ICHCA
INTERNATIONAL

EMERGENCY PLANS

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Warning

This document provides an introduction to Emergency Plans. For detailed advice it is necessary to refer to the latest versions of documentation produced by and about Emergency Plans and read this in conjunction with the relevant national and international legislation.

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1. | INTRODUCTION

This guidance on the preparation and implementation of emergency plans and procedures has been prepared for port and harbour areas. It is based upon the experience and knowledge of various members of ICHCA Technical Panel and the results of a survey conducted for the Panel.

The International Maritime Organization (IMO) Revised Recommendations on the Safe Transport of Dangerous Cargoes and Related Activities in Port Areas (2007) include the provision of emergency plans in ports. Many countries have, therefore, adopted national laws that require such plans. This guidance is not intended to replace any national advice but is aimed principally at those ports that may not have the benefit of such assistance. It is also not just concerned with emergencies relating to dangerous substances.

Although throughout the guidance the words "port authorities" are used, this should also be taken to include "individual berth operators". Berth operator means any person or body of persons with the day-to-day control of the operation of a berth e.g. terminal operators, stevedoring companies and also warehousing companies operating a berth.

Emergency plans should be made to cover any foreseeable incidents such as personal injuries, damage, fires or explosions, spillage or releases of toxic or flammable liquids or gases, collisions and the various situations which may be caused by "nature" on quays, in sheds, warehouses or other shore side facilities or on ships, whether moored or underway. Where the port has an airport within or close to the harbour this should also be taken into account.

2. | HOW IS IT ORGANISED?

To be effective, emergency plans require close co-operation between the Port Authority and other bodies, especially the emergency services. Where such plans already exist, they should be reviewed to ensure that they satisfy current requirements.

Some port or harbour areas may contain, or have very close to their boundary, a town or city area or industrial plants. Where this is so, port authorities should consult and liaise with the responsible people producing other emergency plans so that all sets of plans are compatible to deal properly with a major emergency (disaster) affecting both the port or harbour area and the town area. For the town area the Local Authority is typically responsible. For the port or harbour area it is the Port Authority.

The overall objectives of emergency planning are as follows:

- to contain and control emergency incidents
- to safeguard people in the port or harbour area and the neighbouring area
- to mitigate the effects and minimise damage to property and the environment

Emergency plans will be concerned with three factors:

- the hazard, nature and extent of the possible event

- the risk and the probability of occurrence
- the consequences and the possible effect on people and the environment

3. | DEVELOPING THE PLAN

Emergency planning for a range of incidents should not be considered in isolation and is just one aspect of such planning. As a first step in preparing an emergency plan, an assessment should be made of the activities in the port or harbour area to ensure that all that is reasonably practicable has been done to eliminate or reduce danger. Such agreements should:

- ensure that the movement of vessels in the port or harbour area is carried out safely and that the risks of collision or grounding are minimized
- ensure that safe systems and preventive maintenance procedures are set up throughout the harbour area
- consider what might still result in an emergency. Further preventative action to make the work as safe as reasonably practicable may become apparent
- consider what dangers could arise to people and the environment, both within and outside the port or harbour area, as a result of these foreseeable emergencies and how these could be reduced by pre-planned measures which might include the combined resources of the Port Authority, the port users concerned, the emergency services and the Local Authority.

The emergency plan should be based on the particular needs of each specific port or harbour area in anticipation of the emergencies that it is foreseen may arise.

The emergency plan will need to vary according to the situation and will also need to take into account the size, complexity and location of the port or harbour area, the nature of cargoes handled (whether they are in bulk, packaged or containerized), the numbers of people employed, the possible presence of passengers, the presence of people in vulnerable premises such as schools or hospitals, the availability of resources and the likelihood of meteorological or other natural disasters affecting the region.

Events considered might include but are not limited to an emergency as result of: vessel groundings or collisions, flooding, high winds, earthquakes, volcanic eruptions, fires, road or rail vehicle accidents involving the spillage or release of corrosive, toxic or flammable liquids or gases, aircraft emergencies, localised fires at pumps and flanges, ruptured hoses, a wide variety of workplace accidents, fractured pipes, and incidents with explosives or radioactive materials.

The possibility that people may need to be rescued from isolated or dangerous positions should be considered.

The plan should also reflect the possible consequences of escalation of the incident due to deteriorating conditions or through cumulative effects. The Port Authority should be able to show that their assessment of the consequences is soundly based.

Individual berth operators (terminal operators, stevedoring companies and also warehousing companies, operating a berth) in port or harbour areas should make their own detailed emergency plan. These emergency plans should be harmonised with the emergency plans of the Port Authority and the Local Authority. Mutual consultation is required during the preparation of such plans.

Not all the matters referred to above will be relevant to every port or harbour area but all port authorities should consider them so as to be able to decide which elements will be needed to ensure that there is an effective plan in the particular circumstances of their port or harbour area. It is better to have a single basic plan with simple initiation than many detailed different plans for different circumstances.

The initial purpose of any emergency plan is to control and contain the incident and to prevent adjacent berths, materials or ships etc. from becoming involved. Sufficient resources and back-up facilities need to be allocated for this. The plan should also include procedures for:

- evacuation of non-essential personnel to predetermined assembly points in a safe place, either in the open or in a building depending on the hazard
- accounting for employees, visitors and contractors, particularly those in the affected area
- access to records so that relatives of any casualties be informed
- public relations and giving information to the news media
- notification of adjoining town areas
- rehabilitation of the affected areas

The basic plan should be capable of developing to deal with all emergencies. It should be supported by more detailed parts dealing with specific types of emergencies such as fire/explosion, pollution, railway accidents or road accidents, incidents onboard ships, floods, windstorms, earthquakes and others.

Once developed, such plans should be published and regularly revised.

4. | ESSENTIAL PERSONNEL

Essential personnel should be selected, trained and assigned specific responsibilities within the emergency plans.

An Incident Controller should take charge at the scene of the incident and, in the initial stages of an emergency, may be called upon to act as the Main Controller. For this reason the Incident Controller should have a comprehensive knowledge of the emergency plan and the current overall situation in the port or harbour area.

The Incident Controller could be a member of the Port Authority staff such as the person having overall control of the port or harbour area at the time of the incident or a designated member of the berth operator who does not have the overall control of the port or harbour area. Continuous cover is important and will be achieved by appointing a responsible person to be Incident Controller for each work period.

The Main Controller should have overall responsibility for directing operations from an Emergency Control Centre, and may be the port captain, harbour master or the chief of the fire services.

All appointments should be formal and made in writing. Deputies should also be appointed to act in cases of absence or incapacity.

Other important personnel, such as those representing shipping interests, other port users and berth operators will be required to advise the Main Controller and to implement the Main Controller's decisions. Such people should report to the Emergency Control Centre when an emergency is declared. A further group of essential workers will be required to undertake emergency work such as:

- stopping loading, unloading and handling operations and making them safe
- acting as marshals or runners, or staffing assembly or communication centres
- providing emergency power supplies and lighting
- moving equipment to or from the scene of the incident
- search and rescue
- first-aid fire-fighting
- provision of first-aid

The Incident Controller or deputy, together with an emergency team and nominated key personnel should always be available to carry out immediate response. Arrangements should be made to call-out other key personnel, including the Main Controller, who may be absent from the port or harbour area. Arrangements should be made to ensure that staffing levels would be adequate to cope with an emergency.

5. | THE ROLE OF THE INCIDENT CONTROLLER

The Incident Controller should first assess the size of the incident and decide whether it constitutes a major emergency or whether one is likely to develop. If either is so, they should immediately activate the emergency plan.

Once the plan is activated, the Incident Controller should assume the duties of the Main Controller until the Main Controller arrives and:

- direct the closing down and evacuation of the immediate area and other areas and berths likely to be affected
- ensure that the emergency services have been called
- ensure that key personnel have been summoned

The main function of the Incident Controller is to direct operations at the scene of the incident, including:

- rescue and firefighting operations, until the arrival of the fire services when control should typically be handed over to the senior emergency services person present (e.g. the senior fire officer)
- search for casualties
- ensure non-essential persons are evacuated to assembly areas

In addition, the Incident Controller should:

- set up a communications point with suitable means of communication (such as radio, telephone, computer/laptop with an internet access or other messenger to contact with the Emergency Control Centre
- give advice and information as requested to the emergency services as required
- brief the Main Controller and
- keep the Main Controller informed of developments

6. | MAIN CONTROLLER ROLE, FORM EMERGENCY CONTROL CENTRE

On being made aware of an incident that has become, or could develop into, a major emergency, the Main Controller should immediately go to the Emergency Control Centre, take over control from the Incident Controller and formally declare an emergency situation.

In addition, depending on the actual circumstances, the Main Controller should:

- ensure that key personnel are deployed
- exercise direct operational control of those parts of the port or harbour area outside the affected area
- continually review and assess developments to determine the most probable course of events
- direct the closing of berths and their evacuation, in consultation with the Incident Controller and key personnel
- ensure that casualties are receiving adequate attention, arrange for additional help if required, ensure that relatives are informed
- liaise with chief officers of the fire, police and ambulance services and provide advice on possible effects on areas outside the port or harbour area, ensure that personnel are accounted for
- control traffic movement on land and water within the port or harbour area in co-operation with the emergency services
- arrange for a log of the emergency to be maintained
- liaise with the emergency services and the Local Authority if there is a need to alert neighbouring premises which may be affected
- in the case of prolonged emergencies which involve risk to outside areas by wind-blown materials, contact the local Meteorological Office to receive early notification of impending changes in weather conditions

- issue statements to the relevant authorities (such as harbour master/port captain and or civic representative) and to appropriate media
- ensure that proper consideration is given to the preservation of evidence
- where the emergency is prolonged, arrange for the relief of personnel and the provision of catering facilities
- control rehabilitation of affected areas after the emergency

If the Main Controller is one of the berth operators, these items may not be applicable because these are duties that are usually the responsibility of the Port Authority.

7. | EMERGENCY CONTROL CENTRE

The Emergency Control Centre is the place from which the responses to the emergency are directed and co-ordinated. The Main Controller, key personnel, and the senior officers of the emergency services will need to be in attendance at it.

Unauthorized persons should be forbidden to enter the Emergency Control Centre.

The Centre should be equipped to receive and transmit information and directions from and to the Incident Controller, other areas of the port or the harbour and from outside it. There should be equipment for logging the development of the incident to assist the controllers in determining any necessary action. If possible, an entirely separate facility dedicated to the media, should be made and provided.

The Emergency Control Centre should be located, designed and equipped to remain operational throughout an emergency. At large port or harbour areas consideration should be given to setting up two Emergency Control Centres to ensure that one will be available for use should the other become disabled.

The Emergency Control Centre should contain:

- an adequate number of external telephones. At least one of these should be ex-directory or only available for outgoing calls to avoid a situation where such calls cannot be made because the telephone switchboard is overloaded with in- coming calls from anxious relatives, the press etc.
- an adequate number of internal telephones
- radio equipment or other messenger
- computer with internet access
- a plan or plans of the port or harbour area showing:
    - areas where there are large stores of hazardous materials, including tanks, drum storage or compressed gas cylinders
    - locations of radioactive substances
    - locations of safety equipment
    - the fire-water system and additional sources of water
    - locations of stocks of other fire extinguishing materials
    - locations of stocks of neutralization materials, absorbent materials and oil booms

  - land entrances and road system; this should be updated during the emergency to indicate any road that is impassable
  - assembly points, casualty treatment centres
  - location of the port or harbour in relation to the surrounding community

- Additional plans should be marked up (during the emergency) to show:
  - areas affected or endangered
  - deployment of emergency vehicles and personnel
  - areas where particular problems arise, e.g. fractured pipelines, roadblocks
  - areas evacuated
  - other relevant information

- In addition to the above, the following will also be essential in the Emergency Control Centre:
  - office equipment to record (numbered) messages received and sent by any means
  - the nominal roll of employees, or means of access to this information
  - a list of telephone numbers and addresses of key personnel and relevant authorities
  - technical information: chemical data sheets or Material Safety Data Sheets (MSDS), International Maritime Dangerous Goods (IMDG) Code with the supplement containing the Emergency Schedule and the Medical First Aid Guide for use in Accidents Involving Dangerous Goods (MFAG) or any other source of information about dangerous cargoes such as a computer database
  - sources of external specialists, sources of specialist equipment, advice and information, such as any national arrangements for dealing with incidents involving spillage or spreading of radioactive substances
  - information about substances handled in the port or harbour should be made available by the originator, consignor or consignee of cargoes.

There should be an entirely separate facility dedicated to the media. This should have good external communications, including internet access and fax. The issuing of written communications (e.g. by e-mail and/or fax) reduces risk of media misunderstanding of Emergency Control Centre directions. It is useful if communiqués are issued at regular intervals, possibly even every 30 minutes, to ensure that the media stays in one place.

8. | ACTIVATING THE PLAN

The operating procedures for each part of the port or harbour area should clearly indicate the action to be taken in the event of an incident. It may help the Incident Controller to have predetermined levels of response laid down to match the severity of the incident. These

responses should include the procedure for raising the alarm and measures to contain or control the incident e.g. closing-off the berth and first aid firefighting.

Anyone should be able to raise the alarm thus ensuring that action can be taken as early as possible.

In small port or harbour areas, a simple alarm system will be needed so that the person discovering the incident can warn others of the danger and summon assistance. There should be an adequate number of points from which the alarm can be raised either directly, by actuating an audible warning, or indirectly, via a signal or message to a permanently staffed location. The alarm should alert the Incident Controller who should assess the situation and implement the appropriate response.

In large port or harbour areas or ones that handle, for example, toxic and/or flammable gases or liquid dangerous goods in bulk, a staged warning system may be more appropriate. The person discovering the incident should warn all those in the vicinity who should either evacuate or take other immediate action depending on the predetermined plan. The Incident Controller should be alerted to decide the next action.

Automatic alarms may be appropriate in certain port or harbour areas.

When the general emergency alarm has been given, essential personnel should report to the Emergency Control Centre or other designated locations. Everyone else should report to predetermined locations, for example their normal place of work or an assembly point to await further instructions.

Separate alarms may be necessary for different types of emergency, such as fire, or escape of toxic materials, as different procedures may be required. Care should be taken however to avoid a multiplicity of alarms which could cause confusion. Therefore, one general emergency alarm system with one audible alarm system with a speech facility is preferable.

There should be a reliable system for informing the emergency services as soon as the alarm is raised. The details of the communication arrangements should be agreed locally. In some cases it may be advisable to have a direct telephone line to the fire services. Predetermined code words to indicate the scale and the type of the emergency may be useful.

If the incident is likely to affect people or the environment outside the port or harbour area the Main Controller should advise the emergency services and the Local Authority as soon as possible of the nature and size of the incident.

It is impossible to predict the exact course of any incident, particularly where there are a number of different risks. It is, therefore, essential that a clearly understood procedure is drawn up to ensure that after an incident is declared to be a real emergency, the basic emergency plan is initiated. Any part of the emergency plan intended to deal with specific kinds of emergency can be implemented at the same time or later as necessary.

9. | TRAINING

Berth operators and port authorities should ensure that everyone employed in the port or harbour area has received adequate training on the action to be taken in cases of emergency and that provision has been made for dealing with other people such as visitors and contractors who may also be in the port or harbour area. Such training should ensure that those people not involved in dealing with the emergency leave the vicinity of the incident and go to a place of safety. People needed to carry out the emergency plan should be capable of doing their assigned tasks and have been thoroughly trained. They require correct personal protection and other equipment and should be adequately supervised.

10. | TESTING AND FAMILIARISATION

Emergency plans need to be tested when first devised and rehearsed at suitable intervals thereafter. Rehearsals or exercises are important because they:

- familiarise personnel with their roles, equipment and the details of the emergency plan
- allow the professional emergency services to test their parts of the plan, the co-ordination of their activities and the compatibility of communication equipment
- familiarise the professional emergency services with the special hazards
- prove the current accuracy of details of the plan, e.g. telephone numbers, the availability of special equipment such as fire and rescue equipment, breathing apparatus etc.
- give experience to and build confidence in team members. In the initial shock and confusion of a real incident the ability to fall back on well-rehearsed actions will be invaluable
- can identify any unforeseen weaknesses of the plan

Berth operators and port authorities should regularly test their emergency plans and ensure that all employees receive refresher training. Such exercises should test each part of the emergency plan in each part of the port or harbour area, or each berth, stage by stage starting with the first immediate action. Emergency isolation and shut down should be rehearsed. Where appropriate this may be by simulation. Familiarisation visits by the emergency services, especially the Fire Services, should be encouraged.

The complete emergency plan for the port or harbour area should also be tested. Many organisations use tabletop exercises to test emergency plans: these are cost effective since they do not interrupt the day-to-day running of the port or harbour and because many events can be considered in one exercise.

However, tabletop exercises are theoretical in nature and should be complemented by control centre exercises designed to test communications with key personnel working from the locations they would use in an emergency. It is, of course, essential that the exercises are carefully prepared, the results analysed and the lessons learned shared.

11. | REASSESSMENT AND UPDATING

The emergency plan should be reassessed and updated, if necessary, at regular intervals and particularly following a major change in the amount or type of dangerous goods handled, the type of ships entering the port or in the personnel structure.

After each rehearsal or practice the plan should be reviewed to take account of any shortcomings highlighted by the exercise or identified as weaknesses or problems. In addition, the effectiveness should be reviewed every time the plan is used to deal with a real emergency.

Everybody involved should be made aware of any revision and appropriately revised instructions and plans made available. For clarity, every revision of the plan and revised instruction should have a number and a date of issue.

APPENDIX 1 - ASSESSING THE ADEQUACY OF THE EMERGENCY PLAN

In assessing the adequacy of an emergency plan consideration should be given to:

- Coverage of the full range of incidents that can realistically be anticipated. The incidents considered should range from small events which can be dealt with by in-house personnel without outside help to large scale events. Berth operators and port authorities should be able to justify the proposals in their emergency plans including the following points:
  - the events considered, and why they were included or excluded
  - the typical causes of these events
  - the timescale involved
  - the size of lesser events if the emergency is contained
  - the likelihood of events, so far as can be assessed
- Assessment of the consequences of the various incidents. For example if dangerous goods were involved, it should be assessed in terms of the quantities of dangerous goods (in solid, liquid or gaseous form) that could be released, the rate of release, the effects of thermal radiation from fires, the effects of toxic gases, etc.
- Ensuring that there are sufficient resources in terms of personnel and equipment on the site to carry out the emergency plan in conjunction with the public emergency services. For example, is there sufficient water for cooling, and, if this water is applied via hoses, will there be sufficient people who are able to operate them?
- Timescales are assessed correctly. The time element is of great significance but is often overlooked. For example, time will elapse between the start of the incident and the arrival of the emergency services, which will then need further time to deploy their personnel and equipment. In such circumstances the Port Authority or berth operator's resources should seek to contain the incident until the emergency services take over. Some toxic releases may take place very quickly. For example, a one tonne chlorine drum releasing liquid at full flow through an open valve will be empty in about ten minutes. If the possibility of such a release is identified, the remedial action should be appropriately prompt.
- There should be a logical sequence of actions for each person given a role in the plan. A person should not be assigned so many duties that some are omitted by default due to the pressures of the incident or be required to be in more than one place at a time. Where a person has a number of tasks to perform, the order or priority should be clearly laid down.
- Key personnel, in particular the nominated Incident Controller(s) and Main Controller should have been consulted in the preparation of the plan.
- There should be 24-hour cover taking into account absences due to sickness and holidays, minimum shift staffing, operator only periods, silent hours, shut-down periods, only security personnel being present, unmanned sites etc.
- There should be satisfactory co-operation with the local emergency services and emergency planning officers.

APPENDIX 2 - CHECKLIST OF ORGANISATIONS TO BE CONSULTED

Emergency services and other organisations which might become involved and which should be consulted and whose roles should be defined in an emergency plan include:

- Ambulance services
- Berth operators
- Chemist
- Coastguards
- Electricity boards
- Environmental agencies
- Fire authorities
- Gas regions
- Government organisations
- Health authorities
- Local authorities
- Local transport undertakings
- Major port users
- Police
- Railways
- River purification boards
- Social services
- Waste disposal authorities
- Water authorities

APPENDIX 3 - ASPECTS TO BE INCLUDED IN THE EMERGENCY PLAN

Not all aspects can be mentioned in this guidance on the preparation of emergency plans. Here is a list of aspects which can be helpful to set up your emergency plan.

- Organisation: command structure, coordination arrangements, warning systems, implementation procedures and emergency control centres.
- Personnel: names and appointments of Main Controller, Incident Controller, deputies, and other key personnel.
- Communications: identification of personnel involved, communication centre, call signs, network, lists of key telephone numbers and e-mail addresses, transport by land and water.
- Specialised emergency equipment: details of availability and location of heavy lifting gear, bulldozers, specified firefighting equipment, fire boats, containment booms, product recovery pumps.
- Cargo information: including details of any hazardous substances stored or kept in the harbour area and a summary of the risks associated with them.
- Specialised knowledge: details of specialist bodies, firms and persons whom it may be necessary to call on such as people or firms with specialised chemical knowledge, laboratories.
- Meteorological information: arrangement for obtaining details of weather conditions prevailing at the time and for weather forecasts.
- Voluntary organisations: details of organisers, telephone numbers, e-mail addresses and applicable resources.
- Humanitarian arrangements: transport, evacuation centres, emergency feeding, treatment of injured, first aid, ambulances, temporary mortuaries.
- Public information: arrangements for giving information dealing with the media, press office, informing relatives.
- Assessment: arrangements for collecting information on the causes of the emergency appointment of an investigator reviewing the efficiency and effectiveness of all aspects of the emergency plan.
- Date of reviewing the plan.

APPENDIX 4 - REVISED RECOMMENDATIONS ON THE SAFE TRANSPORT OF DANGEROUS CARGOES AND RELATED ACTIVITIES IN PORT AREAS - 2007 edition

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7 GENERAL RECOMMENDATIONS FOR REGULATORY AUTHORITIES, PORT AUTHORITIES, SHIPS, BERTH OPERATORS AND CARGO INTERESTS

7.1 Regulatory authorities and port authorities

(…)

7.1.4 Emergency procedures

7.1.4.1 The regulatory authority should require that appropriate emergency arrangements (plans and procedures) are made, and brought to the attention of all concerned and ensure their training is appropriate and commensurate with their responsibilities. These arrangements should include:

.1 the provision of appropriate emergency response alarm operating points

.2 procedures for notification of an incident or emergency to the appropriate emergency response services within and outside the port area

.3 procedures for notification of an incident or emergency to the port area users both on land and water

.4 the provision of emergency equipment appropriate to the hazards of the dangerous cargoes to be handled

.5 the formation of a local emergency response team to co-ordinate action in the case of a major emergency and to deal with any day-to-day untoward incidents such as a minor leak or spillage of dangerous cargoes

.6 co-ordinated arrangements for the release of a ship in case of an emergency; and

.7 arrangements to ensure adequate access/egress at all times.

7.1.4.1 Berth emergency plans should be harmonized with the port emergency plan and the emergency plans of any other relevant nearly premises. The plans should include agreed arrangements for alerting the port authority and other premises as appropriate.

The emergency plan should set out clearly how it is to be initiated, the steps to be taken to put it into practice and identify the facilities and equipment that would be available in the event of an emergency.

It is essential to ensure that communications can be maintained with the emergency services at all times during an emergency. It is therefore necessary to ensure that facilities for dealing with the media and the public are kept separate from those used to control the emergency.

The emergency plan should be distributed to all organizations and to all bodies who may be involved with it in the event of an emergency.

Port authority personnel who may be involved in putting the emergency plan into effect should be suitably instructed and trained in its operation.

Persons who may be involved in clean-up measures should be aware of the limitations of their knowledge and capabilities and have clear instructions as to when to call on external sources of help.

The emergency plan should be exercised at regular intervals, e.g. at least once per year. Whilst full-scale exercises are desirable, they may only be practicable infrequently. In such circumstances table-top exercises should be carried out at more frequent intervals.

The emergency plan should be reviewed periodically on a routine basis, as well as after each occasion that it has to be put into effect or is exercised and when changes are made in the port. Any lesson that can be learned should be incorporated in a revision of the plan.

7.1.4.2 The regulatory authority should require the preparation and maintenance of records of the dangerous cargoes which are present in the port area for use in emergency.

7.1.4.2 The records may be prepared from the notifications required by 7.1.2.1 and 7.1.2.4, together with details of arrival and departure. The records should show the type, quantity and location of the dangerous cargoes in the port area.

The records should include:

.1 intermediate keeping within the port area for the purpose of changing the mode of transport

.2 dangerous cargoes remaining on board in transit (7.2.5.1.1); and

.3 dangerous cargoes to be loaded and discharged in the port (7.2.5.1.2/3).

The use of electronic data processing (EDP) has the advantage of having the possibility to provide other authorities (e.g. fire brigade, port police or port health or other authorities) with the same information through electronic data interchange (EDI).

Provided that the system is constantly updated and function without disturbance, they can provide instant information to the emergency services about the type and quantities of dangerous cargoes that may be involved in an incident, immediately after the receipt of the notification. It will enable the emergency services to plan manpower and equipment

deployment already on their way to the location of the incident and take all necessary precautions right away (e.g. evacuation of people, etc.) especially when the systems are connected to a dangerous substances database.

The records can also be maintained manually. In such cases each shed, warehouse or area where dangerous cargoes are kept, should have a designated place (e.g. a red box) where all relevant documents of each dangerous cargoes kept within the premises are placed The location should be chosen in close co-operation with the emergency services and should be well known to them. The person responsible for the shed, warehouse or area will also be responsible for ensuring that only documents of cargoes still within the premises are kept in the designated place.

In addition to the designated places for documents, a detailed plan of each shed, warehouse or area should be prepared by the port authority in close co-operation with the emergency services and the berth operator, specifying the exact location within the shed, warehouse or area where dangerous cargoes may be kept. This should specify the class(es) and the maximum quantities that may be kept there.

When specifying the class(es) and quantities, due consideration should be given to the construction and the emergency equipment installed. All parties concerned should have a copy of the plans.

7.1.4.3 The regulatory authority should require that emergency response information is available where dangerous cargoes are handled and that it is accessible at all times.

7.1.4.3 The information is intended to give the berth operator's personnel some guidance on the first aid and first steps to be taken to limit the extent of injuries in case of an incident until the arrival of the emergency services.

The use of electronic data banks can be of great assistance, provided the authorities and operators have direct access to the information in them.

7.2 Ships carrying dangerous cargoes

(…)

7.2.4 Emergency procedures

7.2.4.1 The master of a ship should, as appropriate, make themself, their officers and crew familiar with the emergency response procedures established in the port area and the facilities available at the berth.

7.2.4.2 The master of a ship should consider the necessity for arrangements for a safe and quick emergency escape, taking into account the nature of the dangerous cargoes and any special conditions on board.

7.2.4.3 The master of a ship should establish emergency response procedures on board the ship to deal with incidents involving dangerous cargoes carried or to be carried

on board and should ensure that the officers and crew are properly trained in carrying out such procedures.

7.2.5 Emergency information

7.2.5.1 The master of a ship carrying dangerous cargoes should ensure that in addition to the information to be provided in accordance with SOLAS regulation II-2/15.2.4.2 , the following information is kept at the same place:

.1 a list of all dangerous cargoes on board in transit

.2 a list of all dangerous cargoes to be unloaded in the port area

and

.3 a list of all dangerous cargoes to be loaded in the port area and the intended stowage and loading arrangement on board the ship.

7.2.5.2 The master of a ship should ensure that the officer on duty has the necessary information on measures to be taken to deal with incidents involving dangerous cargoes and that it is available for use in emergencies

7.2.5.3 The master should ensure that, in addition to the emergency response procedures required for dangerous cargoes, any appropriate security provisions are readily accessible. Such information includes, for example, the Emergency Response Procedures for Ships Carrying Dangerous Goods for use in conjunction with the transport document, the Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (MFAG) (included in the IMDG Code Supplement) and safety data sheets.

7.2.5.4 The master of a ship should ensure that the duty officer is always aware of the crew members or passengers and/or visitors on board or on shore leave.

7.2.5.4 This can be achieved by ensuring all crew members/passengers/visitors, etc. report to the duty officers when they leave the ship. A record should be kept by the duty officer.

The purpose of this requirement is the need for the emergency services to know, in case of an incident, if all persons have left the ship or if any is still on board, e.g. trapped inside the accommodation

7.3 Shore installations (…)

7.3.5 Emergency procedures

7.3.5.1 The berth operator should ensure that appropriate emergency arrangements are made and brought to the attention of all concerned. These arrangements should include:

.1 the provision of appropriate emergency alarm operating points

.2 procedures for notification of an incident or emergency to the appropriate emergency services within and outside the port area

.3 procedures for notification of an incident or emergency to the port authority and port area users both on land and water

.4 the provision of emergency equipment appropriate to the hazards of the dangerous cargoes to be handled

.5 co-ordinated arrangements for the release of a ship in the case of an emergency and

.6 arrangements to ensure adequate access/egress at all times.

7.3.5.2 The berth operator should consider the necessity of arrangements for a safe and quick emergency escape, taking into account the nature of the dangerous cargoes and any special conditions.

7.3.6 Emergency information

7.3.6.1 The berth operator should ensure that a list of all dangerous cargoes in the warehouses, sheds or other areas, including the quantities, and, if appropriate, Proper Shipping Names, correct technical names (if applicable), UN numbers, classes, or, when assigned, the division of the goods, including for class 1, the compatibility group letter, subsidiary hazard classes (if assigned), packing group (where assigned) and exact location is held readily available for the emergency services.

7.3.6.1 Notifications in accordance with 7.1.2.1 could be used for preparing the comprehensive record of all dangerous cargoes present in the port area at any given time (see also Guidance to 7.1.4.2).

7.3.6.2 The berth operator should ensure that the responsible person for a warehouse, shed or area where dangerous cargoes are handled is, as far as possible, aware of the status of occupancy with the dangerous cargoes in his area and this is available in case of emergencies.

7.3.6.3 The berth operator should ensure that the person responsible for cargo handling operations involving dangerous cargoes has the necessary information on measures to be taken to deal with incidents involving dangerous cargoes and that it is available for use in emergencies.

7.3.6.4 To ensure the availability of the information referred to in 7.3.6.1 to 7.3.6.3, electronic or other automatic data-processing or transmission techniques should be used.

7.3.6.4 Dangerous substances data sheets are normally available from manufacturers of chemicals. Electronic databases with emergency response information are also available and should be used when direct access to the data can be ensured.

7.3.6.5 The berth operator should ensure that the port or berth emergency response procedures and port or berth emergency telephone numbers are placed at prominent locations within or at warehouses, sheds or areas where dangerous cargoes are transported or handled.

7.3.6.6 The berth operator should ensure that fire-fighting and pollution-combating equipment and installations are clearly marked as such and notices drawing attention to them are clearly visible at all appropriate locations.

7.3.6.7 The berth operator should inform the master of any ship carrying or handling dangerous cargoes of the emergency procedures in force and the services available at the berth.

About The Authors

This document was originally developed by the ICHCA Technical Panel.

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Evert Wijdeveld was employed by the Rotterdam Port Authority for more than seventeen years. His first job was as Dangerous Cargo Inspector. After seven years he became Vessel Traffic Manager in the Rotterdam Europort, becoming Duty Officer a few years later. In this job, which could be considered the equivalent of the Incident Controller mentioned in this pamphlet, he had responsibility for training the Patrol-boats crew, preparation of emergency plans and procedures and fighting incidents at the scene.

Five years later he became Head of the Dangerous Cargo Department of the Rotterdam Port Authority.

In 1990 he moved to the Rotterdam Port Industries' Association (Deltalinqs) where he is now employed as their specialist in Safety and Environmental affairs.

He joined the ICHCA Safety Panel in its first year in 1991 and was one of two Deputy Chairmen.

Other ICHCA International-ISP-publications of the author: BP#20 Unseen Dangers in Freight Containers

Pocket Card #4 Safe Entry into Freight Containers (in preparation) The author reviewed and expanded the contents in 2008

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