grained suspended sedirnents which then settle out and get deposited on the seafloor. This process is more likely to occur near river mouths where fine-grained sedirnent are carried in by rivers. It is less likely to occur in open marine settings. This process is not likely to result in measurable sediment contamination for small spills.

- Diesel oil is not very sticky or viscous, compared to black oils. When small spills do strand on the shoreline, the oil tends to penetrate porous sedirnents quickly, but also to be washed off quickly by waves and tidal flushing. Thus, shoreline cleanup is usually not needed.

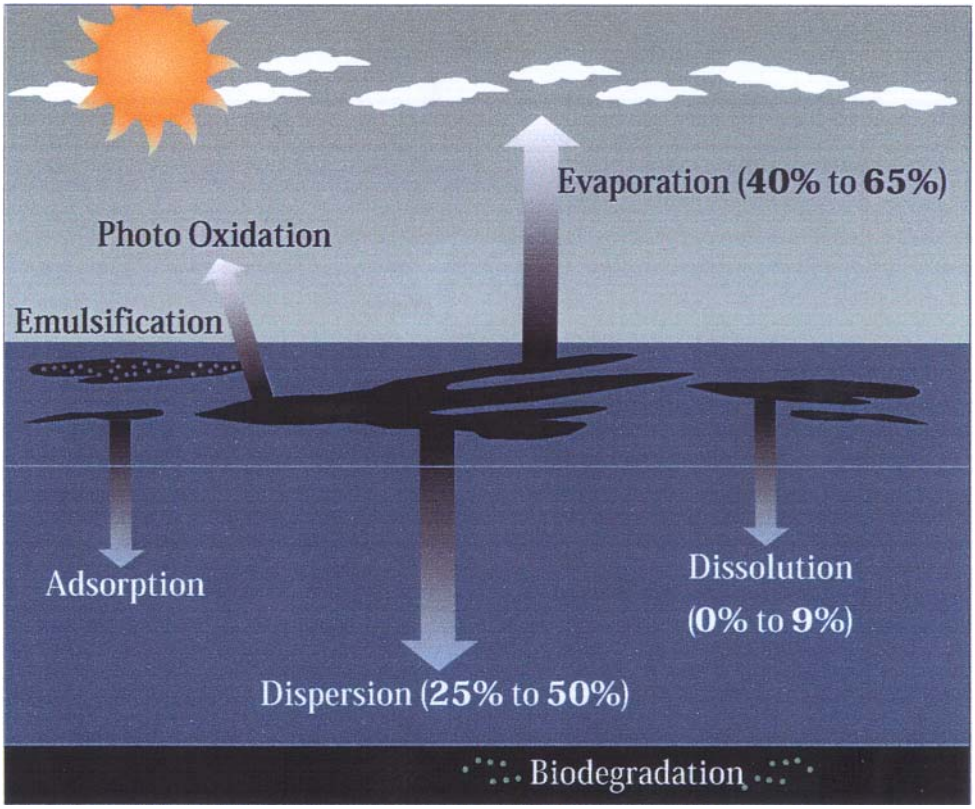
- Diesel oil is readily and completely degraded by naturally occurring microbes, under time frames of one to two months.

- In terms of toxicity to water-column organism's, diesel is considered to be one of the most acutely toxic oil types. Fish, invertebrates and seaweed that come in direct contact with a diesel spill may be killed. However, small spills in open water are so rapidly diluted that fish kills have never been reported. Fish kills have been reported for small spills in confined, shallow water.

- Grabs and shellfish can be tainted from sink diesel spills in shallow, nearshore areas. These organisms bioaccumulate the oil, but will also depurate the oil, usually over a period of several weeks after exposure.

- Small diesel spills can affect marine birds by direct contact, though the number of birds affected is usually small because of the short time the oil is on the water surface. Mortality is caused by ingestion during preening as well as to hypothermia from rnatted feathers. Experience with small diesel spills, is that few birds are directly affected. However, small spills could result in serious irnpacts to birds under the "wrong" conditions, such as grounding right next to a large nesting colony or transport of sheens into a high bird concentration area.

Weathering Processes Affecting Small Diesel Spills (500-5000 gallons)



Over 90% of the diesel in a small spill incident into the marine environment is either evaporated or naturally dispersed into the water column in time frames of a couple of hours to a couple of days. Percent ranges, in parentheses above, represent effects of winds ranging from 5 to 30 knots.

Adsorption
The process by which one substance is attracted to and adheres to the surface of another substance without actually penetrating its internal structure

Biodegradation
The degradation of substances resulting from their use as food energy sources by certain rnicro-organisms including bacteria, fungi, and yeasts

Dispersion
The distribution of spilled oil into the upper layers of the water column by natural wave action or application of chemical dispersants

Dissolution
The act or process of dissolving one substance in another

Emulsification
The process whereby one liquid is dispersed into another liquid in the form of small droplets

Evaporation
The process whereby any substance is converted from a liquid state to become part of the surrounding atmosphere in the form of a vapour

Photo Oxidation
Sunlight-promoted chemical reaction of oxygen in the air and oil

NOAA 1 Hazardous Materials Response and Assessment Division
7600 Sand Point Way NE
Seattle, Washington 98115
206 / 526-6317

APPENDIX G

- **Oil Spill Contingency Plan – Audit Checklist**

OSCP AUDIT CHECKLIST

Audit Ref.	Item/Topic	Yes/ No	OSCP Ref.	Comment
0	**Plan Structure**			
0.1	Table of Contents complete and correct		page 3	
0.2	Plan sections/pages dated		Whole doc.	
0.3	Revision record sheet			
0.4	Distribution list			
0.5	Copies of OSCP numbered			
A	**Introduction**			
A.1	Aim and objectives		S1.2	
A.2	Statutory requirements		S1.3	
A.3	Scope			
	A Geographic area covered		S1	
	B Operations/facilities		S1.4	
	C Oil or chemical types		S1.4	
A.4	Description of risks		S1.5, S4, S5	
	A Potential source of spill		S1.5	
	B Potential volumes		S1.4	
	C Resources at risk		S4	
A.5	Integration with other plans			
	A WestPlan-MOP		S1.6	
	B National plan		S1.6	
	C AMOS Plan		S1.6	
	D Port OSCP		S1.6	
	E WestPlan-Hazmat		S1.6	
A.6	Integration with other relevant documents			
	A Environmental Managt. System (EMS)			
	B Emergency Response Plan (ERP)			
	C Corporate Crisis Management Plan			
B	**Response Organisation (Prevention and Preparedness**			
B.1	Response priorities		S2, S3	
B.2	Response team structure and responsibilities (Co-ordination and Control)		S1.7, S2.2, S2.3	
	A Incident Management Team			
	B Crisis Management Team			
	C Emergency Management Team			
B.3	Government/Port Authorities authority and responsibilities		S1.7	
B.4	Defn. of tiers, (Agency/Port/Company) risks and capabilities		S1.7	
B.5	Mechanism for determining Tiers			
B.6	Triggers for Tier level escalation/de-escalation			
B.7	Tiered support and Incident Management Team organization			
B.8	Reference to supporting data in Appendices (if any)			
B.9	Identifies possible ICC and AOC locations		S7	
B.10	Notes set-up of ICC (a)		S7	
B.11	Identifies staffing for LMT		S2, S7	
B.12	Covers/refers to procedures for:			
	A Incident Action Plan prep.			
	B Finance			
	C Administration procedures			

Audit Ref.	Item/Topic	Yes/ No	OSCP Ref.	Comment
C	**Actions (Response and Recovery)**			
C.1	Reporting requirements and sequence			
C.2	Flow chart			
C.3	Incident Management Team Call-out procedures			
C.4	Location of the ICC		S7	
C.5	Incident assessment procedures		S5.4	
C.6	Surveillance		App. A	
C.7	Incident Action Plan development procedures		S2, S3	
C.8	Marine response plan and guidelines		S4.3, S5.6	
C.9	Aerial response plan and guidelines		App. A	
C.10	Shoreline response plan and guidelines		S5.4	
C.11	Waste management plan and guidelines			
C.12	Occupational Health and Safety guidelines			
C.13	Procedures for initiating State/regional/local wildlife cleanup		S4, S5, S7	
C.14	Ongoing monitoring procedures			
	a Surveillance		App. A	
	b Trajectory modelling		App. A	
	c Oil fate/behaviour model		S1.4, S5, App. A	
	d Ground-truthing			
C.15	Response termination procedures		S3	
D	**Appendices (Support Material)**			
D.1	Contact Directory			
	a Spill response agencies		S7	
	b Key Company personnel		S7	
	c State Government authorities		S7	
	d Regional/Local Government authorities		S7	
	e Commonwealth Government authorities	Y	S7	
	f Waste disposal sites	Y	S7	
	g Contractors and Support resources	Y	S7	
D.2	Environmental data, including location of sensitive resources:			
	a Biological/ecological	Y	S4.3, S5.4	
	b Heritage areas/sites	N		
D.3	Oil spill data:			
	a Spill trajectory modelling	Y	S5.3	
	b Oil character	Y	S1.4	
	c Oil fates and behaviour	Y	S1.4	
D.4	Guidelines for the use of Dispersants	Y	S3.5	
D.5	Sub-Plans			
	a Waste Management			
	b OH&S	Y		
	c Media			
	d Communications			
D.6	Material Safety Data Sheets	Y	S1.4	
D.7	Equipment Directory			
	a Local resources	Y	S6.3	
	b State resources	Y	S6.3	
D.8	Maintenance of response preparedness			
	a Training programme	Y	S6.3	
	b OSCP audit programme	Y	S6.2	
	c Responsibilities	Y	S6.2	
D.9	Maps	Y	S4.3	
D.10	Tidal data/current data			
D.11	Glossary of Term			
D.12	Sampling protocols	Y	App. B	
D.13	Other (Note)			