



JAPAN P&I CLUB

Vol.52 November 2021

P&I Loss Prevention Bulletin

The Japan Ship Owners' Mutual Protection & Indemnity Association Loss Prevention and Ship Inspection Department



Response to Oil Spills

Contents

<u>§ 1</u>	<u>Introduction</u>	<u>2</u>
<u>§ 2</u>	<u>Countermeasures for Maritime Accidents</u>	<u>3</u>
2 1	Countermeasures for Maritime Accidents (For Each Maritime Accident Including Those Between Ship and Shore)	3
2-2	Immediate Launch of Land Support Team	7
<u>§ 3</u>	<u>Oil Spill Response</u>	<u>12</u>
3-1	Oil Spill Progression Timeline	13
3-2	Oil Spill Spreading Factor.....	19
3 3	Spreading Preventive Measures	21
3 4	Classification of Oil Spills.....	25
3 5	Oil Types	26
3 6	Oil Recovery Materials	29
3-7	Oil Treatment Agents.....	33
3 8	Oil Spill Response	36
3 9	Oil Spill from a Vessel with a Hole Rupture	40

§ 4 Case Study of Oil Spillage Accidents 41

4 1	Oceangoing Vessel Case	41
4 1 1	Accident Overview	41
4 1 2	Accident Treatment Expense	42
4 1 3	What Caused the Accident?	44
4 1 4	Accident Cause	48
4 1 5	Recurrence Preventive Measures	55
4 2	Coastal Vessel Cases	58
4 2 1	Accident Overview	58
4 2 2	Accident Treatment Expense	59
4 2 3	Extent of Damage	60
4 2 4	What Caused the Accident?	61
4 2 5	Accident Cause	65
4 2 6	Recurrence Preventive Measures	69

§ 5 Conclusion 72

References	74
Acknowledgement of Provided References and Materials	74
P.40 Answer to Quiz	75
Attachment 1: Oil Recovery Procedure by Oil Type	81
Attachment 2: Flowchart of Oil Spill Response (Example)	82
Attachment 3: Response Framework to Major Oil Pollution Incidents in Japan (Organisation Chart)	83
Attachment 4 : Oil Spill Report Form: Sample	84

§1 Introduction



Image 1 : Image of Oil Spill Accident

When it comes to oil spills, certain readers may remember the M/V Exxon Valdez incident which occurred in Alaska. On 23 March 1989, the M/V Exxon Valdez grounded in Alaska, North America, spilling 10.8 million gallons (approximately 41,000 KL) of crude oil. It is considered to be one of the largest human-induced environmental incidents to have ever occurred at sea.

Since then, tankers have been regulated with dedicated ballast tanks and double bottoms, and the number of spills of loaded oil have been greatly reduced. However, we receive reports of oil spills every year, and the number of oil spillage accidents show no sign of significant decline. In this guide we will discuss the prevention of oil spills and how to deal with them appropriately.

§2 Countermeasures for Maritime Accidents

2-1 Countermeasures for Maritime Accidents (For Each Maritime Accident Including Those Between Ship and Shore)

The following is a summary of the common responses to all maritime accidents and not just oil spills. It goes without saying that it is important to do everything possible to prevent maritime accidents from occurring. However, in the unfortunate event of a maritime accident, the following two factors can have a significant impact on the safety of the crew, cargo and the hull of the vessel, as well as the expenses involved in dealing with the accident.



Image 2: Oil Spill Due to Collision

- **Suitability of initial measures**
- **Skilful handling of the accident afterwards**

The main difference between a maritime accident and a road traffic accident or a fire accident on land is that on land, the relevant people can arrive on the site immediately, whereas with a maritime accident, the Vessel (Master) has to take care of the situation and avoid any detriment to the shipowner from the moment of the accident until the assistance of the company's Land Support Team, the Japan Coast Guard (JCG) and private organisations have been arranged.

However, in the event of a major accident, such as a collision, fire or oil spillage accident, the Vessel may be in a state of confusion, and most probably very busy dealing with the immediate aftermath of the accident. In such cases, it is often difficult for the Vessel to keep a record of the situation and the details that need to be ascertained in order to ensure the smooth processing of the accident.

In addition, with today's communication methods such as email and Inmarsat, communication between ship and shore is much faster than in the past. However, if the Supporting Team on Land (department) has to contact the Vessel repeatedly in order to obtain information on the situation, this may not only result in inaccurate information, but may also cause further confusion between the Vessel and the department on land.

In the immediate aftermath of a maritime accident, the Master, Chief Engineer (C/E), Navigation Officer, Engineer and Supporting Team on Land are all in a state of turmoil. The initial response is of the utmost importance in order to minimise the damage and facilitate the subsequent smooth processing of the accident. In order to achieve this, the Vessel conducts regular drills on board to simulate various accidents, and an emergency support response team is also formed on shore for joint training between ship and shore.

However, as mentioned above, when a lot of information is exchanged between ship and

shore via Inmarsat, there are often cases that information does not get conveyed accurately due to mutual misunderstandings and assumptions.

In order to avoid this, each company has its own ISM code and SMS manual (Safety Management System), which specify how to deal with each type of maritime accident. It is essential that these trainings and the procedure manuals that have been so carefully created get to be utilized in accordance with the procedures. In other words, in order to avoid wasting time when checking the situation between ship and shore, it is necessary to establish in advance an efficient way of dealing with accidents, for example by using checklists and other forms such as reports. This is a good opportunity to review the relevant parts of the Safety Management System. Key points to be reviewed are as follows:

Review of check list and reports

In order to eliminate redundant work and to communicate with an accurate and efficient exchange of information, it will be recommended to set up a report form based system between ship and shore by each type of accident. Using checklists and other documents as reports can be an option.

The following should be noted when reporting to government authorities

- ▶ Report all actual facts concisely.
- ▶ Do not report unconfirmed, speculative or extraneous information, or declare that the information is inaccurate.
- ▶ If you have to report about something uncertain, use flexible vocabulary such as "approximately" or "about" (this makes it easier to correct the report if you get more accurate information later).
- ▶ It can be easy to make changes to your report while bearing government authorities in mind, however, even if you do not intend to do so, you are not allowed to report on anything that deliberately distorts or underestimates the

facts. It is important to remember that misrepresentation of the facts “brings nothing but harm”.

Paperwork to be done later

When an accident occurs, a number of document exchanges between ship and shore take place. Also, in the event of reviewing the original paper by picking it out from the accumulated papers to check with the contents of a previously sent document, as a result, the order of the documents is often lost or confused at a later date. In order to avoid this situation, the following are recommendable.

- ▶ Be sure to add the date and time on all incoming and outgoing documents (preferably with a reference number).
- ▶ The original documents are to be accumulated in separate received/outgoing document boxes and sorted later.

In the case that you need a document that has already been sent for any reason, make a photocopy of it on the spot and return it immediately to its original place. Do not add notes to the original document as an afterthought. In the case that additionally revised documents are to be added to accumulated docs, a new revised date and time and reference number are to be added for them to be accumulated in the original document box.

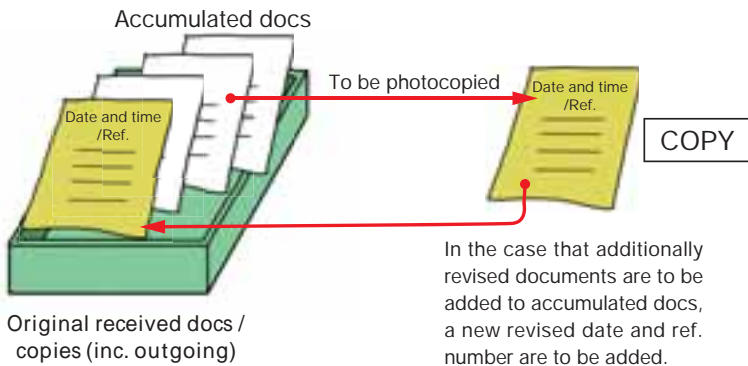


Figure 1: Document Storage Box

2-2 Immediate Launch of Land Support Team

Once you have received "contact regarding the occurrence of an accident, in the first instance", you need to launch an emergency support response team (the Land Support Team) promptly. Records (time, actions, who did it, etc.) will also start from that point. The launching of the Land Support Team will have been developed in accordance with the Safety Management System of each company. In the case of launching the Land Support Team, the main points to be considered are as follows:

Notification to coastal nation authorities

- ▶ When receiving contact in the first instance, it is to be confirmed as to whether the report originates from the Vessel or from the supporting team on land. If the Vessel has already reported the accident, confirm the details of the report (to whom, when and by what means).
- ▶ According to the above, in the event of a report being made by the Vessel, the Land Support Team should instruct the Vessel as to the "nature of the report, to whom it is being reported, and by what method, etc.". It will be better to avoid using VHF radio communications, if possible.

Notifying the insurance company (Hull & Machinery Insurance and P&I Insurance)

In most cases, it is a telephone call from the Vessel to the Superintendent (SI) in the first instance. Afterwards, the party on land will convene the supporting team, which may take some time to assemble if it is during a day off or at night. In the meantime, the Vessel uses an emergency checklist to begin assessing the situation and collecting information. Once the checklist is available, Hull & Machinery Insurance and P&I Insurance may be contacted.

Hull & Machinery Insurance and P&I Insurance have information on various past cases, so we believe that it is better to consult with them directly.

The items of the checklist above should cover what you are going to confirm, but make sure it includes the following points:

- ▶ Date, time and point accident occurs
- ▶ Accident type
- ▶ The status and situation of the other ship, if any
- ▶ Possibility of accident involving people

Nominating the Shipowner's agency

Nominating a local Shipowner's agency at the earliest possible opportunity will help to facilitate any further arrangements. If possible, it is advisable to have the charterer's agent act as the Shipowner's agent. If different agents are selected, there is a possibility of information between them being confused. In particular, depending on the type of operation, because fuel oil is the property of the charterer, close communication is desirable.

Also, as soon as possible, two representatives from the shipowner or ship management company should be sent to the Vessel: one should be stationed at the ship's agent to act as a liaison officer, while the other attend the ship.

Arrangement of various surveyors

The appointment of a third party is necessary as disputes are likely to arise at a later date over the extent of the damage, the cost of ship repairs, the extent of the damage caused by the oil spill or the burden of responsibility. It should be noted that the term "surveyor" can be used to refer to any of the following types of surveyor:

- (1) Hull Damage: arrangement via Hull & Machinery Insurance
- (2) Response to Cargo Damage or Oil Pollution: arrangement via P&I Insurance
- (3) Classification Survey (not required if there is no problem with performance)

capability); arrangement via shipowner or ship management company

- (4) Under Water Inspection Survey, if necessary: arrangement via Hull & Machinery Insurance.

This is needed in case of damage below the surface of the hull.

- (5) Joint Survey

In the event of a damage accident, the interests of both parties involved in the accident and the victim are represented in a joint survey arrangement as described above.

In this case, a surveyor arranged by both parties may attend the site and mutually check the extent of the damage (width and depth).

Hull & Machinery Insurance and P&I Insurance are familiar with this type of survey arrangement. If in any doubt utilize the insurance companies to make the arrangements.

Notify Vessel of arrangement status

Following an accident, a number of interested parties and the media visit the Vessel. In some cases, the personnel on duty at the time of the accident, including the Master, may be interviewed in the offices of the authorities.

It is necessary to inform the vessel of the progress of the arrangements, the list of visitors and know how to deal with them in order to not be at a disadvantage in the aftermath.

The Vessel will verify the identity of the visitor and the purpose for which he or she has come on board, and will decide if the candidate is to be allowed to get on board to investigate the damage and answer questions. However, there is a limit to what the Master can do on his own, so as mentioned above, it is advisable to have a member of the Supporting Team on Land (e.g. SI) on board as soon as possible.

In addition, the Master needs to inform the crew members that the Master (or SI) is the only person who can respond to them, and that the rest of the crew members should not tell anyone what is going on. A brief summary of these is shown in Figure 2.

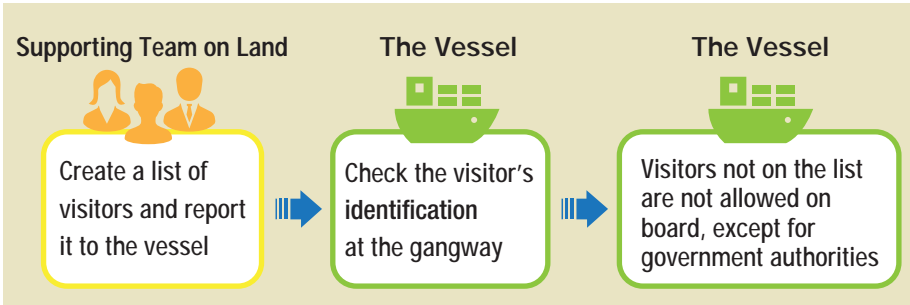


Figure 2: Managing Visitors on Board

Particularly, the following must be thoroughly taken into account:

Response to government authorities

Respond immediately. Crew members other than the Master will also be interviewed, the findings of which are to be reported to the Supporting Team on Land.

Response to Vessel's related parties

To be fully cooperative with any investigation by the Vessel's officials, including the Attorney, Surveyor and P&I and Hull Insurance representatives.

Response to other parties related to the Vessel

If there is a request for disclosure of records, consult with the company or insurer to decide how to respond, rather than relying on the captain's judgment. If forced to do so (permission granted), only show the situation. Do not give any comments or opinions (especially disapproving ones).

Letter of Guarantee or Letter of Undertaking

If there is a need for a submission, prepare in consultation with the insurance company.

Preparation of a sea [marine] protest and confirmation and instructions to be included in the Log Book

- ▶ The sea [marine] protest and the Log Book are understood to be irrevocable oaths. It must be carefully prepared and completed, fully recognising the importance of documentary evidence.
- ▶ The contents of the Chief Engineer's Log Book, Bell Book and checklists should be consistent. Only main points should be recorded in the Log Book. Naturally, false statements are strictly prohibited. This may have irreversible consequences. It is also recommendable to have a lawyer prepare a draft via the insurance company.

§3 Oil Spill Response

In Chapter 2, “2-1 Countermeasures for Maritime Accidents”, it was explained that an accurate record be kept of the “situation and the details that need to be ascertained” and that “the initial response is of the utmost importance”. In particular, in the event of an oil spillage accident occurring, the following issues should be considered when assessing the situation.

- ① **Type and property of oil spill**
- ② **The location of the spill (e.g. from a hull hole rupture or deck overflow) and the condition of the spilt site (e.g. the surrounding environment, particularly in fishing facilities where the impact of marine contamination is significant)**
- ③ **Oil spill spread**
- ④ **Amount of oil spill spread**

By assessing the situation and conditions as quickly as possible, a response is decided upon and removal measures implemented on site. In particular, some types of oil spill can produce toxic gases which can be harmful to residents of a coastal area. In the event of such types of oil spill, it may be necessary to give priority to oil removal measures, including the evacuation of the area, if necessary, in order to control the oil spill.

When an oil spill occurs at sea, it is almost impossible to take measures to control it using only the removal and recovery materials equipped on a vessel. Therefore, in order to prevent spreading, it is also advisable to request the assistance of an organisation specialising in removal operations which will help minimise damage and loss. This chapter describes the four situations that need to be identified.