TABLE OF CONTENTS

			PAGE
A.	**HISTORY OF PASSENGER VESSEL FIRE SAFETY**		**D7-1**
	1.	International Convention for the Safety of Life at Sea (SOLAS)	D7-1
	2.	SOLAS 48 and 60	D7-1
	3.	Maritime Safety Committee (MSC) Efforts	D7-2
	4.	Examination Program	D7-3
	5.	Retroactive Fire Safety Amendments (RFSAs)	D7-3
	6.	USPHS Sanitary Condition Inspections	D7-4
B.	**APPLICABLE PROCEDURES**		**D7-4**
	1.	Initial Examinations of Passenger Vessels	D7-4
	2.	Passenger Vessels Registered with an Administration Signatory to SOLAS	D7-4
	3.	Passenger Vessels Registered with an Administration Not Signatory to SOLAS	D7-7
	4.	Foreign Passenger Vessels Operating on “Cruises to Nowhere”	D7-7
C.	**EXAMINATIONS**		**D7-8**
	1.	Initial Examination	D7-8
	2.	Annual Examination	D7-12
	3.	Quarterly Reexamination	D7-13
	4.	Specific Procedures Applicable to Examinations and Re-exams	D7-13
D.	**MSIS**		**D7-20**

A. HISTORY OF PASSENGER VESSEL FIRE SAFETY

1. International Convention for the Safety of Life at Sea (SOLAS) 1929

SOLAS 1929 contained the first international requirements on structural fire protection for passenger vessels, calling for the installation of fire-resistant bulkheads above the bulkhead deck at intervals not exceeding 40 meters. Such bulkheads were required to resist a temperature of 815° Celsius for 1 hour. Serious fires occurring on passenger vessels in the early 1930's, e.g., the GEORGES PHILIPPAR, L'ATLANTIQUE, and the MORRO CASTLE, gave rise to great concern in the maritime countries, which concluded that the existing requirements were insufficient. In the U.S., an extensive series of tests were carried out on board the steam ship NANTASKET in 1936. As a result of these tests, U.S. regulations for the construction of passenger vessels were amended in 1936. The new regulations called for the installation of internal bulkheads of incombustible material with a view to containment of fire in the space of origin. In the United Kingdom, regulations for fire safety measures in passenger vessels, formulated in 1937, depended on automatic sprinkler systems. Similar development of national requirements for fire prevention took place in France and other maritime countries.

2. SOLAS 48 and 60

At the Safety Conference in 1948, delegates of the U.S., United Kingdom, and France proposed the adoption of their national systems of fire protection. The 1948 Safety Convention adopted all three systems. They are known as Method I, (U.S.), Method II (United Kingdom), and Method III (France). In addition, specific provisions were incorporated in the Convention for fire detection and fire extinguishing appliances in machinery and other spaces, for means of escape, for musters, and for fire drills. SOLAS 48 entered into force on 19 November 1952. The requirements of SOLAS 48 were reviewed at the Safety Conference in 1960; a number of amendments were incorporated in SOLAS 60, which came into force on 26 May 1965.

3. Maritime Safety Committee (MSC) Efforts

Passenger Vessel Fire Safety

a. Passenger Vessel Fire Safety. The attention of maritime countries was aroused after old passenger vessels, including the LAKONIA, YARMOUTH CASTLE, and VIKING PRINCESS, suffered serious fire casualties with heavy loss of life. In May 1966, a special meeting of the MSC of the Intergovernmental Maritime Consultative Organization (IMCO) was summoned to consider measures for improving the fire safety of passenger vessels.

NOTE: In May 1982, IMCO changed its name to the International Maritime Organization (IMO).

The MSC first directed attention to the problem of fire safety in older passenger vessels and, after thorough consideration of the problem, agreed upon a series of proposed amendments to the fire safety regulations in SOLAS 60. In November l966, representatives and experts from 46 countries met at the special IMCO Assembly and adopted the proposed amendments and recommendations submitted by the MSC. These 1966 amendments (IMCO Resolution A.108(ES.III)) proposed additional fire protection standards for existing passenger vessels. Major changes required vessels to be constructed of steel; separation of accommodation spaces from machinery, cargo, and service spaces; protection of control stations, stairways and lifts; reduction in the amount of combustible material used in accommodation spaces; and the installation of automatic sprinkler or fire detection systems. Under these provisions, old passenger vessels were required to be brought into close conformity with one of the methods of fire protection specified in the 1960 Safety Convention. For pre-SOLAS 48 vessels, the additional requirements normally involved structural modification.

Future Passenger Vessel Fire Safety

b. Future Passenger Vessel Fire Safety. Another task was the improvement in fire safety of future passenger vessels. The MSC requested that the IMCO Subcommittee on Fire Protection develop a new system of fire protection, taking into account the best features of the existing three methods of fire protection and considering the maximum use of noncombustible material and the appropriate use of automatic sprinkler and detection systems. Requirements for new vessels were proposed as the 1967 Fire Safety Amendments (IMCO Resolution A.122(V)). In part due to the stringent amendment approval process, the 1966 and 1967 Amendments were never ratified by the required number of countries to bring them into force internationally. SOLAS 74, which came into force on 25 May 1980, incorporated the 1966 and 1967 Amendments for fire safety.

4. Examination Program

In 1968, the U.S. unilaterally required all passenger vessels with overnight accommodations for 50 or more passengers to meet the 1966 Fire Safety Amendments or U.S. passenger vessel requirements. The present law (46 U.S.C. 3505) requires that the Secretary of the Department of Transportation (SECDOT) determine that the vessels meet SOLAS and applicable U.S. requirements. An evaluation of the program in 1984, as a result of fires on board the SCANDINAVIAN SEA and SCANDINAVIAN SUN, concluded that the examination program for foreign passenger vessels is still needed, both for vessels built before SOLAS 74 came into force and new vessels under SOLAS 74.

5. Retroactive Fire Safety Amendments

a. Spaces which currently give direct access to, or which are located within, stairway enclosures must not be used to store combustible or flammable materials that may present an elevated fire risk or hazardous condition. Examples of these combustible materials are cleaning fluids, paints, and other hazardous chemical products. Doors separating such spaces should be kept closed and in good operating condition. Spaces, such as galleys, Category A machinery spaces, engine rooms, boiler rooms, and similar spaces, having direct access to stairway enclosures should be treated similarly. No structural modifications will be required until 1 October 1997. Compliance and maintenance must be borne by owners and operators of vessels, ship's masters and crew.

b. Physical modifications of existing ships to comply with the RFSAs described in paragraph D7.A.1.c.(3) should not result in direct access between stairway enclosures and spaces other than public spaces, corridors, public toilets, special category spaces, other stairways required by SOLAS Regulation II-2/28.1.5, and open deck spaces. Such arrangements should not be found on SOLAS 74 vessels. If so, such spaces must be removed and not have direct access to the stairway enclosures. SOLAS 60 and SOLAS 48 vessels having existing spaces <u>within</u> the stairway enclosures will be required to either:

(1) Empty, permanently close, and disconnect the electrical system in such spaces; or

(2) Separate such spaces from the stairway enclosure by the provisions of "A" class divisions in accordance with SOLAS 74, Regulation 26. Such spaces may have direct access to the stairway enclosure by the provisions of "A" class doors in accordance with SOLAS 74, Regulation 26, and subject to a sprinkler system being provided. Cabins may <u>not</u> open directly into stairway enclosures.

Additionally, construction of short dead-end corridors or vestibules in an attempt to eliminate direct access to stairways in not permitted. Owners proceeding with modifications to comply with these fire safety amendments prior to the implementation dates should submit plans approved by the flag state to the MSC for review.

6. USPHS Sanitary Condition Inspections

Under Congressional mandate, the Centers for Disease Control (CDC) oversees a cruise ship sanitary condition inspection program. The program is made up of several components which include: periodic unannounced inspections of ships carrying passengers from U.S. ports; follow-up inspection, reinspections and other inspections, as necessary; technical consultation for new construction or refitting of older ships; investigation of disease outbreaks when they occur; biweekly publication of inspection results in the Summary of Health Information for Intentional Travel (Blue Sheet); and provisions of inspection reports on individual vessels to the public on request. The CDC program will be directed at vessels carrying more than twelve passengers, however, any report of unsanitary conditions will be investigated. A 24-hour answering service is maintained by their Miami office with additional staff specialists available at the CDC in Atlanta, GA and the Quarantine Station in Los Angeles, CA. Coast Guard marine safety personnel may relay any report of unsanitary passenger-carrying vessel conditions to the following PHS points of contact:

USPHS Vessel Sanitation Program
Office of the Chief
P.O. Box DQ, CPS, CDC
1015 North American Way, Room 107
Miami, FL 33132-2017
(305) 536-4307

Mr. Anthony Perez
Centers for Disease Control
Center for Prevention Services, Division of Quarantine
Atlanta, GA 30333
(404) 329-2574

Mr. Thomas A. DeMarcus
Quarantine Station, USPHS Quarantine
P.O. Box 90834 LAX
Los Angeles, CA 90009
(213) 215-2365

B. APPLICABLE PROCEDURES

Navigation Vessel Inspection Circular (NVIC) 3-79 provides information concerning the assessment of lifeboat capacity on foreign passenger vessels; NVIC 1-93 provides detailed examination procedures (including plan review) for initial examinations, annual examinations, and quarterly reexaminations of foreign passenger vessels; and NVIC 4-95 provides detailed guidance on the application and enforcement of the SOLAS 1992 Fire Safety Amendments to existing passenger vessels. NVIC 1-93 also has provisions for conducting initial examinations at foreign ports.

1. Initial Examinations of Passenger Vessels

Concern for the safety of U.S. citizens that embark on foreign flag passenger vessels continues to be one of our highest priorities. In U.S. ports this concern includes all passengers, U.S. and foreign. A foreign passenger vessel will fit one of the three categories described below. A determination as to the appropriate category must be made when such a vessel enters the United States for the first time. The specific category will determine the appropriate response by the Officer-in-Charge Marine Inspection (OCMI). This categorization will dictate the need for plan review and approval, boarding, examination, inspection and/or the issuance of appropriate Coast Guard certificates. Note that these guidelines are nearly identical for both passenger vessels (100 gross tons and over) and small passenger vessels (under 100 gross tons). These categories are:

a. Vessels registered with an administration signatory to SOLAS 74/78 and in possession of valid Passenger Ship Safety and Exemption Certificates.

b. Vessels registered with an administration signatory to SOLAS 74/78, but not holding valid Passenger Ship Safety or Exemption Certificates.

c. Vessels registered with an administration not signatory to SOLAS 74/78.

2. Passenger Vessels Registered With an Administration Signatory to SOLAS

a. Passenger Vessels Registered with an Administration Signatory to SOLAS 74/78 and in Possession of Valid Passenger Ship Safety and Exemption Certificates. When both the Passenger Ship Safety and Exemption Certificates refer only to SOLAS requirements, an examination shall be conducted in sufficient depth and scope to assure that SOLAS 74/78 is being met, keeping in mind the International Maritime Organization's Guidelines on Procedures for Port State Control (Resolution A.787(19)). This examination should include, among other items, operational tests of main, vital, and safety related machinery; fire drills; lifeboat drills; and the removal of sufficient bulkhead and overhead coverings to verify the installation of appropriate structural fire protection material where required. A Control Verification Certificate may be issued at the successful conclusion of this examination. G-MOC should be consulted in cases where the OCMI believes exemptions issued by the flag administration render the vessel unacceptable for service from a U.S. port.

(1) When the Passenger Ship Safety and/or Exemption Certificates claim adherence to U.S. Coast Guard regulations, in whole or in part, a more detailed examination must be conducted to assure compliance with the referenced Coast Guard regulations. Panama has referenced Subchapter T on some of its vessels that were former U.S. flag "T-boats" now operating locally on cruises to nowhere. In general, this exam should proceed on the same scale as if the vessel were U.S. flag, including the specific requirements described above as they apply to the vessel in question on the specific route or area of operation. A Cargo, Miscellaneous and Passenger Vessel Hull Inspection Book (CG-840A), Machinery Inspection Book (CG-840B) or Small Passenger Vessel Inspection Book (CG-840T), as applicable, should be used as a guide for completing this examination.

(2) The U.S. has filed with the IMO an equivalency statement, applicable to certain U.S. flag small passenger vessels on international voyages, for structural fire protection and lifesaving equipment. It has been reported that some administrations may apply this equivalency to their vessels, whereupon it will be listed on their Exemption Certificates. That is acceptable, subject to the results of the examination and verification that the vessel in question meets the criteria established in the equivalency statement (i.e., operates not more than 20 miles from land, under 100 gross tons, overnight accommodations for less than 50 passengers, less than 150 passengers, equipped with inflatable liferafts [or inflatable buoyant apparatus in warmer waters] for 100% of the persons on board, and certificated for an ocean route). If this criteria is not met, the vessel in question must meet SOLAS 74/78 or the requirements in 46 Code of Federal Regulations (CFR) Subchapter T, just as a U.S. vessel of similar design and service would be required to meet. In applying U.S. regulations, the vessel's date of build is immaterial because the regulations in effect on the date of application will apply.

b. Passenger Vessels Registered with an Administration Signatory to SOLAS 74/78, but not Holding Valid Passenger Ship Safety or Exemption Certificates.

Intervention under SOLAS 74/78 Chapter I, Regulation 19, is appropriate. Alternatively, compliance with Subchapter H, K or T, as appropriate, including issuance of a Certificate of Inspection in the same manner as for a domestic vessel, would be acceptable. It is within the OCMI's discretion to determine the better solution. Note that failure to examine the external underwater body of the vessel, as required by SOLAS 74/78, Regulation 7(b)(ii), invalidates SOLAS certificates.

3. Passenger Vessels Registered With an Administration Not Signatory to SOLAS

a. Passenger Vessels Registered with an Administration not Signatory to SOLAS or Passenger Vessels to which the Convention does not Apply. Passenger vessels of foreign nations not party to SOLAS, or to which the Convention does not apply, that embark any number of passengers from any U.S. port must meet 46 CFR Subchapter H, K, T or C, as appropriate. A certificate of inspection should be issued if a vessel subject to Subchapter H, K or T meets the requirements. The scope and detail of the inspection shall be the same as for a U.S. vessel.

b. Cargo Vessels Registered with an Administration not Signatory to SOLAS, or to which the Convention does not Apply, that Carry Passengers. Such vessels are not considered passenger vessels unless carrying 13 or more passengers. As cargo vessels they must meet 46 CFR Subchapter I, D, or O, as appropriate. A Certificate of Inspection should be issued if the vessel meets these requirements. The scope and detail of the inspection shall be the same as for a U.S. vessel.

4. Foreign Passenger Vessels Operating on "Cruises to Nowhere"

Foreign passenger vessels, regardless of their tonnage, operated on a day-service or "cruise to nowhere" basis are not on an international voyage. Therefore, it has been argued that SOLAS 74/78 would not apply. However, because the Coast Guard and most flag administrations recognize the special care and concern for passenger safety needed for this trade, the actions recommended above will apply to these vessels, as well as those on conventional international voyages.

C. EXAMINATIONS

Under Coast Guard policy set forth in the "M" Business Plan (COMDTINST 16000.26), each foreign passenger vessel embarking passengers from U.S. ports shall be examined at its first port of call in the U.S. and at least annually thereafter. Quarterly reexaminations shall also be conducted. Such a vessel operating on routes to several U.S. ports and under the jurisdiction of more than one OCMI shall be examined at least quarterly by one of the offices. Coordination between offices is encouraged. There are three different examinations for foreign passenger vessels: initial examination, annual examination, and quarterly reexamination. The importance of these examinations from primarily a fire safety and lifesaving point of view are described below. This is not to downplay the importance of examining the entire vessel for compliance with all SOLAS, statutory, and regulatory requirements, but rather to emphasize the extreme importance of fire safety and lifesaving for passenger vessels. The Foreign Passenger Vessel Examination Book will be used in conducting examinations and reexaminations.

1. Initial Examination

Foreign passenger vessels intending to embark passengers for the first time from a U.S. port; that have undergone a modification or alteration of a "major character" as defined by SOLAS Regulation II-2/1.3; that return to service more than two years after their last annual examination and whose plans have not been reviewed by the Marine Safety Center within five years; and certain vessels selected by the Commandant shall be subject to plan review and an initial examination in accordance with NVIC 1-93. See Section 4.b below for guidance on conducting drills.

Application of the 1992 Fire Safety Amendments to Existing Passenger Vessels (Keel Laid Prior to 1 October 1994).

a. The 1992 Fire Safety Amendments to SOLAS apply retroactively to existing passenger vessels and phase in over a 16-year period. The amendments require significant modifications to existing passenger vessels which carry more than 36 passengers. To determine compliance, the Commandant directed that all existing foreign passenger vessels which carry more than 36 passengers and embark passengers from U.S. ports undergo an initial examination in accordance with NVIC 1-93. NVIC 4-95 provides additional guidance and information to ensure consistent enforcement of the 1992 Amendments.

Existing Passenger Vessels (Keel Laid on or after 25 May 1980).

b. Passenger vessels built as new vessels under SOLAS 74, or vessels built on or after 25 May 1980 to meet the requirements of the 1967 Fire Safety Amendments (which are the same as SOLAS 74 requirements for new vessels), shall comply with the following 1992 SOLAS Amendments:

(1) Paragraph 1 of regulation 41-2 (as of 1 October 1994); and

(2) Paragraphs 2 and 4 of regulation 41-2 not later than 1 October 1997; and

(3) Paragraph 6 of regulation 41-2 not later than 1 October 2000; and

(4) Paragraph 5 of regulation 41-2 not later than 1 October 2005 or 15 years after the date of construction, whichever occurs later.

Existing Passenger Vessels (Keel Laid Prior to 25 May 1980).

c. Passenger vessels which do not comply with all the requirements of SOLAS Chapter II-2 applicable to ships constructed on or after 25 May 1980 shall comply with the following 1992 SOLAS Amendments:

(1) Paragraph 1 of regulation 41-2 (as of 1 October 1994); and

(2) Paragraphs 2, 3, 4 and 5 of regulation 41-2 not later than 1 October 1997; and

(3) Paragraph 6 of regulation 41-2 not later than 1 October 2000; and

(4) All requirements of Chapter II-2 applicable to vessels constructed on or after 25 May 1980 not later than 1 October 2010.

Method I, II and III Construction

d. Before starting an examination of an existing passenger vessel built before 25 May 1980, which is not built to the 1967 Fire Safety Amendments, it is essential that the method of construction or possible combination of methods used in the construction be known. The basic concern of the examination of these vessels is that they meet the Convention to which they were built and have been upgraded as required by SOLAS 74, Chapter II-2. SOLAS 29, 48, and 60 can be found in Commandant Instruction (COMDTINST) M16707.1, International Conventions and Conferences on Marine Safety. The examination should also verify that the vessel conforms to the submitted plans. From a fire safety standpoint many of the items stressed for new construction are even more important for existing passenger vessels. Since four different conventions and three different methods of construction may be involved, the boarding team must become very knowledgeable of the particular convention that is applicable and thoroughly examine the vessel to ensure that the requirements of that convention are complied with. An understanding of the three methods of fire protection is necessary to conduct a good examination.

Method I

(1) This is the only one of the three Convention methods, to the best of our knowledge, which is based upon extensive fire test experience aboard vessels. This method had been employed with considerable success in the U.S. prior to its presentation at the 1948 Conference. Convinced of its effectiveness, Method I was strongly supported by the maritime industry. The primary reliance with Method I is on containment of the fire to the space of origin by suitable structural and thermal boundaries. Combustibles are minimized. The vessel is divided into a number of discrete cells, each one of which is capable of containing a fire within that space. Should fire, for some reason, progress beyond a particular space, it would only encounter another "fire-cell." In Method I, the objectives of separating the accommodation spaces from the remainder of the vessel by thermal and structural boundaries and the protection of the means of escape are inherent in the system. There is no fixed active fire protection (fire detection or sprinkler system) equipment to malfunction, the subsequent inspections are relatively simple, and little reliance is placed upon the effective firefighting capabilities of the crew. The expenditure of effort in dealing with the fire problem under this method is entirely in the construction stage, which then lasts for the life of the vessel, whether at sea or in port. This method has been most effective in keeping fires in vessels from becoming a serious problem. No passenger lives have been lost due to fire on U.S. flag passenger vessels since 1946. Records prior to this date are difficult to substantiate, but it is believed that no passenger lives have been lost due to fire since the MORRO CASTLE.

Method II

(2) Method II employs the automatic sprinkler system as the first line of defense in combating fires. There is no restriction on the quantity of combustible materials which can be installed. The first line of defense depends entirely upon catching the fire in its incipient stage. The first line of defense may not be effective because of mechanical failure of the system. It may also not be effective because of a fire originating in the space containing the sprinkler pumps or because of a fire starting in unsprinklered concealed spaces (in which case the fire might gain headway and overpower the limited capacity sprinkler system). Moreover, a space which was not considered as having a substantial fire risk when the vessel was built may not have sprinklers. As the character of spaces change during the service of the vessel, such unsprinklered spaces may inadvertently be converted to the stowage of combustibles without extension of the sprinkler system. The secondary lines of fire defense are provided by separation of the accommodation spaces from other spaces on the vessel by "A" class bulkheads, low flame spread materials in the escape routes and hidden spaces, and Main Vertical Zone's (MVZ's).

The secondary lines of defense in the case of Method II play a very important function in permitting limited time for the rapid evacuation of passengers and crew. It is highly doubtful, however, that these secondary lines of defense alone could save the vessel and all of the passengers when there is no limit on the quantity of combustibles in a vessel's construction. The Class A, 1-hour division concept originated with Method I and was the result of extensive testing. One hour was considered sufficient if combustibles in construction were minimized. It is not adequate, as demonstrated by numerous fires, when large quantities of combustibles are employed.

NOTE: Smoke can be a very serious problem when large quantities of combustibles are installed.

Method II relies upon a mechanical system which is subject to malfunction or lack of maintenance. The system is very difficult to test for proper operation of all elements. The principal drawbacks to this system are the necessity for continuous maintenance, the difficulty of effective inspection, the possibility of fire originating in concealed or other unsprinklered spaces, the necessity for continuous sources of water and power, and the possibility of fire originating in spaces containing the sprinkler pumps.

Method III

(3) In Method III, the primary reliance is placed upon early detection of the fire by an installed detection system and prompt firefighting action on the part of the crew. Fire detection systems aboard vessels have notably poor records. For example, they were ineffective for various reasons during fires aboard the vessels LAKONIA, QUEBEC, and RIO JACHAL. In order to contain a fire after the assumed early detection, there are two elements available. The vessel is subdivided into a number of areas, in general not exceeding 1300 square feet. The crew would be expected to take prompt firefighting action to contain a fire to one of these areas. To provide an increase in fire protection in existing passenger vessels complying with Method III, hoses should be connected to hydrants and pressure maintained on the firemain at all times. Should the fire not be contained within a single area, the MVZ bulkheads are to serve as secondary fire stops. Under Method III, the degree of flammability of materials is limited, but no real limit is placed on the total quantity of combustibles which might be contained within a single space. Here again, the containment of any fire to a single MVZ is believed to be temporary, unless there is a prompt and effective firefighting effort. With this method, inspectors must be concerned with both the mechanical element of the fire detecting system and the human element of crew readiness.

2. Annual Examination

The purpose of the annual examination is to ensure that the vessel continues to maintain all the systems that were examined in the initial port call examination. This examination should determine that all detection and sprinkler systems are operable, all fire doors are operable and clear of obstructions, lifesaving gear is being maintained and fixed fire extinguishing systems are in satisfactory condition. This examination will include fire and boat drills as discussed in Section 4.b. below. See NVIC 1-93 for further details on conducting annual examinations.

Vessel Changes

a. During these examinations inspectors should remain alert for changes to the vessel. The 1981 Amendments to SOLAS 74 (Reg. II-2/1.3) require that all vessels which undergo repairs, alterations, modifications, and outfitting related thereto shall continue to comply with at least the requirements previously applicable to these vessels. Of particular concern is the refurbishment of passenger accommodations and the potential use of materials which are capable of producing large quantities of smoke and toxic products (i.e., replacing the covering on chipboard with plastic or synthetic materials).

Carbon Dioxide Discharge Lines

b. Carbon Dioxide Discharge Lines. It is a practice in some shipyards to place blanks in CO2 discharge lines to prevent accidental discharge. Vessels returning from a shipyard should be checked to ensure that all blanks have been removed. Inspectors should also be alert to alterations that may adversely affect the vessel's structural fire protection.

In Port Fire Watch

c. When inspectors are on board they should verify the existence of an in port fire watch. The need for prompt reaction to the presence of smoke or fire on board passenger vessels requires that the installed controls be capable of immediate use. When at sea, the bridge and engine room control stations are manned. This provides immediate access to communication centers; fire detection, suppression and isolation systems; and passenger and crew alarms. When the vessel is in port, the at sea watch is terminated and the hotel nature of the operation is dominant. The potential for fire does not diminish when a vessel is in port. While passengers are on board, the bridge and engine room control spaces should be manned with qualified individuals of sufficient training and experience to initiate a prompt and effective response to the detection of smoke and/or fire on the vessel. A requirement for a fire watch should be included in local marine firefighting contingency plans.

3. Quarterly Reexaminations

Reexaminations are intended to ensure that a vessel is being operated in a safe manner. The reexamination should ensure that materials are not stored in escape routes, that the condition of the vessel is being maintained, and that the crew remains familiar with the vessel. Fire and abandon ship drills will normally be conducted in accordance with Section 4.b. below. See NVIC 1-93 for further details on conducting quarterly reexaminations.

4. Specific Procedures Applicable to Examinations and Reexams

Examination of Documents

a. Examination of Documents. Sight and review pertinent vessel documents, certificates, and officers' licenses in accordance with Section C of Appendix A and NVIC 1-93.

Safe Manning Document

(1) Safe Manning Document. SOLAS Chapter V, Regulation 13, requires all ships of 500 gross tons and more on international voyages to be issued a safe manning document. This document is to state what the flag state administration considers to be the minimum complement necessary to ensure the vessel is sufficiently and efficiently manned from the point of view of safety. There is no standard format for a safe manning document, though some guidance on the elements to be included in the document can be found in IMO resolution A.481(XII), Annex 1, and guidance to be taken into account in determining safe manning can be found in Annex 2 of that IMO resolution. However, there are no specific manning scales which can be considered as an international standard for assessing the adequacy of the crew complement on a seagoing ship. Therefore, the boarding team must use good judgment in questioning a flag state's determination of the adequacy of a vessel's manning level.

(a) Every foreign flag vessel of 500 gross tons or more visiting a U.S. port should have on board a safe manning document issued by the vessel's flag state administration. If the document is in a foreign language, an English translation is to be available. The document should contain the following information:

- Identification of the ship;

- A table showing the numbers and grades of personnel required to be carried, together with any special conditions or limitations based on the particulars of the ship or the nature of the service upon which it is engaged; and
- The date of issue and expiration along with a signature for and the seal of the administration.

(b) In the event a safe manning document is available, the flag state is a party to SOLAS, the information in the document is complete, and the required crew complement is consistent with normal expectations for a ship of its size and service, no further action is required with respect to the manning document itself.

STCW

(2) International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1995 (STCW). Refer to Ch. D5.C.6.c and NVIC 3-98 for guidance.

General Examination

b. General Examination. See NVIC 1-93.

Fire Drill

(1) Fire Drill. The ability of the crew to respond to emergencies is witnessed during the drill. All crewmembers are to participate except for a limited number of crew on watch in machinery spaces. One suggested method of conducting the fire drill is to choose a specific location in the vessel (passenger cabin, paint locker, storage room, etc.) for a simulated fire.

Conducting the Drill

(a) Conducting the Drill. Have a crewmember go to the location and activate the manual fire alarm system. Observe the alarm indication on the fire alarm panel and the responses of the vessel's officers. A normal procedure is to send an officer or fire patrolman to investigate. Go to the location and describe the fire indication (smoke, flames, etc.) to the investigator. Observe how the report of fire is relayed to the bridge or damage control center. At this point most vessels will sound the crew alarm to summon the firefighting parties and the remainder of the crew to their stations. Observe the firefighting party arriving on scene, breaking out their equipment and fighting the simulated fire. Team leaders should be giving orders as appropriate to their crews and passing word back to the bridge or damage control center on the conditions. The firefighting crews should be observed for proper donning and use of their equipment. Make sure that all of the gear is compatible; e.g., the breathing apparatus can be worn with the protective suit, the helmet can be worn with the air mask, and the lifeline can be attached to breathing apparatus or belt. Merely mustering the emergency

crews with their gear is not acceptable. Crew response to personnel injuries can be checked by selecting a crewmember as a simulated casualty. Observe how the word is passed and the response of stretcher and medical teams. Handling a stretcher properly through narrow passageways, doors and stairtowers is difficult and takes practice.

Station Bill and Crewmember Duties

(b) Station Bill and Crewmember Duties. The station bill should be consulted to determine the duties and location of other crewmembers such as those assigned to emergency generators, CO2 room, sprinkler pumps and other essential equipment. Those areas should be visited during the drill and the crew should demonstrate use of the equipment and be quizzed in their duties. During the drill, note the vessel's command organization. Orders should be passed down the chain of command and information and reports passed up smoothly. All team leaders should know how many people are assigned to their team, what their duties are and to whom they are to report. Crewmembers not assigned to the firefighting teams are generally assigned to locations throughout the passenger accommodations to assist in passenger evacuation. These crewmembers should be quizzed on their duties and the meaning of the various emergency signals. Additionally, they should be asked to point out the two means of escape from the area and where the passengers are to report. Language difficulties are frequently encountered. Crewmembers assigned to assist passengers should be able to communicate at least enough information to direct a passenger to the proper muster area.

Firescreen Doors

(c) Firescreen Doors. Operation of firescreen doors is to be observed during the fire drill. If time permits, all doors are to be checked for proper latching and full closure. Remote indicators for firescreen doors are not required by SOLAS; however, if fitted, vessel owners should be encouraged to repair any faulty indicators observed.

Local Fire Department Responsibilities

(d) Local Fire Department Responsibilities. The local fire department normally has the responsibility for fighting vessel fires in port. Therefore, it is important that local firemen understand vessel organization, layout, and firefighting capabilities. Representatives of the local fire department should be encouraged to join Coast Guard inspectors to observe fire drills and to become familiar with passenger vessels in their ports. Vessel personnel are generally very receptive to having firefighters on board during these evolutions. The exchange of information between all concerned during and after drills can be most beneficial.

Abandon Ship Drill

(2) Abandon Ship Drill. SOLAS 74, Chapter III, requires the number of lifeboats and davit-launched life rafts required to accommodate all persons on board to be capable of being launched in 30 minutes. During drills, the lifeboats will normally not be loaded with passengers; therefore, they should be capable of being lowered well within the 30-minute limit. It is the practice of some vessels to have only a limited number of crewmembers operate the lifeboat davit winches. These winch crews operate one set at a time rather than having a crew at each davit. This may make it difficult to meet the 30-minute limit. SOLAS 74 permits up to 25 percent of the total required lifeboats to be substituted with davit launched inflatable life rafts. These life rafts are launched in succession from one or more davits. The securing hook must be recovered after each raft is lowered and released. The process is time-consuming and more complicated than operation of conventional gravity lifeboat davits. If the vessel has a practice raft available, the davit crews should demonstrate its use. If no practice raft is available, the crews should be quizzed and should demonstrate the davit operation without actually inflating a raft. It is the practice of some vessels to assign members of the hotel or catering staffs as the launching crews for these rafts. These crews should be observed closely in this situation, since handling equipment of this nature is not in the normal course of their regular duties.

(3) Drills and Training on Davit-Launched Liferafts. Marine Inspectors shall follow these guidelines and procedures for the evaluation of crew competency in handling of davit-launched liferafts. The focus is on evaluating the adequacy of the crew training.

NOTE: "Crew" or "crewmembers" mans those shipboard personnel on the vessel's muster list, whose assigned duties include launching or assisting in the launching of davit-launched liferafts.

(a) Applicability. This policy is applicable to all oceangoing passenger vessels that are subject to a CVE.

Implementation

(b) Implementation.

(i) Frequency of Training and Demonstrations.

Crew Training. Onboard training in the use of davit-launched liferafts should be conducted monthly on each vessel. Crewmembers should be rotated during these drills so that each member gets training at least once every four months, as required by SOLAS 74, Chapter III, Regulation 18.4.3 (1996 Amendments). This training should consist of inflating and lowering a davit-launched liferaft whenever practicable. This liferaft may be a special liferaft intended for training purposes only, which is not part of the ship's required lifesaving equipment. If such a liferaft is used, it shall be conspicuously marked as a training liferaft.

Initial and Annual CVES

Initial and Annual CVES. During initial and subsequent annual CVFS, each vessel shall be required to demonstrate, by means of a drill, the complete process of rigging, inflating, and lowering a davit-launched liferaft. If a training liferaft is not available for this demonstration, the following options shall apply:

Option 1. If a training liferaft is not available, Coast Guard inspectors may issue a requirement to complete the demonstration in the presence of a Coast Guard marine inspector within 30 days or upon arrival at the next U.S. port, whichever is later. If this option is chosen, Coast Guard inspectors shall question crewmembers on their assigned duties relating to the davit-launched liferafts and ask the person(s)-in-charge at a liferaft station to explain the complete rigging, inflation, and launching procedure.

Option 2. If a training liferaft is not available and when reasonable cause exists, Coast Guard inspectors may require an immediate demonstration using a liferaft that is part of the ship's regular lifesaving complement. in determining reasonable cause, the following factors may be considered:

- no documented evidence of crew training as required by SOLAS;
- performance of crew during previous liferaft drills;
- the general condition of the ship;
- overall crew performance during other emergency drills; or,
- other factors which indicate that the crew may not be satisfactorily trained.

Quarterly CVES

Quarterly CVES. During a quarterly CVE, Coast Guard inspectors shall examine the vessel's documentary evidence to verify that the liferaft training required by SOLAS has been conducted. Where there is reasonable cause to doubt the crew's ability to safely and effectively launch a davit-launched liferaft, Coast Guard inspectors may require a complete rigging, inflation, and lowering demonstration. The same factors for reasonable cause, as prescribed by paragraph ii) above, shall be applied in making this determination.

Test Procedure

(ii) Test Procedure. The following policy shall apply to all liferaft inflation and lowering demonstrations conducted during CVES:

- Before commencing a drill, Coast Guard inspectors shall discuss all details of the procedure with the vessel master.
- Coast Guard inspectors shall not require personnel to be in a liferaft while it is being deployed. However, the master may, at his discretion, choose

to put personnel in the liferaft while it is being launched or after it is in the water.

- The raft need not be lowered to the water and released from its hook.
- At the master's discretion, drills may be conducted using a liferaft out of the ship's lifesaving appliance complement. If a ship's service liferaft is to be used, the operator may wish to consider using one that is scheduled for annual servicing or its five-year inflation test. If such a raft is used, it shall be replaced prior to sailing.
- A training liferaft need not be the same make/model as those found in the ship's regular complement. However, it should be of at least 12-person capacity and have launching procedures similar to those for the ship's regular liferafts.

Documentation of Examinations

c. Documentation of Examinations. Marine Safety Information System (MSIS) entries for initial examinations, annual examinations and reexaminations are to be made in accordance with Section A.5 of this chapter.

Control Verification for Foreign Vessel, Form CG-4504

d. Control Verification for Foreign Vessel, Form CG-4504. Under 46 CFR 2.01-6, Control Verification for Foreign Vessel, Form CG-4504, is issued to foreign passenger vessels embarking or carrying passengers from U.S. ports. Upon successful completion of an initial or annual examination, such a vessel may be issued Form CG-4504. The Control Verification certificate shall be made effective for one year from the date of issue provided the vessel maintains a valid PSSC during that period. Issuance of this form to vessels of foreign countries that are party to SOLAS is not specifically authorized by the convention. When the owner of a foreign vessel objects to issuance of this form, the OCMI or the Captain of the Port (COTP) should explain that it provides for orderly administration of Coast Guard examinations and expedites entrance and clearance procedures for a foreign vessel calling at several U.S. ports. However, its issuance is not required by law.

Reexaminations

(1) Reexaminations. Form CG-4504 need not be reissued at the conclusion of a reexamination. If minor deficiencies are identified during the reexamination, the master should be provided with a worklist which clearly explains the corrective measures that must be taken. See chapter D2 for additional information.

Administration

(2) Administration. Form CG-4504 shall not be amended. When changes in the vessel's condition occur, a new form shall be issued. The replacement form shall contain the statement, "This replaces Form CG-4504 dated," and shall have the same expiration date as the original form. A copy of the replacement form shall be forwarded to the OCMI who issued the original.

Revocation

(3) Revocation. Form CG-4504 may be revoked for sufficient cause. However, before this occurs, the vessel's representative should be given every reasonable opportunity to correct deficient conditions. It is

anticipated that revocation will usually accompany a detention under Regulation 19, Chapter I of SOLAS. The revoked form shall be removed from the vessel. The master or nearest consular representative of the home administration shall be advised of the reasons for revocation in writing. The local Collector of Customs should also be advised of the revocation. See Chapter D2 of this volume for additional guidance on control measures.

Examination of Cargo Vessels Which Carry Up To 12 Persons In Addition To The Crew.

e. All cargo vessels of countries party to SOLAS that embark and carry up to 12 passengers from a port of the U.S. shall be examined at their first U.S. port of call and at least annually thereafter. Cargo vessels that embark and carry up to 12 passengers from a port of the U.S. need not undergo quarterly reexaminations. However, the vessel may be targeted for reexaminations in accordance with the procedures outlined in Chapter D4. The Marine Safety Information System (MSIS) procedures applicable to freight vessels, as discussed in Chapter D5 of this volume, shall also be followed.

Scope of Examination

(1) Scope of Examination. The procedures applicable to the examination of foreign freight vessels will be used when examining cargo vessels carrying up to 12 persons in addition to the crew, except that the examination shall also verify that safe facilities are provided for the persons in addition to the crew. The Foreign Freight Vessel Examination Book should be used. It is important to remember that the vessel is being examined as a freight vessel, not a passenger vessel. Detention or other control action should be exercised if the vessel is unfit to proceed to sea or an unreasonable risk to the environment. However, the inspector may not specifically prohibit the carriage of persons in addition to the crew and then allow the vessel to sail with a crew on board. If the vessel is unsafe, it is also unsafe for the crew.

Fire and Boat Drills

(2) Fire and Boat Drills. Drills are to be conducted during annual examinations. However, they should not normally be required during reexamination. They may be required whenever there is reason to question the condition of equipment or the efficiency of operation. If conditions warrant that drills be conducted during a reexamination, a marine inspector should be called in to witness the drills.

Marine Safety Information System (MSIS).

(3) Marine Safety Information System (MSIS). MSIS entries are to be made in accordance with the procedures for documenting freight vessel examinations in MSM II-D5.G.1.

D. MSIS

Passenger vessel examinations and reexaminations will be documented in MSIS by filing a Marine Inspection Activity Report (MIAR). To ensure the accuracy of the database used in making boarding decisions:

- The inspection type "COC/CVE" (Control Verification Exam) is used for both initial and annual control verification examinations. The code "COC/CVQ (Control Verification Quarterly) is used for all passenger vessel reexaminations.

- The certificate codes "ISS" (issue) for an initial exam, "RIS" (reissue) for an annual exam, and "NON" (none) for reexaminations are entered as appropriate.

- Outstanding discrepancies and any significant discrepancies corrected during the boarding must be entered in the Marine Inspection Deficiency Report (MIDR) product set.

- Update the Vessel File Involved Party (VFIP) product set if different from that observed aboard the vessel. If a vessel's classification society is not listed or differs from that shown in VFIP, enter the appropriate classification society using the Involved Party Numbers (IPN) listed in MSM II-D4B.3.e. The "OWNER" indicated in the VFIP should match that indicated on the vessel's registry. The "OPERATOR" indicated in the VFIP should match that indicated on the vessel's Certificate of Financial Responsibility (COFR). Ensure that addresses are accurate.

- The Vessel File List of Documents (VFLD) product set should be updated to reflect the status of the vessel's documents. The initial and annual examinations will automatically map over to VFLD.

- Boardings shall be scheduled in advance using the MSIS Marine Inspection Scheduler Function (MISF).

- MSIS entries including deficiencies are to be entered into MSIS within 48 hours of completing a boarding.

- If a vessel is expected to arrive within another OCMI or Captain of the Port zone of responsibility before MSIS can be updated, information regarding the boarding and any deficiencies or control action taken shall be relayed to the next port of call in the most expedient means available, (e.g. facsimile, telephone, E-mail etc.).