

NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 2-94

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Subj: GUIDANCE REGARDING VOLUNTARY COMPLIANCE WITH THE INTERNATIONAL MANAGEMENT CODE FOR THE SAFE OPERATION OF SHIPS AND FOR POLLUTION PREVENTION

1. PURPOSE. The purpose of this Circular is to advise owners and operators of U.S. flag merchant vessels regarding voluntary compliance with the International Management Code for the Safe Operation of Ships and for Pollution Prevention.
2. DIRECTIVES AFFECTED. NVIC 1-90, Recommendation Concerning Management Practices for Safe Ship Operation and Pollution Prevention, is canceled.
3. INTRODUCTION
 - a. The International Maritime Organization (IMO) has adopted "The International Management Code for the Safe Operation of Ships and for Pollution Prevention" (International Safety Management [ISM] Code) as a means to encourage the continuous improvement of safety management skills in the maritime industry. The Code provides a link between the company and the seafarers on board its vessels, and if properly administered, will improve safety at sea, reduce the occurrence of human injuries, and minimize environmental consequences attributable to marine casualties. A copy of the ISM Code is provided in enclosure (1) to this Circular. Terms used in this Circular are defined in paragraph 1.1 of the Code.
 - b. The ultimate aim of the ISM Code is to encourage companies to operate their fleets safely and responsibly in accordance with applicable international and flag state requirements. The provisions of the ISM Code are voluntary at this time, but may become mandatory on or before June 1, 1998 for certain vessels. Companies may desire to adopt the management practices incorporated in the Code prior to that time. This NVIC explains a method for companies to incorporate these safe management practices into their operations.
 - c. Owners or operators of U.S. flag vessels may obtain certification to document their compliance during the voluntary period. Guidance for meeting the requirements of the ISM Code and obtaining certification is provided in enclosure (2) to this Circular. During this period certificates may be issued to qualifying companies and qualifying vessels by the American Bureau of Shipping (ABS).
 - d. ABS has developed explicit procedures to evaluate shipping operations against the requirements of the ISM Code. The Coast Guard has evaluated these and found them adequate to merit issuance of an U.S. ISM Code Certificate for U.S. vessels and

companies found to meet the ISM Code requirements. The Coast Guard will monitor this program to assure proper management of the ISM program.

4. BACKGROUND.

- a. Analyses of marine casualties which have occurred over the past thirty years have prompted the safety regime of the international maritime community to evolve from one based primarily upon technical requirements to one which recognizes the importance of the human element in the system. Historically, the international maritime community has approached maritime safety from a predominantly technical perspective. The conventional wisdom was to apply engineering and technological solutions to promote safety and minimize the consequences of marine casualties. Accordingly, international standards have addressed equipment requirements, such as the type and amount of lifesaving and firefighting apparatus required on board. Design requirements such as protectively located segregated ballast tanks, double hulls, and improved steering gear standards, have been adopted to make the operation of tankers safer, and minimize the extent of pollution in the event of a casualty. Innovations in structural fire protection engineering have significantly improved the fire safety of today's modern cruise vessels. State-of-the-art electronics have had a profound effect on the accuracy of navigation. Finally, advances in materials and computer assisted construction techniques have improved quality and reliability throughout the industry.
- b. Despite these engineering and technological innovations, significant marine casualties continue to occur. In an effort to further reduce casualties, the role of "human factors" in the maritime safety equation has been evaluated. The term "human factors" may be broadly defined as the acts or omissions of personnel which adversely affect the proper functioning of a particular system, or the successful performance of a particular task. Recent studies have suggested that in excess of 80 percent of all high consequence marine casualties may be directly or indirectly attributable to "human factors."
- c. Consequently, the international maritime community has started to emphasize shipboard management. As noted by the International Chamber of Shipping and the International Shipping Federation, "the task facing all shipping companies is to minimize the scope for human decisions to contribute, directly or indirectly, to a casualty or pollution incident. Decisions taken ashore can be as important as those taken at sea, and there is a need to ensure that every action affecting safety or the prevention of pollution, taken at any level within the company, is based upon sound understanding of its consequences.
- d. However, senior management's philosophical commitment to safety can not be realized without an effective organizational infrastructure to implement and monitor a safety management program. The importance of top management commitment, and an effective organizational infrastructure, were the key elements which the IMO cited when it developed resolution A.647(16), "IMO Guidelines on Management for the Safe Operation of Ships and for Pollution Prevention," in October 1989. This resolution was revised and replaced by IMO resolution A.680(17), which, among other things, encouraged those responsible for the management and operation of ships to develop, implement, and assess safety and pollution prevention management practices.
- e. Following the adoption of resolution A.680(17), IMO's Maritime Safety and Marine Environment Protection Committees continued to explore the importance of appropriate managerial response to the needs of those on board ships to achieve and maintain high

standards of safety and environmental protection. These efforts have led to the development of the ISM Code, which supersedes resolution A. 680(17).

5. DISCUSSION.

- a. The ISM Code marks a significant philosophical shift in the international maritime community's approach to safety of life at sea and environmental protection. The ISM Code acknowledges the importance of the human element in preventing marine casualties and ensuring vessels are operated responsibly in accordance with applicable domestic and international standards. In the context of the ISM Code, the human element refers to individual persons on the vessel, as well as the company's management infrastructure.
- b. The ISM Code addresses the importance of designated persons and the various responsibilities of the master and the company and requires that the company document its management procedures to ensure that actions and practices affecting safety or environmental matters which occur on the vessel or at the office, are developed, coordinated, implemented, and monitored in accordance with governmental and company requirements. Documentation of these management procedures constitutes the company's Safety Management System (SMS).
- c. The ISM Code is intended to re-orient the current approach to regulatory compliance from the industry's passive defect notification and correction response mode to an aggressive approach to safety. Under a proactive approach, potential discrepancies are resolved by the companies themselves, before they can become significant safety or environmental problems.
- d. Safe management certification requires responsible industry personnel, both shipboard and shore side, to become much more accountable to ensure that their vessels are operated in conformity with applicable domestic and international standards. A Document of Compliance may be issued to a qualified company which meets the applicable provisions of the ISM Code. Vessels which meet applicable ISM Code provisions, and are owned or operated by a company which has a Document of Compliance, may be issued a Safety Management Certificate.
- e. Companies may have already instituted management practices which are consistent with the ISM Code. Documentation of these management practices may have taken a variety of forms. For example, company personnel manuals may already provide job descriptions, specify duties and responsibilities, identify responsible officials, and establish licensing and qualification prerequisites for employment. Many companies have established specialized training programs and developed emergency response plans which are described in their own manuals. Specific documentation for other emergency situations required by regulation, such as approved Vessel Oil Spill Response Plans, may satisfy certain Code provisions. Equipment manufacturers' manuals, shipyard technical publications, guidebooks developed by recognized industry organizations, and similar documents may provide adequate instruction on servicing, repair, preventive maintenance programs, and operational guidance.

6. APPLICABILITY.

- a. At present, U.S. certification is voluntary. However, the Maritime Safety Committee of IMO will be considering amendments to incorporate the ISM Code into the International Convention for the Safety of Life at Sea (SOLAS 74/78). If these amendments are adopted, the ISM Code could be mandatory beginning on June 1, 1998, for certain vessels.
- b. While the ISM Code was intended primarily for deep draft fleets on international routes, its management principles and organizational guidelines can be of value to companies operating other vessels as well. Therefore, owners and operators of all U.S. flag commercial vessels are eligible for, and encouraged to seek, ISM Code certification.
- c. While the Coast Guard encourages vessel owners and operators to comply with the provisions and recommended practices in the ISM Code, SMS Certificates issued before the Code is incorporated into SOLAS 74/78 or otherwise adopted into U.S. law have neither force nor effect under U.S. law, nor provide any substitute for any certificate, document, or license. Once the ISM Code becomes mandatory in the U.S., the Coast Guard will revisit this implementing guidance. Accordingly, SMS Certificates issued before the ISM Code is adopted into U.S. law will reflect ABS' determination of conformance with appropriate criteria, which may include this NVIC, for meeting the intent of the ISM Code. The ISM Code may become part of U.S. law and mandatory before June 1, 1998.

7. IMPLEMENTATION.

- a. Owners or operators of U.S. flag vessels who seek certification of compliance with the ISM Code may contact the American Bureau of Shipping (ABS) at:

ABS AMERICAS
ABS Plaza
16855 Northchase Drive
Houston, TX 77060
- b. Guidance concerning the scope of the material and type of documents to be made available for compliance review is provided in enclosure (2) to this Circular. Applicants are encouraged to prepare their documentation in accordance with this guidance.
- c. Safety Management Certificates should be displayed aboard the vessel to which they have been issued, and a copy of the company's Document of Compliance should also be available aboard the vessel for presentation upon request.



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INTERNATIONAL MARITIME
ORGANIZATION

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RESOLUTION A.741(18)
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INTERNATIONAL MANAGEMENT CODE FOR THE SAFE OPERATION
OF SHIPS AND FOR POLLUTION PREVENTION
(INTERNATIONAL SAFETY MANAGEMENT
(ISM) CODE)

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety control and the prevention and of marine pollution from ships,

RECALLING ALSO resolution A.680(17), by which it invited Member Governments to encourage those responsible for the management and operation of ships to take appropriate steps to develop, implement and assess safety and pollution prevention management in accordance with the IMO Guidelines on management for the safe operation of ships and for pollution prevention,

RECALLING ALSO resolution A.596(15), by which it requested the Maritime Safety Committee to develop, as a matter of urgency, guidelines, wherever relevant, concerning shipboard and shore-based management and its decision to include in the work program of the Maritime Safety Committee and the Marine Environment protection Committee an item on shipboard and shore-based management for the safe operation of ships and for the prevention of marine pollution, respectively,

RECALLING FURTHER resolution A.441(XI), by which it invited every State to take the necessary steps to ensure that the owner of a ship which flies the flag of that State provides such State with the current information necessary to enable it to identify and contact the person contracted or otherwise entrusted by the owner to discharge his responsibilities for that ship in regard to matters relating to maritime safety and the protection of the marine environment,

RECALLING FURTHER resolution A.443(XI), by which it invited Governments to take the necessary steps to safeguard the shipmaster in the proper discharge of his responsibilities in regard to maritime safety and the protection of the marine environment.

RECOGNIZING the need for appropriate organization of management to enable it to respond to the need of those on board ships to achieve and maintain high standards of safety and environmental protection,

RECOGNIZING ALSO that the most important means of preventing maritime casualties and pollution of the sea from ships is to design, construct, equip and maintain ships and to operate them with properly trained crews in compliance with international conventions and standards relating to maritime safety and pollution prevention,

NOTING that the Maritime Safety Committee is developing requirements for adoption by Contracting Governments to the International Convention for the Safety of Life at Sea (SOLAS), 1974, which will make compliance with the Code referred to in operative paragraph 1 mandatory,

CONSIDERING that the early implementation of that Code would greatly assist in improving safety at sea and protection of the marine environment,

NOTING FURTHER that the Maritime Safety Committee and the Marine Environment Protection committee have reviewed resolution A.680(17) and the Guidelines annexed thereto in developing the Code,

HAVING CONSIDERED the recommendations made by the Maritime Safety Committee at its sixty-second session and by the Marine Environment Protection Committee at its thirty-fourth session,

1. ADOPTS the International Management Code for the Safe Operation of Ships and for Pollution Prevention (International Safety Management (ISM) Code), set out in the Annex to the present resolution;
2. STRONGLY URGES Governments to implement the ISM Code on a national basis, giving priority to passenger ships, tankers, gas carriers, bulk carriers and mobile offshore units, which are flying their flags, as soon as possible but not later than 1 June 1998, pending development of the mandatory applications of the Code:
3. REQUESTS Governments to inform the Maritime Safety Committee and the Marine Environment Protection Committee of the action they have taken in implementing the ISM Code;
4. REQUESTS the Maritime Safety Committee and the Marine Environment Protection Committee to develop Guidelines for the implementation of the ISM Code:
5. REQUESTS ALSO the Maritime Safety Committee and the Marine Environment Protection Committee to keep the Code and its associated Guidelines, under review and to amend them as necessary;
6. REVOKES resolution A.680(17).

ANNEX
INTERNATIONAL MANAGEMENT CODE FOR THE SAFE OPERATION OF SHIPS MID FOR
POLLUTION PREVENTION (INTERNATIONAL SAFETY MANAGEMENT (IBM) CODE)

SAFETY AND POLLUTION PREVENTION MANAGEMENT REQUIREMENTS

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PREAMBLE

- 1 The purpose of this Code is to provide an international standard for the safe management and operation of ships and for pollution prevention.
- 2 The Assembly adopted resolution A.443(XI) by which it invited all Governments to take the necessary steps to safeguard the shipmaster in the proper discharge of his responsibilities with regard to maritime safety and the protection of the marine environment.
- 3 The Assembly also adopted resolution A.680(17) by which it further recognized the need for appropriate organization of management to enable it to respond to the need of those on board ship. to achieve and maintain high standards of safety and environmental protection.
- 4 Recognizing that no two shipping companies or shipowners are the same, and that ships operate under a wide range of different conditions, the Code is based on general principles and objectives.
- 5 The Code is expressed in broad terms so that it can have a widespread application. Clearly, different levels of management, whether shore-based or at sea, will require varying levels of knowledge and awareness of the items outlined.

6 The cornerstone of good safety management is commitment from the top. In matters of safety and pollution prevention it is the commitment, competence, attitudes and motivation of individuals at all levels that determines the end result.

1 GENERAL

1.1 Definitions

1.1.1 "International Safety Management (ISM) Code" means the International Management Code for the Safe Operation of Ships and for Pollution Prevention as adopted by the Assembly, as may be amended by the Organization.

1.1.2 "Company" means the Owner of the ship or any other organization or person such as the Manager, or the Bareboat Charterer, who has assumed the responsibility for operation of the ship from the Shipowner and who on assuming such responsibility has agreed to take over all the duties and responsibility imposed by the Code.

1.1.3 "Administration" means the Government of the State whose flag the ship is entitled to fly.

1.2 Objectives

1.2.1 The objectives of the Code are to ensure safety at sea, prevention of human injury or loss of life, and avoidance of damage to the environment, in particular to the marine environment, and to property.

1.2.2 Safety management objectives of the Company should, inter alia

- .1 provide for safe practices in ship operation and a safe working environment;
- .2 establish safeguards against all identified risks; and
- .3 continuously improve safety management skills of personnel ashore and aboard ships, including preparing for emergencies related both to safety and environmental protection.

1.2.3 The safety management system should ensure:

- .1 compliance with mandatory rules and regulations; and
- .2 that applicable codes, guidelines and standards recommended by the Organization, Administrations, classification societies and maritime industry organizations are taken into account.

1.3 Application

The requirements of this Code may be applied to all ships.

1.4 Functional requirements for a Safety Management System (SMS)

Every Company should develop, implement and maintain a Safety Management System (SMS) which includes the following functional requirements:

- .1 a safety and environmental protection policy;
- .2 instructions and procedures to ensure safe operation of ships and protection of the environment in compliance with relevant international and flag State legislation;
- .3 defined levels of authority and lines of communication between, and amongst, shore and shipboard personnel;
- .4 procedures for reporting accidents and non-conformities with the provisions of this Code;
- .5 procedures to prepare for and respond to emergency situations; and
- .6 procedures for internal audits and management reviews.

2 SAFETY AND ENVIRONMENTAL PROTECTION POLICY

2.1 The Company should establish a safety and environmental protection policy which describes how the objectives, given in paragraph 1.2, will be achieved.

2.2 The Company should ensure that the policy is implemented and maintained at all levels of the organization both ship based as well as shore based.

3 COMPANY RESPONSIBILITIES AND AUTHORITY

3.1 If the entity who is responsible for the operation of the ship is other than the owner, the owner must report the full name and details of such entity to the Administration.

3.2 The Company should define and document the responsibility, authority and interrelation of all personnel who manage, perform and verify work relating to and affecting safety and pollution prevention.

3.3 The Company is responsible for ensuring that adequate resources and shore based support are provided to enable the designated person or persons to carry out their functions.

4 DESIGNATED PERSON(S)

To ensure the safe operation of each ship and to provide a link between the company and those on board, every company, as appropriate, should designate a person or persons ashore having direct access to the highest level of management. The responsibility and authority of the designated person or persons should include monitoring the safety and pollution prevention aspects of the operation of each ship and to ensure that adequate resources and shore based support are applied, as required.

5 MASTER'S RESPONSIBILITY AND AUTHORITY

5.1 The Company should clearly define and document the master's responsibility with regard to:

- .1 implementing the safety and environmental protection policy of the Company;
- .2 motivating the crew in the observation of that policy;
- .3 issuing appropriate orders and instructions in a clear and simple manner;

- .4 verifying that specified requirements are observed: and
- .5 reviewing the SMS and reporting its deficiencies to the shore based management.

5.2 The Company should ensure that the SMS operating on board the ship contains a clear statement emphasizing the Master's authority. The Company should establish in the SMS that the master has the overriding authority and the responsibility to make decisions with respect to safety and pollution prevention and to request the Company's assistance as may be necessary.

6 RESOURCES AND PERSONNEL

6.1 The Company should ensure that the master is:

- .1 properly qualified for command;
- .2 fully conversant with the Company's EMS; and
- .3 given the necessary support so that the Master's duties can be safely performed.

6.2 The Company should ensure that each ship is manned with qualified, certificated and medically fit seafarers in accordance with national and international requirements.

6.3 The Company should establish procedures to ensure that new personnel and personnel transferred to new assignments related to safety and protection of the environment are given proper familiarization with their duties. Instructions which are essential to be provided prior to sailing should be identified, documented and given.

6.4 The Company should ensure that all personnel involved in the Company's SMS have an adequate understanding of relevant rules, regulations, codes and guidelines.

6.5 The Company should establish and maintain procedures for identifying any training which may be required in support of the SMS and ensure that such training is provided for all personnel concerned.

6.6 The Company should establish procedures by which the ship's personnel receive relevant information on the SMS in a working language or languages understood by them.

6.7 The Company should ensure that the ship's personnel are able to communicate effectively in the execution of their duties related to the SMS.

7 DEVELOPMENT OF PLANS FOR SHIPBOARD OPERATIONS

The Company should establish procedures for the preparation of plans and instructions for key shipboard operations concerning the safety of the ship and the prevention of pollution. The various tasks involved should be defined and assigned to qualified personnel.

8 EMERGENCY PREPAREDNESS

8.1 The Company should establish procedures to identify, describe and respond to potential emergency shipboard situations.

8.2 The Company should establish programmes for drills and exercises to prepare for emergency actions.

8.3 The SMS should provide for measures ensuring that the Company's organization can respond at any time to hazards, accidents and emergency situations involving its ships.

9 REPORTS AND ANALYSIS OF NON-CONFORMITIES, ACCIDENTS AND HAZARDOUS OCCURRENCES

9.1 The SMS should include procedures ensuring that non-conformities, accidents and hazardous situations are reported to the company¹ investigated and analyzed with the objective of improving safety and pollution prevention.

9.2 The Company should establish procedures for the implementation of corrective action.

10 MAINTENANCE OF THE SHIP AND EQUIPMENT

10.1 The Company should establish procedures to ensure that the ship is maintained in conformity with the provision. of the relevant rules and regulations and with any additional requirements which may be established by the Company.

10.2 In meeting these requirements the Company should ensure that:

- .1 inspections are held at appropriate intervals;
- .2 any non-conformity is reported with its possible cause, if known;
- .3 appropriate corrective action is taken; and
- .4 records of these activities are maintained.

10.3 The Company should establish procedures in SMS to identify equipment and technical Systems the sudden operational failure of which may result in hazardous situations. The SMS should provide for specific measures aimed at promoting the reliability of such equipment or systems. These measures should include the regular testing of stand-by arrangements and equipment or technical systems that are not in continuous use.

10.4 The inspections mentioned in 10.2 as well as the measures referred to 10.3 should be integrated in the ship's operational maintenance routine.

11 DOCUMENTATION

11.1 The Company should establish and maintain procedures to control all documents and data which are relevant to the SMS.

11.2 The Company should ensure that:

- .1 valid documents are available at all relevant locations;
- .2 changes to documents are reviewed and approved by authorized personnel; and
- .3 obsolete documents are promptly removed.

11.3 The documents used to describe and implement the EMS may be referred to as the "Safety Management Manual". Documentation should be kept in a form that the Company considers most effective. Each ship should carry on board all documentation relevant to that ship.

12 COMPANY VERIFICATION, REVIEW AND EVALUATION

12.1 The Company should carry out internal safety audits to verify whether safety and pollution prevention activities comply with the EMS.

12.2 The Company should periodically evaluate the efficiency and when needed review the SMS in accordance with procedures established by the Company.

12.3 The audits and possible corrective action, should be carried out in accordance with documented procedures.

12.4 personnel carrying out audits should be independent of the areas being audited unless this is impracticable due to the size and the nature of the Company.

12.5 The results of the audits and reviews should be brought to the attention of all personnel having responsibility in the area involved.

12.6 The management personnel responsible for the area involved should take timely corrective action on deficiencies found.

13 CERTIFICATION, VERIFICATION AND CONTROL

13.1 The ship should be operated by a Company which is issued a document of compliance relevant to that ship.

13.2 A document of compliance should be issued for every Company complying with the requirements of the ISM Code by the Administration, by an organization recognized by the Administration or by the Government of the country, acting on behalf of the Administration in which the Company has chosen to conduct its business. This document should be accepted as evidence that the Company is capable of complying with the requirements of the Code.

13.3 A copy of such a document should be placed on board in order that the Master, if so asked, may produce it for the verification of the Administration or organizations recognized by it.

13.4 A Certificate, called a Safety Management Certificate, should be issued to a ship by the Administration or organization recognized by the Administration. The Administration should, when issuing the certificate, verify that the Company and its shipboard management operate in accordance with the approved SMS.

13.5 The Administration or an organization recognized by the Administration should periodically verify the proper functioning of the ship's SMS as approved.

GUIDANCE FOR MEETING THE REQUIREMENTS OF THE ISM CODE

The ISM Code identifies twelve elements which together form an acceptable safety and pollution prevention management regime. This enclosure provides interpretative guidance which the Coast Guard believes U.S. vessel owners or operators should meet to obtain Documents of Compliance and Safety Management System Certificates. ABS may provide additional criteria. The twelve Code elements follow.

Note, as used in this enclosure, the term "applicable standard(s)" means a Federal regulation, Classification Rule, ABS/United States Supplement, or international regulation which has been accepted by the Coast Guard as satisfying a relevant material, design, construction, equipment, or operational requirement.

1. FUNCTIONAL REQUIREMENTS FOR A SAFETY MANAGEMENT SYSTEM

The SMS is the vehicle by which a company applies the principles of the ISM Code. Section 1.4 of the ISM Code establishes six functional requirements for an SMS. These are:

- a safety and environmental protection policy;
- instructions and procedures to ensure safe operation of ships and protection of the environment in compliance with relevant international and flag State legislation;
- defined levels of authority and lines of communications between, and among, shore and shipboard personnel;
- procedures for reporting accidents and non-conformities with the provisions of the Code;
- procedures to prepare for and respond to emergency situations; and,
- procedures for internal audits and management reviews.

2. SAFETY AND ENVIRONMENTAL PROTECTION POLICY

The safety and environmental protection policy should be a clear and concise statement which outlines the company's philosophy on workplace safety and health, and preservation and protection of the environment. The policy should indicate, in general terms, the company's intent to comply with relevant statutes and regulations concerning workplace safety and health, and protection of the maritime environment. The policy should encourage continuous improvement in safety practices, and efforts to operate in an environmentally conscious manner.

The policy should be signed by the Chief Executive Officer or equivalent senior level manager. Provisions should be in place to review and update the policy to ensure it remains appropriate and functional.

The company should document the means by which all employees are made aware of, comprehend, and carry out the safety and environmental policy.

3. COMPANY RESPONSIBILITIES AND AUTHORITY

It is important to ensure that all personnel involved in safety management or environmental protection, both shore side and ship board, have a clear understanding of their duties and responsibilities in carrying out the SMS.

To satisfy this requirement, the company should have an organizational chart or similar diagram which identifies and briefly describes the duties and responsibilities of those positions which impact upon vessel operations. Relevant positions include, but are not limited to, Chief Executive Officer, Vice Presidents, Operations Department, Traffic or Dispatching Department, Safety Department, Regulatory Affairs, Public Affairs, Engineering, Ship Support (port engineers/port captains), Accounting and Purchasing, etc. This information should also identify the shore side "designated person" having direct access to senior management.

Vessel specific organizational charts or job descriptions should be available which identify and briefly describe the duties and responsibilities of all shipboard positions. This documentation should describe the master's special duties with respect to implementing the safety and environmental policy and SMS.

The company should establish procedures by which shipboard personnel can make notification of shipboard emergencies, pollution incidents, non-conformities with applicable standards, etc., to responsible officials. The procedures should indicate who is responsible for taking action on the notification.

4. DESIGNATED PERSON(S)

The "designated person(s)" is the key player in the SMS. The designated person(s) should be responsible for verifying the effectiveness of the SMS, monitoring the operation of the SMS, and resolving non-conformities in the system. To effectively carry out these responsibilities the designated person(s) should be qualified and experienced in the safety and pollution control aspects of ship operations, and be well versed in the safety and environmental protection policies. The designated person(s) should be responsible for carrying out safety audits, and should have access to senior management officials to expedite the resolution of non-conformities with the SMS.

5. MASTER'S RESPONSIBILITY AND AUTHORITY

The vessel's master is the vital link to ensure that the policies, procedures, and processes developed by shore based management are implemented efficiently and effectively aboard ship. Accordingly, companies should have a system which encourages vessel masters to participate in the development of safety and environmental protection policies, procedures, and processes to ensure that they are practicable and achievable. Companies should develop specific guidelines which advise the masters on how to implement, monitor, train, and motivate their crews in carrying out the SMS. The guidelines should clearly identify the master's authority with respect to decisions regarding the safe operation of the vessel.

6. RESOURCES AND PERSONNEL

Companies should have procedures by which they confirm that shipboard employees are properly licensed and qualified for service on the particular vessel to which they are assigned. The procedures should identify any special training or qualifications (i.e. Certificates of Competence for the carriage and handling of liquefied gasses, etc.) which may be required, and the process for obtaining same. Particular attention should be paid to how new crew members are familiarized with any unique aspects of the vessel

The company should have a program by which its personnel are trained in the SMS and have a procedure for documenting the SMS training, or other related professional training, which its personnel have completed.

7. DEVELOPMENT OF PLANS FOR SHIPBOARD OPERATIONS

Vessels should have on board plans for key shipboard operations, such as shipboard organization and management, cargo and fueling procedures, preparing the vessel for sea, and underway operations. The plan should provide clear and concise instructions on how these operations are to be conducted. Checklist type formats can be particularly effective in ensuring all necessary tasks in a particular evolution are addressed. The duties and responsibilities of crew members involved in key shipboard operations should be identified. Procedures and instructions should emphasize a proactive approach to correct unsafe conditions before accidents can occur.

8. EMERGENCY PREPAREDNESS

At the minimum, all vessels should have written procedures for dealing with steering failures, loss of bridge control, shipboard fires, crew overboard situations, vessel abandonment, loss of watertight integrity, and medical emergencies. Tank vessels should also have written procedures to address failures of cargo control apparatus, cargo spillages, deployment of containment apparatus, and notification of shore based spill response organizations. Passenger vessels should have written procedures for evacuating the passengers in the event of an emergency.

Procedures should identify the duties and responsibilities of all shipboard personnel, the specific actions to be taken to regain control over the situation, the communications methods to be employed, and the procedures for notifying the company and relevant authorities.

The company should document that emergency drills and training in emergency procedures are conducted on a regular basis.

9. REPORTS AND ANALYSIS OF NON-CONFORMITIES, ACCIDENTS AND HAZARDOUS OCCURRENCES

The company should have written instructions for reporting non-conformities which identify the party responsible for taking action on, and resolving the nonconformity.

For the purpose of this paragraph, an accident means a reportable marine casualty as identified in Title 46 Code of Federal Regulations, Sections 4.05-1(a) through (f). Companies should have written procedures which identify the person(s) responsible, and procedures used, for making the notification and preparing a written report of a marine casualty.

The company should have written procedures which describe how it complies with the post-casualty mandatory chemical testing requirements of Title 46 Code of Federal Regulations, Section 4.06.

Also, for the purpose of this paragraph, a hazardous occurrence means a hazardous condition as defined in Title 33 Code of Federal Regulations, Section 160.203. Hazardous condition means any condition that could adversely affect the safety of any vessel, bridge, structure, or shore area or the environmental quality of any port, harbor, or navigable water of the United States. This condition could include but is not limited to, fire, explosion, grounding, leaking, damage, illness of a person on board, or a manning shortage. The company should have written procedures which identify the person(s) responsible, and

procedures used, for making the immediate notification required by Title 33 Code of Federal Regulations, Section 160.215.

10. MAINTENANCE OF THE SHIP AND EQUIPMENT

The vessel should be provided with adequate reference material to enable it to be maintained and operated in accordance with applicable domestic and international regulations, classification rules, applicable standards, and pertinent industrial codes which are relevant to its route and service.

Vessels should have on board sufficient maintenance manuals, technical publications, or equipment operating instructions which describe the procedures to properly operate and maintain all vessel systems and equipment, the failure of which would adversely impact upon the safe operation of the vessel, pose a safety hazard to vessel personnel, or create a potential environmental hazard. These vessel systems include, but are not limited to: firefighting and fire protection, lifesaving, navigation, propulsion, electrical generation, pollution prevention, and cargo control systems.

Vessels should have on board procedures for contacting qualified shore based personnel to carry out equipment servicing or repairs which are beyond the capacity of the vessel's crew to successfully complete.

Special consideration should be given to those vessels which operate on limited routes and have convenient access to a designated shore side facility where the above materials may be referenced. The company should identify the designated shore side facility.

Vessels should have a system to record the tests, inspections, and periodic maintenance called for above. The system should indicate the date the action was performed, results, corrective actions taken, and next due dates.

11. DOCUMENTATION

Proper document control is critical to the effectiveness of the SMS. Companies should have a system to ensure that all material relevant to the SMS is distributed promptly and accurately to all affected parties. Document control procedures should allow individuals to readily identify the revision status of the document to preclude the use of outdated or superseded reference material.

The documents used to describe and implement the SMS may be referred to as the "Safety Management Manual." Documentation may be in the form most convenient to the company. Some companies may have already addressed the SMS functional requirements in a variety of acceptable documents. Therefore, a "Safety Management Manual," which describes the SMS may include an index which directs the interested person to the substantive source document which specifically addresses the particular functional requirement under consideration.

For example, under ISM Code paragraph 6.3, companies should have procedures by which they confirm that shipboard employees are properly licensed and qualified for service on the particular vessel to which they are assigned. If the company's personnel manual adequately addresses this requirement, the "Safety Management Manual" need only say, "refer to Chapter 2, pages 5-9 of XYZ Company Personnel Manual dated 15 January 1991 for information on this requirement." Similarly, equipment maintenance procedures, discussed in ISM Code paragraph 10.1, might be cited in the "Safety Management Manual" as, "refer to XYZ Company Technical Pub No. 123, Chapter 5, dated 1 March 1987, for procedures for periodic maintenance of the ship's service generator."

12. VERIFICATION REVIEW AND EVALUATION

The company should have an audit plan for all departments and the vessel. The audit plan should address the specific areas and activities to be audited, the qualifications of the personnel conducting the audits, and the procedures for reporting findings, conclusions, and recommendations to appropriate senior management.

The audit plan should identify the means by which the audit results are evaluated. The evaluation should indicate any need for additional familiarization, or any modifications which might be needed in regards to the vessel, documentation, reports, or record keeping.

The audit plan should include provisions for monitoring corrective actions and maintaining reports for review by certifying agencies or regulatory authorities.

Management should review accident analyses, hazardous occurrences and non-conformities, the audit findings, and any recommendations following inspections by regulatory authorities.

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