COMDTCHANGENOTE 16000
20 JULY 2016

COMMANDANT CHANGE NOTICE 16000

Subj: CH-2 TO MARINE SAFETY MANUAL VOLUME II, COMDTINST M16000.7B

1. PURPOSE. This Commandant Change Notice publishes a change to Marine Safety Manual Volume II, COMDTINST M16000.7B.

2. ACTION. All Coast Guard unit commanders, commanding officers, officers-in-charge, deputy/assistant commandants, and chiefs of headquarters staff elements shall comply with the provisions of this Commandant Change Notice. Internet release is authorized.


4. DISCUSSION. This does not constitute a substantial change to the content of the previous version of this Manual. The primary reason for this change is to incorporate existing policy into the Manual to reduce the number of places Coast Guard members have to reference for guidance. Numerous non-technical changes have been made throughout the document including correcting misspellings and incorrect paragraph numbering.

5. DISCLAIMER. This guidance is not a substitute for applicable legal requirements, nor is it itself a rule. It is intended to provide operational guidance for Coast Guard personnel and is not intended to nor does it impose legally-binding requirements on any party outside the Coast Guard.

6. MAJOR CHANGES.

   a. The content of Section A3, Documentation of Vessel Inspections has been edited with additional guidance on how to document dry-dock dates. This guidance can be found on page 14.

   DISTRIBUTION – SDL No. 167

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   NON-STANDARD DISTRIBUTION:
b. Created a new section, A7 on commercial vessel compliance personnel proficiency. This incorporates policy from CG-543 Policy Letter 09-04 Change 1, Marine Inspector/Port State Control Officer Certification Policy; CG-543 Policy Letter 11-08, Civilian Apprentice Marine Inspector (CAMI) Program; and CG-CVC Policy Letter 13-05, Award for Excellence in Marine Inspections.

c. The content of Section B1, Inspection of Vessels for Certification has been edited to add additional Sectors that conduct inspection of U.S. vessels in foreign countries. This guidance can be found on pages 8-9.

d. G-MRP Policy Letter 02-96, dated June 07, 1996, Overseas Inspection and Examination Fee Collection Policy on payment of user fees and overseas inspections expenses has been incorporated into the manual. The guidance in the policy letter can be found in Section B1, page 8a.

e. Completed a significant revision to the content of Section B1 involving Machinery Inspections to provide clarification of the inspection requirements. This guidance can be found on B1, pages 29-30.

f. Completed a significant revision to the content of Section B1 involving the inspection and hydrostatic tests of boilers to provide clarification of the requirements. This guidance can be found on pages 29-51i.

g. The content of Section B1, Inspection of Vessels for Certification has been edited to include guidance from CG-MOC Policy Letter 11-97 for the use of miniature thermal over-current circuit breakers on small passenger vessels. This guidance can be found on pages 58-58a.

h. The content of Section B4, Inspection Procedures Applicable to Vessel Types, Classes, and Categories has been edited to add Great Lakes Barges. This section was accidently removed during the 2000 update. This guidance can be found on pages 33-33a.

i. The content of Section B4, Inspection Procedures Applicable to Vessel Types, Classes, and Categories has been edited for certificated vessels that change status to Permanently Moored Craft. This guidance can be found on pages 45-49b.

j. The content of Section D1, Port State Control, and General Aspects of Port State Control Examinations has been edited to add policy for stowaway incidents. This incorporates portions of the Coast Guard Stowaway Policy from ALCOAST 0343/05. This guidance can be found on pages 50-52.

k. The content of Section D4, Port State Control, Targeting of Foreign Vessels has been edited with the removal of Column V of the ISPS/MTSA Security Compliance Targeting Matrix in Section D4 based on changes to the targeting policy as described in CG-5P Policy Letter 01-14. The targeting matrix can be found on page 13.
1. The content of Section D4, Port State Control, Targeting of Foreign Vessels has been edited to add stowaway incidents as an ISPS II exam on ISPS/MTSA targeting matrix under column IV. The targeting matrix can be found on page 13.

m. The content of Section D4, Port State Control, Targeting of Foreign Vessels has been edited to add port state control exam downgrade options for certain foreign freight vessels as described in CG-CVC’s message of 22652Z JUL 14. This guidance can be found on pages 18a-18b.

n. Completed a significant revision to Section E3, Safety Management Systems. This guidance can be found on pages 1-36.

o. The content of Section G1, Offshore – Regulations, Policy and Guidance for a Unit Conducting OCS Activity, has been edited to add Overseas Exams for Issuance of a COC and a COI for MODUs and Floating OCS Facilities. This guidance can be found on pages 5-10.

p. The content of Section G1, Offshore – Regulations, Policy and Guidance for a Unit Conducting OCS Activity, has been edited to add Additional Restrictions for MODUs or fixed OCS facilities. This guidance can be found on page 23-24.

q. The content of Section G2, Offshore – Procedures Applicable to MODUs (U.S.), has been edited to add Load Line Authorization and clarify Single Voyage Load Line issuance for vessels operating on the OCS. This guidance can be found on pages 18a-18b.

r. The content of Section G3, Offshore – Procedures Applicable to MODUs (Foreign), has been edited to incorporate the Cross Reference of Regulations Pertaining to U.S. and Foreign Flag MODUs from Navigation and Vessel Inspection Circular (NVIC) 03-88. The guidance in the NVIC can be found on pages 32-42.

s. The content of Section G4, Offshore – Procedures Applicable to Floating OCS Facilities, has been edited to add an example of a Quarters Habitable Letter. This guidance can be found on pages 4-6.

t. The content of Section G4, Offshore – Procedures Applicable to Floating OCS Facilities, has been edited to add an example of a Control of Hydrocarbon Flow “Buy-Back Gas” Approval Letter. This guidance can be found on pages 6-7.

u. The content of Section G4, Offshore – Procedures Applicable to Floating OCS Facilities, has been edited to add Manning of Non-self Propelled Floating Outer Continental (OCS) Facilities. This guidance can be found on pages 19-21.

v. The content of Section G6, Offshore – Procedures Applicable to Other Vessels Engaged in OCS Activities, has been edited to add the definition of an OSV which comes from the 2010 Coast Guard Authorization Act. This guidance can be found on page 2.
w. The content of Section G6, Offshore – Procedures Applicable to Other Vessels Engaged in OCS Activities has been edited to add Accommodation Service Vessels. This guidance can be found on pages 23-24.

x. Due to the numerous changes and shifting down of pages, Section G, Chapters 1 and 4 have been replaced in their entirety.

7. ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS.

a. The development of this Commandant Change Notice and the general policies contained within it have been thoroughly reviewed by the originating office in conjunction with the Office of Environmental Management, and are categorically excluded (CE) under current USCG CE # 33 from further environmental analysis, in accordance with Section 2.B.2. and Figure 2-1 of the National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts, COMDTINST M16475.1 (series).

b. This directive will not have any of the following: significant cumulative impacts on the human environment; substantial controversy or substantial change to existing environmental conditions; or inconsistencies with any Federal, State, or local laws or administrative determinations relating to the environment. All future specific actions resulting from the general policies in this Commandant Change Notice must be individually evaluated for compliance with the National Environmental Policy Act (NEPA), DHS and Coast Guard NEPA policy, and compliance with all other environmental mandates.

8. DISTRIBUTION. No paper distribution will be made of this Commandant Change Notice. An electronic version will be located on the following Commandant (CG-612) web sites. Internet: http://www.uscg.mil/directives/, and CGPortal: https://cg.portal.uscg.mil/library/directives/SitePages/directives.aspx

9. PROEDURE. Remove and replace the following sections of The Marine Safety Manual Volume II, COMDTINST M16000.7B:

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10. RECORDS MANAGEMENT CONSIDERATIONS. This Commandant Change Notice has been thoroughly reviewed during the directives clearing process, and it has been determined that there are records scheduling requirements, in accordance with Federal Records Act, 44 U.S.C. 3101 et seq., NARA requirements, and Information and Life Cycle Management Manual, COMDTINST M5212.12 (series). This policy has significant or substantial change to existing records management requirements, or inconsistencies with existing determinations relating to documentation requirements.


12. REQUEST FOR CHANGES. Request for changes to the Marine Safety Manual Volume II, COMDTINST M16000.7B may be sent to Commandant (CG-CVC-1) at (202) 372-1224 or marinesafetymanual@uscg.mil.

P. F. THOMAS /s/
Rear Admiral, U.S. Coast Guard
Assistant Commandant for Prevention Policy
# USCG Marine Safety Manual, Vol. II: Materiel Inspection

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(5) This data should reflect the number of items that are actually carried to meet
the minimum total capacity (number of persons) required by regulation. The
total capacity of the required items must be listed.

b. **Cargo authority.**

(1) **Carriage of oil.** Each U.S. tankship and integrated tug/tank barge unit of 20,000
or more deadweight tons permitted to carry "oil" (46 U.S.C. 2101(20)) has the
cargo authority is listed on its COI to specify the type of cargo it is authorized
to carry, the applicable subchapter, and the loading constraints related to
structure and stability.

(a) The proper authorization endorsement is determined from the applicable
regulations in 33 CFR Part 157 and 46 CFR 32.53. Cargo grade restrictions
are entered under "Highest Grade."

(b) The value for "Capacity" must be that of all integral cargo tanks, and the
"Units" must be in barrels.

(c) If the vessel carries 46 CFR Subchapter O cargo, then the appropriate CFR
Part must be indicated. Data regarding "Loading Constraints" will be
provided by Commandant (G-MSC) and is to be entered as appropriate.

(d) Special cargo restrictions and/or exemptions, such as those found in 46 CFR
36.01-5 and 46 CFR 38.01-5 must be listed by endorsement under "Route
Permitted and Conditions of Operation." The following are samples of
appropriate wording for "Authorization" entries:

i. "Crude oil and flammable or combustible liquids."

ii. "Products and flammable or combustible liquids other than crude oil."

iii. "Products and combustible liquids."

iv. "Crude oil, products, and flammable or combustible liquids."

v. "Flammable liquids other than oil."

2. **MARPOL Annex II/Noxious liquid substances (NLS).** See NVIC 03-06 for
information on applicable certificates, cargo record books, and endorsement to
the Certificate of Inspection.

(a) “See “Cargo Authority” Located In “Conditions of Carriage.”
(b) **Conditions of Carriage.** The following statement should appear at the beginning of the COI "Conditions of Carriage" section: “Per 46 CFR 150.130, the person in charge of the barge (vessel) is responsible for ensuring that the compatibility requirements of 46 CFR 150 are met.”

(c) Once all the tank groups' characteristics and requirements have been verified by an inspector as matching those on a tank vessel's LAC, the following text from the MSC's plan approval letter should be entered in VFCC under another "Cargo Authority" heading: “Only those cargoes named in the vessel's list of authorized cargoes bearing marine safety center approved stamp dated (date) may be carried, and then only in the tanks indicated.”

3. **Inland tank barges.** The following statement should appear at the beginning of the COI of an inland tank barge under "Conditions of Carriage": “Per 46 CFR 150.130, the person in charge of the barge (vessel) is responsible for ensuring that the compatibility requirements of 46 CFR 150 are met. Cargoes must be checked for compatibility using the figures, tables, and appendices of 46 CFR 150 in conjunction with the reactive group numbers from the 'React Grp' column listed above the 'Specific Dangerous (i.e., hazardous) cargo authority' section.”

4. **Vessels not in compliance with MARPOL Annex II.** A self-propelled vessel or oceangoing non-self-propelled vessel, certificated under Subchapter D and which is not in compliance with the MARPOL Annex II regulations, should have a COI endorsement that excludes the carriage of NLS cargoes, e.g., "Vessel may not carry cargoes that are designated as NLS in 46 CFR 30.25, Table 30.25-1, 33 CFR 151.47, and 33 CFR 151.49." The standard cargo authority entered for the COI of these vessels is only by grade(s) of flammable or combustible liquids and does not distinguish NLS cargoes.

c. **Hull examination and drydock details.** The intent of this guidance is to avoid the forward migration of the hull examination dates from COI to COI. Hull examination dates/intervals should be entered in MISLE serving as an attachment to the COI. The “Next Exam” date entries shall reflect the last day of the month the drydock or ISE is credited (i.e. completed). For example: a 2 year interval salt water environment drydock examination is completed 05May15, the “Next Exam” date shall reflect 31May17. And, in turn, at the next drydock interval, say if the drydock exam was completed 14May 2017 (actual), then in turn, the “Next Exam” would be set to 31May2019. No forward migration of dates. But, when the examination (actual) extends into the following month (i.e. delayed), the “Next Exam” dates shall reflect the last day of the month for the allowable period from the “Last Exam” entry. For example: if the drydock examination is due by 31May15 but the examination is actually conducted (credited) 10Jun15, the
“Next Exam” date should reflect same month of when the examination was due. So, the “Next Exam” date shall reflect 31May17 (and not 30Jun17).

d. Additional marine inspection details. Other vessel particulars and systems such as fixed fire fighting systems, steering gear, and machinery can be entered into MISLE by referring to the MISLE user guide.

4. COI Entries - Additional Endorsements

a. Military Sealift Command (MSC) vessels. The following entries should be made for MSC vessels that are certificated:

(1) For vessel service, enter PUBLIC VESSEL only if the following conditions are met

(a) The vessel is Navy owned and operated by a MSC civilian crew; or

(b) The vessel is demise chartered by the MSC and is operated by its own civilian crew.

(2) Vessels which are time chartered by the MSC, or are either Navy owned or demise chartered and operated by a contract operator are not considered public vessels. The class of vessel is as appropriate.

(3) Under "Route Permitted and Conditions of Operation," insert the following endorsement: “Naval vessel, in Service, civilian manned. This vessel has been inspected and certificated in accordance with the standards applicable to military sealift command vessels.”

NOTE: The term "in service" refers to MSC vessels that are manned by civilian crews, as opposed to those manned by naval crews and termed "in commission."

(4) "Persons in Addition To the Crew" should reflect the number of persons carried onboard a vessel who are connected with the business of the vessel but not classed as crew or passengers. Such persons include military liaison staff on transports or fleet support vessels, technicians and scientists on oceanographic research vessels, military guards on certain cargo vessels, etc. Such personnel should be reflected in the total persons allowed.

b. Seasonal restrictions. COI statements of seasonal restrictions should be as descriptive as possible, specifying details such as limitations on vessel routes and the scope of passenger-carrying authorizations. Seasonal limitations are intended to ensure the overall seaworthiness of the vessel and the safety of the passengers carried under differing operational conditions without completely halting the operation of the vessel during any specific period of time.
c. Manning requirements for vessels towing inspected passenger barges. These
should be indicated on the COI issued to the barge (see the MSM Volume III,
Marine Industry Personnel, COMDTINST M16000.8B (series)).

d. Endorsements for special cargoes. The endorsements required by 46 CFR 36.01-5
and 38.01-5 should be made as indicated.

e. Endorsements listing cargo names and relief valve calculations. See 46 CFR Part
154.17. Such endorsements should also be made for liquefied gas cargoes
regulated solely under 46 CFR Subchapter D.

5. Crew Requirements

a. Maintenance persons. Maintenance persons may be listed in one of the available
slots for required manning. A specific departmental affiliation may be included,
e.g., engine maintenance person.

b. The qualifications of a position, as appropriate, may be further specified under
"Route Permitted and Conditions of Operation," e.g., deck maintenance person
(any deck rating), engine maintenance person (junior engineer, electrician, deck
engine mechanic), or maintenance person (any deck or engine rating). Whenever
a maintenance person is listed without departmental affiliation, it is left to the
master's discretion to determine where and how to use that person. This action--
(1) Allows the master and chief engineer a degree of latitude in determining the
ship's internal organization; and

(2) Minimizes the possibility of direct Coast Guard involvement in contractual
matters of labor management.

NOTE: See MSM Volume III, Marine Industry Personnel, COMDTINST
M16000.8B (series), for additional guidance.

b. Radio officers. When the requirement for a Radio Officer is solely to reinforce the
Federal Communications Commission's authority, an asterisk should be entered in
the slot for "Radio Officer," with the following endorsement made under "Route
Permitted and Conditions of Operation": "If Required By the Federal
Communications Commission."

c. Liquefied gas carriers. The COI for a liquefied gas vessel should clearly state that
the cargo officer and cargo systems engineer are non-watchstanders. A notation
should be made under "Routes Permitted and Conditions of Operation" specifying
that "The chief mate shall be designated the cargo officer and be
non-watchstanding" and "The (first or second) assistant engineer shall be
designated the cargo systems engineer and be non-watchstanding." The latter designation should be made by the OCMI.

d. **Certificated engineering personnel.** These should not be required on the COIs of river and other vessels exempted from this by 46 U.S.C. 8701 and 8702.

e. **Statement of minimum complement.** By law, the COI must state the minimum complement of licensed and certificated personnel necessary for the safe operation of the vessel; this requirement should be strictly followed.

f. **Radar observer endorsements.** These are not necessary, except on certificates for hydrofoils or air cushion vehicles (see MSM Volume III, Marine Industry Personnel, COMDTINST M16000.8B (series)). The regulatory requirements are sufficient without other special notations.
I. TEMPORARY CERTIFICATE OF INSPECTION, FORM CG-854

Temporary Certificate of Inspection Form CG-854, authorized by 46 U.S.C. 3309, provides evidence of the satisfactory completion of an inspection for certification. It has all the force and effect of a full term COI and permits operation of a vessel pending receipt of the COI generated by MISLE. This temporary COI is intended for use when the immediate issuance of a full term COI is not possible at the completion of an inspection. When the full term COI can be issued in time to meet the vessel's needs, a temporary COI should not be issued. A temporary COI should never be issued to a vessel that does not qualify for a COI. The vessel's master should be given one copy of the temporary COI while the OCMI retains the original. It is not the Commandant's intention that a COI be withheld pending correction of minor deficiencies after a temporary COI has been issued.

FORM CANCELLATION: Form CG-2801A, List of Merchant Vessels Under Construction or Conversion. Vessel owner/operators are no longer required to submit Form CG-2801A, List of Merchant Vessels Under Construction or Conversion.

The form was used to record Coast Guard inspection resources used for new construction of inspected vessels, uncertificated Military Sealift Command vessels, or vessel conversions. It included information on involvement by the American Bureau of Shipping under the Memorandum of Understanding dated 27 April 1982. This information historically has been used on an infrequent basis by Headquarters personnel; making monthly submissions unnecessary.

Despite its infrequent use, the inspection manhours reported on the subject form are still very important. This information represents a significant expenditure of MI program resources at many ports, particularly for new construction or conversion cases that may last for several months or years. The manhours are eventually used by Headquarters to substantiate both the billet structure in the MI program and future budget requests for resource allocations.

Each OCMI must account for and maintain these MI resource expenditures at the local level. Upon certification, all manhours expended since the initial inspection began, including plan review manhours expended by the unit, must be entered by inspection type into the activity narrative in MISLE.

All of the manhours should not be attributed to “initial certification.” If the vessel is not certificated, for whatever reason, the expended manhours must be entered into the MISLE activity before the activity is closed, thereby enabling this information to be retrieved for reporting purposes. The importance of accurate, complete and timely MISLE data entry cannot be overemphasized, even for those cases in which a vessel is
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A. PHILOSOPHY AND RELATED POLICY

1. General Philosophy

All personnel involved in commercial vessel safety, whether in the field or at a staff, have the personal responsibility to continue developing and increasing their proficiency and the proficiency of those around them. There is no finite amount of knowledge regarding ships, structures, systems, equipment, navigation and operations. No one person can acquire all the required knowledge. As such, Commercial Vessel Compliance personnel must always strive to improve personal and unit proficiency to apply the best solutions to challenging problems and enhance the safety of an ever-evolving maritime industry.

Feeder Ports are the backbone of training for Commercial Vessel Compliance personnel, producing highly competent marine safety professionals who will train the next generation of marine inspectors and supply the Prevention program with personnel who understand the marine industry that we protect. Specific guidance for Feeder Ports is found in Section C.1.

Non-Feeder Ports must also continue to train and develop their personnel. It is probable that a Journeyman Marine Inspector reporting to a non-feeder port will not always have the correct mix of certifications and will have to be trained for new competencies.

Training programs at both Feeder Ports and Non-Feeder Ports must also consider the training needs of the enlisted workforce, generally known as Vessel Examiners.

Training should be integrated in operations, both through formal unit programs and informally. Opportunities for unique training opportunities (e.g., different vessel types, steam, unique repairs) should be seized and capitalized on. Additionally, working with local industry and manufacturers provide an opportunity to gain a much deeper understanding of systems that we regulate.

Commercial vessel certification is achieved through selected formal training and significant On-the-Job-Training (OJT). Verifying Officers (VO) are integral to the OJT process and are discussed in detail in Section D.4. In addition to VOs, many successful training plans incorporate coaches or mentors to assist new inspectors through their transition to marine inspections and the OJT process.

2. Optimal Marine Inspector

a. Background. It is imperative that all Commercial Vessel Compliance personnel develop suitable proficiency beyond initial competency attainment. The Optimal Marine
Inspector definition is an ideal that begins to formulate what is suitable proficiency. The term was used in the 2012 Marine Inspector Strategic Needs Assessment and is integral to the Human Performance Technology cycle.

b. Definition of Marine Inspector. Marine Safety Manual, Volume I, Administration and Management, COMDINST M16000.6 (series), Chapter 3 defines a Marine Inspector as:

The marine inspector is an officer or civilian assigned to the inspection department of a field unit to perform the field duties of the Commercial Vessel Safety (CVS) Program. The inspector must understand and apply federal statutes and regulations, Coast Guard policy, and accepted industrial standards in the inspection of construction, alterations and repairs, equipment, and operating procedures for various types of vessels. To this end, the inspector shall be thoroughly familiar with applicable references (including this manual), and shall take advantage of available technical training.

c. Traits of Optimal Marine Inspector. The Optimal Marine Inspector is a confident and competent member of the maritime community who:

- has an in-depth technical knowledge of the maritime transportation system including vessel components, policy and regulations,
- demonstrates thorough understanding and correct application of regulations, policies, and technical information,
- is capable of balanced decisions with consideration of how they affect commerce, public safety and environmental risk,
- is committed to the Coast Guard marine safety mission,
- promotes self and others in continued professional and inspector development, and
- is recognized as a leader in the marine safety community.

d. Relationship to Vessel Examiners. The traits of the Optimal Marine Inspector were developed as part of a Strategic Needs Assessment focused on Marine Inspectors. Vessel Examiners should also work towards acquiring and displaying these traits within their scope of responsibilities.

3. Related Policy

number of important topics including Marine Safety program philosophy, authorities for Marine Safety activities, Marine Safety organization, personnel management, and occupational health. This chapter is aligned with Marine Safety Manual Volume I and provides specific direction related to Commercial Vessel Compliance Personnel.

b. Coast Guard Sector Organization Manual. The U.S. Coast Guard Sector Organization Manual, COMDTINST M5401.6 (series), provides general guidance with respect to unit training organization, certification boards, and competency management. This chapter is also aligned with that policy and provides specific direction related to Commercial Vessel Compliance Personnel.

c. Coast Guard Officer Specialty Management System Manual.

   (1) The Officer Specialty Management System is outlined in the Coast Guard Officer Specialty Management System Manual, COMDTINST M5300.3 (series). This system is used to quantify demand and measure supply of the officer workforce based on specific specialties and sub-specialties.

   (2) The OSMS applies to commissioned officers O-1 through O-6, and their corresponding officer positions, both active and reserve. Chief Warrant Officers (CWOs) are managed separately. CWOs who become Lieutenants under the CWO to Lieutenant Program have the opportunity to earn specialties and subspecialties codes.

   (3) The Officer Ashore Prevention (OAP) specialty designation is used for Prevention Officers. Two sub-specialties apply to officers working in Commercial Vessel Compliance: OAP-11 - Marine Inspection and OAP-16 - Marine Safety Engineering Technical. Each sub-specialty contains certain knowledge, education, training, or competency requirements to earn an Officer Specialty Code.

   (4) Sub-specialty descriptions and the associated requirements to earn Officer Specialty Codes can be found on the Officer Specialty/Sub-Specialty Requirements (OSR), Form CGHQ-5318. Officers working in Commercial Vessel Compliance should review OAP-11 and OAP-16 to understand the requirements to earn the associated Officer Specialty Codes.

d. Enlisted Rating Advancement Training System (ERATS).

   (1) The ERATS establishes training standards for each rating within the Coast Guard, which must be completed to become eligible for advancement in a chosen rating. The system is designed to align rating training with organizational goals, technological change and to leverage the full range of learning resources available to best support workforce performance.
(2) The system is comprised of six major training components: the Rating Performance Qualification Standard (RPQS), Rating Advancement Test (RAT), Enlisted Professional Military Education (EPME), Advancement Qualification Examination (AQE), Core Competency Requirements and participation in the Servicewide Examination.

(3) Additional information on ERATS can be found on CG Portal.

4. Terms of Reference

The following definitions are provided for convenience, bringing together relevant definitions from a number COMDTINSTs. Any update in a controlling COMDTINST takes precedence over the definition found in this table.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attainable Competency</td>
<td>A competency that can be obtained at a specific unit due to the frequency of that particular activity. Attainable competencies are determined by the Marine Safety Mission Performance Support Committee based on input from the Sector Staffing Model or Marine Inspector Training Officer/Training Officer. Attainable competencies are also sustainable.</td>
</tr>
<tr>
<td>Competency *</td>
<td>Formerly known as a “qualification”, a competency is a collection of tasks with the associated skills, knowledge, and abilities (e.g., tools, methods, information, doctrine, procedures, materials, etc.) needed to perform the tasks to a predetermined, measurable, performance standard.</td>
</tr>
<tr>
<td>Competency Code*</td>
<td>An alphanumeric code, up to eight characters long, that uniquely identifies a competency in Direct Access. This code is established when the competency is created in Direct Access. Users will only see this code when creating ad hoc competency queries.</td>
</tr>
<tr>
<td>Certification*</td>
<td>Formerly known as “qualified”, a certification is an endorsement by the Sector Commander or designee, indicating that specified standards of knowledge and performance were met, or they are being maintained for a particular competency. Certification alone does not guarantee assignment to duties since currency requirements or requirements for newly reported personnel must also be met.</td>
</tr>
<tr>
<td>Certification Boards*</td>
<td>Certification Boards are used to assess a trainee’s understanding of the duties and potential for performance. “Certification” does not mean that they have attained mastery of craft or proficiency because members are expected to continue to grow well after they first obtain their competency and certification. There are five types of certification boards: Oral Pre-board, Final Assessment, Final Board,</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Currency*</td>
<td>Maintenance of proficiency and knowledge associated with a particular certification usually by performing an inspection / examination within a specific timeframe.</td>
</tr>
<tr>
<td>Feeder Port</td>
<td>A Feeder Port is a Sector or Marine Safety Unit (MSU) with a diverse workload and sufficient volume to allow for training in at least four of the marine inspection (MI) and port state control (PSC) competencies. Feeder ports provide qualified MIs and PSCOs to fill those positions throughout the Coast Guard. Feeder Ports are designated by Commandant (CG-CVC).</td>
</tr>
<tr>
<td>Letter of Certification*</td>
<td>A letter issued to a member who has successfully completed all the training and certification requirements for a particular competency. (Also referred to as a qualification or designation letter).</td>
</tr>
<tr>
<td>Newly Reported Personnel*</td>
<td>Newly Reporting Personnel are those members new to a division or unit from either an internal or an external transfer.</td>
</tr>
<tr>
<td>Marine Inspector</td>
<td>A marine inspector is an officer or civilian assigned to the inspection division of a field unit to perform the field duties of the Commercial Vessel Safety (CVS) Program. The inspector must understand and apply federal statutes and regulations, Coast Guard policy, and accepted industry standards in the inspection of construction, alterations and repairs, equipment, and operating procedures for various types of vessels. To this end, the inspector shall be thoroughly familiar with applicable references (including this manual), and shall take advantage of available technical training. (Definition from Marine Safety Manual, Volume I, Administration and Management, COMDTINST M16000.6 (series), Chapter 3.)</td>
</tr>
<tr>
<td>Marine Inspections Training Officer (MITO)</td>
<td>Exclusive to Feeder Ports, MITOs are designated by the Commanding Officer as being responsible for administering a unit’s Inspections Training Program. These positions are filled by highly skilled civilian marine inspectors. (Appendix A of U.S. Coast Guard Sector Organization Manual, COMDTINST M5401.6 (series), has additional information).</td>
</tr>
<tr>
<td>On-the-Job Training (OJT)*</td>
<td>OJT is the planned process of developing knowledge and skills at the “point of work performance”, which will be conducted in the field, or an office or watchstander setting. OJT emphasizes one-on-one coaching and training by an experienced subject matter expert (SME) or accomplished performer who holds the corresponding competency.</td>
</tr>
<tr>
<td>Proficiency*</td>
<td>A measurable, established level of skill or ability required for the competency attached to a specific position. This characteristic is assigned to a competency when it is attached to a position.</td>
</tr>
<tr>
<td>Sector</td>
<td>The term “Sector” in this policy includes any command, detachment.</td>
</tr>
</tbody>
</table>
or detached duty station that performs commercial vessel compliance activities.

**Sustainable Competency**
A competency that can be maintained (for currency) at a specific unit due to the frequency of that particular activity. Sustainable competencies are determined by the Marine Safety Mission Performance Support Committee based on input from the Sector Staffing Model or Marine Inspector Training Officer/Training Officer.

**Training Officer (TO)**
TOs are designated by the Commanding Officer to be responsible for administering a unit’s Training Program including, but not limited to inspections. The TO oversees the Sector’s Training Board. See Chapter 7 of U.S. Coast Guard Sector Organization Manual, COMDTINST M5401.6 (series).

**Training Board***
A Sector or Unit Training Board is required by Chapter 2 of the Performance, Training and Education Manual, COMDTINST M1500.10 (series), and is discussed further in Chapter 6 of the Sector Organizational Manual.

**Training Manager***
A person designated by the MITO/TO to assist a command staff element or department in executing Sector Competency Management policy.

**Verifying Officer (VO)**
An experienced person designated in writing by the Sector Commander or designee, who has demonstrated the ability to instruct, coach and train and to verify a trainee’s ability to correctly perform the task(s) established in the applicable PQS Workbook.*

VOs are the only personnel authorized to sign off PQS tasks and must be certified in the competency for the PQS workbook they are endorsing. This includes meeting currency requirements.

Certain members at National Centers of Expertise or Commandant (CG-5P-TI) may be designated in writing to serve as National Verifying Officers. These members are not required to have unit-specific VO designation letters. The term VO throughout this document includes National Verifying Officers.

* Taken from the U.S. Coast Guard Sector Organization Manual, COMDTINST M5401.6 (series)

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**B. COMMERCIAL VESSEL COMPLIANCE PERSONNEL**

**1. Workforce Classification**
The Personnel Allowance List (PAL) contains several standard titles for Commercial Vessel Compliance Personnel. All positions, regardless of title, from Apprentice to Chief, Prevention Department, MUST strive to professionally develop proficiency beyond competency attainment. Refer to U.S. Coast Guard Sector Organization Manual, COMDTINST M5401.6 (series), Chapter 3, Section B.4.a for a full description of duties and responsibilities.

Descriptions. A description of the position, paygrades and duties of Commercial Vessel Compliance personnel is as follows:

a. **Marine Inspectors**: A marine inspector is an officer or civilian assigned to the inspection division of a field unit to perform the field duties of the Commercial Vessel Safety (CVS) Program. The inspector must understand and apply federal statutes and regulations, Coast Guard policy, and accepted industry standards in the inspection of construction, alterations and repairs, equipment, and operating procedures for various types of vessels. Marine Inspectors are further defined by three levels based on experience and competency:

   1. **Apprentice Marine Inspector (MI/PSCO APPRENTICE)**: Junior Officers (O1-O3), Chief Warrant Officers (CWO2), and civilians (GS-7-12). They acquire detailed knowledge of US and International maritime laws, regulations, policies and the maritime industry with the goal of attaining a minimum of four competencies, at least one of which is domestic and one is foreign, to become a Journeyman Marine Inspector.

   2. **Journeyman Marine Inspector (MI/PSCO JOURNEYMAN)**: Junior Officers (O2-O4), Chief Warrant Officers (CWO2 and CWO4), and civilians (GS-12 to GS-13) who have completed at least one inspection tour and attained four inspection competencies, at least one of which is domestic and one is foreign. Only certifications for inspected domestic vessels or Port State Control examinations, except PSCE, count toward the required four competencies. Journeymen are expected to continue professional development, pursue Verification Officer status and train new inspectors and vessel examiners.

   3. **Advanced Journeyman Marine Inspector (MI/PSCO ADV JRNYMN)**: Junior Officers (O3-O4), Chief Warrant Officers (CWO3-4), and civilians (GS-12 to GS-13) who have more than four competencies and more than six years field experience as marine inspectors. Additionally, Advanced Journeymen have either the K-Boat Inspector (KI), Drydock Inspector (DI), Foreign Tank Vessel Examiner (FTVE), Foreign Chemical Tank Vessel Examiner (FCTVE), Foreign Gas Carrier Examiner (FGCE), Foreign Passenger Vessel Examiner (FPVE), Hull Inspector (HI), Hull Tankship (HT), Machinery Inspector (MI), or Machinery Steam (MS) Inspector competencies. Their job is similar to Journeymen.
Additionally, they are expected to provide experience and expertise to Inspections Division personnel.

b. **Vessel Examiners:** Vessel Examiners are enlisted and civilian personnel who conduct examinations of foreign commercial vessels and U. S. flagged uninspected vessels such as towing vessels and commercial fishing vessels. Depending on the scope of exam and their certification, they may examine vessel lifesaving, firefighting, pollution prevention and navigational equipment, propulsion and steering systems. They inspect and evaluate vessel construction and hull integrity and crew performance of emergency drills.

(1) **Port State Control Officer/Vessel Examiner (PSCO/VSL EXAMINER):** Enlisted Personnel (E-6 to E-9). Pursuant to their competencies these personnel may only lead foreign flag vessels as allowed by Section D1.E of this Manual. They may lead uninspected towing vessel and uninspected commercial fishing vessel exams. They may not issue International Oil Pollution Prevention (IOPP) certificates. A PSCO/VSL EXAMINER is by their nature a specialist and may serve as a Verifying Officer provided the requirements contained in Section D.4 of this chapter are met. Additionally, Chief Petty Officers are responsible for the professional development, technical acumen and leadership qualities of their subordinates.

(2) **Vessel Examiner (VSL EXAMINER):** Enlisted Personnel (E-4 and E-5) and Civilian Personnel (GS-9 to GS-12). Pursuant to their competencies these personnel may assist Marine Inspectors, PSCOs and uninspected vessel examinations. An E-4 or E-5 VSL EXAMINER may serve as a Verifying Officer for the Port State Control Examiner (PSCE) competency provided the requirements contained in Section D.4 of this chapter are met. A Civilian Commercial Fishing Vessel Examiner is a type of Vessel Examiner who has additional duties of managing and marketing their voluntary examination program.

c. **Mid-Management Positions:** Mid-management positions are discussed here as they are critical to workforce proficiency.

(1) **Chief, Inspection Division (INSP DIV CHIEF):** Refer to the Sector Organization Manual, Chapter 3, Section B.4.a for a full description of duties and responsibilities. The CID is a Marine Inspector and should maintain currency, when practical, periodically perform inspections and examinations and participate on certification boards. Each CID should utilize the Inspector Proficiency Assessment Tool (IPAT) to assess competency on a different certified MI at least once per quarter (see Section F.3 for more detailed information on the IPAT).
(2) **Marine Inspector Training Officer (MITO):** A MITO is a GS-13 Marine Inspector/Training Officer assigned at a Feeder Port who is responsible for managing a unit marine inspector training program and ensuring that apprentices, verifying officers and mentors are meeting HQ and unit professional development and training requirements.

(3) **Inspection Division Branch Chiefs:** The Sector organizational construct and PAL do not include Branch Chief positions with the exception of (LT/O-3) FACILITY INSPECTIONS SUPERVISOR at larger ports. In order to maintain span of control it is sometimes necessary to designate personnel as branch chiefs. Assignment as Journeyman and Advanced Journeyman (Apprentices should not be Branch Chiefs) takes precedence over Branch Chief titles. Personnel in these positions are still responsible to earn certifications (as available), maintain currency, perform inspections and examinations and train marine inspectors and vessel examiners.

(4) **Civilian Marine Inspector (GS-12/13):** Journeyman and Advanced Journeyman level MIs that provide continuity and depth to the inspection bullpen within a specific port over a prolonged period of time. Because tour lengths are not a consideration for civilian MIs, they are expected to gain all the inspection competencies that are attainable at their specific unit over time.

2. **Civilian Apprentice Marine Inspector (CAMI) Program**

   a. **Purpose:** The Marine Safety Enhancement Plan outlined a strategic plan to improve the Coast Guard’s ability to perform its marine safety mission. A key element of this plan is to deploy a percentage of the marine inspector workforce as Civilian Marine Inspectors with a solid core capacity of qualifications, and to promote mission consistency across the service. The CAMI program was created to have a ready pool of qualified candidates to rotate into vacating civilian Journeyman positions once they have completed their training.

   b. **Design:** The CAMI program is designed to be a three-year program and provide a structured training platform for CAMIs to gain a solid foundation in marine inspection and port state control knowledge and skills while assigned to a feeder port. Completion of this program is dependent on satisfying the program requirements outline below. Upon successful completion, the CAMI will be designated as a Journeyman Marine Inspector and considered available for transfer to a permanent duty location.

   c. **Program Roles and Responsibilities:**
(1) Under standard Office of Personnel Management merit principles, District Command Staff Advisors (CSA) will initiate a recruitment action, via Commandant (CG-1211), to publically advertise all CAMI vacant billets and conduct the selection process.

(2) Commandant (CG-CVC) will work with the inbound Feeder Port to select the best candidates to conduct interviews with, and together select a primary and alternate for the position.

(3) The District Command staff Advisor will work with the feeder port MITO to provide a new CAMI with unit sponsor contact information. The sponsor will assist the CAMI during transition and to help coordinate a start date. (This date should not be later than 45 business days after accepting the position unless an extension is authorized by Commandant (CG-CVC)).

d. CAMI Recruitment and Retention: All CAMIs are initially offered a GS-7 Step 1 pay grade. COMDT CG-1211 will coordinate available recruitment incentives for newly appointed CAMIs, as follows:

(1) As outlined in Civilian Recruitment, Relocation, and Retention Incentives, COMDTINST 12500.2 (series), paragraph 10.b., a maximum recruitment bonus of 25 percent of the general schedule pay may be offered.

(2) A superior qualification appointment in accordance with Civilian Recruitment, Relocation, and Retention Incentives, COMDTINST 12500.2 (series), paragraph 9, may be authorized up to a GS-7 step 10. This appointment is designed to off-set the forfeiture of income that would have been earned from a non-governmental employment opportunity.

(3) Retention beyond the one year probationary period is incumbent on the CAMI meeting the competency and promotion requirements discussed in paragraphs h and j below. Newly reporting CAMIs should be notified about these expectations which should become part of their work plan. If during their 1st year of probation they are not meeting these expectations, they should be immediately counseled and performance shortfalls documented.

e. CAMI Transfers: At the completion of this program, the CAMI is expected to transition into a permanent non-training position as a Journeyman Marine Inspector.

(1) Sectors shall report all vacant Journeyman Marine Inspector (GS-1801) positions directly to Commandant (CG-CVC) for management directed reassignment of eligible CAMIs prior to contacting the cognizant CSA and announcing the job to the public.
(2) Commandant (CG-CVC), working together with the MITOs will provide receiving units with a candidate pool of CAMIs eligible to transfer.

(3) The receiving unit shall conduct interviews in coordination with the CAMIs feeder port and MITO.

(4) Once selection has been made, the departing feeder port shall report to their cognizant CSA the name of the selected CAMI, the port they have been selected for, and the agreed upon departure/report date so orders can be cut.

(5) If there are no eligible CAMIs, or the eligible CAMIs do not meet the receiving units needs, the unit may submit a request to Commandant (CG-CVC) to pursue an availability announcement to the public. A phone call, email, or memo is acceptable.

f. Occupational Medical Surveillance and Evaluation Program (OMSEP): All CAMIs are required to enroll in the Occupational Medical Surveillance and Evaluation Program (OMSEP) for Hazardous Waste and Hearing Conservation at a minimum, prior to attending any examinations or inspections. OMSEP is a physical examination established to monitor the health of Coast Guard personnel working in jobs designated as having high health risk potential to chemical or physical agents. Requirements as follows:

(1) Chapter 12.A.2.c.2 of the Coast Guard Medical Manual, COMDTINST M6000.1 (series); enrollment for a CAMI is based on the specific job assignment as a marine inspector who is actively engaged for 30 or more days per calendar year. More information can be found at the OMSEP home page, https://hswl.uscg.mil/kseOmsep/. The Evaluation and Enrollment Tool can be found under OMSEP Tools.

(2) Chapter 12.A.5.g of the Coast Guard Medical Manual, COMDTINST M6000.1 (series); civilian employees are entitled to OMSEP services provided by Coast Guard medical facilities. CAMIs should contact their local Safety and Environmental Health Officer (SEHO) and receive instruction on how to schedule a baseline examination (at no out-of-pocket cost). A current list of SEHOs can be found at https://cg.portal.uscg.mil/units/hswlsc/SafeEvHealth/SitePages/Home.aspx using the link, Contacts.

g. CAMI Formal Training:

(1) Through the Coast Guard Learning Management System (LMS) found in the CG Portal, CAMIs must complete the following on-line mandated training courses within 60 days of obtaining a CG standard workstation account:
(a) Civilian Orientation (502281): The purpose of this course is to provide basic information to all new civilian employees about the Coast Guard as an organization, civilian job resources, and professional development; and,

(b) Information Systems Security (810010): The purpose of this course is to provide minimum awareness to CGSW users on the current requirements, mandates, or policies set forth by OMB, DHS, DoD, and the CG.

(2) As soon as a new CAMI receives an employee identification number, supervisors shall ensure an electronic training request (ETR) is submitted for either the Marine Inspector Course (501869) or the Port State Control Course (501864). In order to meet program requirements, CAMIs will attend both courses within their first two years of employment and Commandant (CG-CVC) shall grant top priority to CAMIs for selection to both courses. When requesting a C-school, supervisors shall also ensure the Introduction to Confined Space Entry and Shipyard Competent Person for Marine Inspection/Port State Control (100028) course is completed prior to attending these courses.

(3) MITOs should continually seek professional development opportunities for their assigned CAMIs within the maritime industry. Working with classification societies, shipyards, or other local marine transportation companies are normally very successful. These training opportunities are welcomed by the industry as they are extremely helpful in developing relationships as well as improving partnership knowledge of the maritime sectors that the Coast Guard regulates. At the conclusion of the training.

h. Proficiencies: To successfully complete this program, CAMIs will need every opportunity to concentrate on their training plan. During this program, CAMIs should not be tasked with duties outside their position description such as carrying collateral responsibilities. The CAMI position description is available at Commandant (CG-CVC).

(1) Once the minimum required proficiencies have been achieved as outlined below, additional responsibilities may be added. Supervisors should only consider CAMI attendance at after-hours inspections if the training opportunity is not otherwise available during normal work hours and provided that the training is in line with the CAMI’s work plan.

(2) CAMIs are directed to Section A, paragraph C, for guidance on completing Performance Qualification Standards (PQS) workbooks and requesting certification. PQS workbooks are available at https://elearning.uscg.mil/catalog/, located under the Marine Safety section.

(3) To ensure CAMIs are well-rounded, it is important that CAMIs become proficient in both domestic inspections and port state control. Supervisors will identify the
required proficiencies in the CAMI’s work plan based on the competencies attainable at their particular feeder port. The Port State Control Examiner (PSCE) competency is attainable at all feeder ports and must be obtained as a pre-requisite by all CAMIs.

i. Paygrade specific CAMI proficiency requirements:

(1) GS-1801-7: Proficiency needed at this level are:

(a) Attend the Marine Inspection Course (501869) or Port State Control Course (501864).

(b) Fundamental knowledge of prevention operations, policies, methods, and procedures with regards to marine safety programs.

(c) Ability to conduct appropriate pre-inspection review for a particular class of vessel and any available previous inspection histories in preparation of assigned vessels or systems.

(d) A working knowledge of computer systems related to job responsibilities, such as MISLE, Lloyd’s Register, IMO, SafeNet, etc.

(e) Ability to perform routine inspections/examinations under supervision on domestic/foreign vessels and other marine structures for compliance with the applicable statutory/international requirements.

(f) Ability to evaluate basic systems and vessels for compliance with straightforward specifications and requirements.

(g) Knowledge of basic inspection procedures & techniques in accordance with the laws, regulations, and precedents governing inspections to perform developmental assignments or segments of larger inspection actions.

(h) Prepare technically accurate and timely reports of inspections and examinations performed.

(i) Develop the ability to communicate, orally and in writing, pertinent information relative to assigned area of study.

(j) Obtain at least two (2) vessel specific competencies as outlined in the appropriate feeder port’s attainable list.

(2) GS-1801-9: In addition to the proficiencies described for the GS-7 level, proficiencies needed at this level are:
(3) Ability to inspect required navigation, intra-vessel communication, alarm, lifesaving, fire fighting, and pollution prevention systems on a vessel to ensure that proper operations and compliance with applicable national and international standards.

(4) Capability of identifying hazardous conditions, note violations of accepted vessel specifications and operations technology, and prescribe acceptable methods of correcting these conditions.

(5) Accurate inspection documentation preparation; including appropriate orders drafted specifying any required changes, repairs or operational limitations for the vessel and its equipment. When deficiencies are noted, CAMI evaluates the impact of the deficiency, directs appropriate corrective measures and prepares appropriate documents to notify the vessel owner/operator of the corrective measures required.

(6) Ability to read engineering plans and have a basic understanding of shipbuilding practices and vessel operations.

(7) The professionalism, judgment and responsibility necessary to understand the impacts of decisions made regarding safety standards (including acceptable concession on the operations, repairs, replacements, etc) on vessel operations and on local industry and commerce.

(8) Understanding and comprehension of the USCG’s strategic, technical and regulatory position in the marine industry (e.g., CG literature - The Proceedings, Mission Performance Plans, CG Authorization Bills, etc. Industry literature - stay current on industry release publications)

(9) Ability to prepare professional briefing papers, technical analyses, and optional evaluations for the Officer-in-Charge, Marine Inspection, where inspection decisions may have broad impact on an industry, are controversial in nature, or are expected to be appealed to higher authority.

(10) Obtain two (2) more competencies for a total of four (4) competencies as outlined in the appropriate feeder port’s attainable list with at least one (1) being a Port State Control vessel competency.

j. Promotion: If all of the required levels of proficiency have been met; a CAMI’s promotion schedule is to start as a GS-7 and promote to GS-9 on the first anniversary. Upon the second anniversary, the CAMI is expected to promote to a GS-11. Finally, the CAMI is expected to promote to a GS-12 on the third anniversary. In order to promote on schedule, the following minimum criteria must be met:
(1) For promotion from a GS-7 to GS-9:

(a) Receive a ‘meets’ or ‘exceeds’ on all performance evaluations; and,

(b) Earn at least two (2) competencies as outlined in the appropriate feeder port’s list of attainable and sustainable competencies.

(2) For promotion from a GS-9 to GS-11:

(a) Receive a ‘meets’ or ‘exceeds’ on all performance evaluations; and,

(b) Earn at least two (2) additional competencies as outlined in the appropriate feeder port’s list of attainable and sustainable competencies. At the completion of the second year and before promotion to GS-11, the total number of competencies earned must be at least 4, not including the PSCE competency.

(3) For promotion from a GS-11 to GS-12:

(a) Receive a ‘meets’ or ‘exceeds’ on all performance evaluations; and,

(b) Throughout the one year time-in-grade, actively seek assignment to a permanent journeyman marine inspector billet.

(4) To avoid promotion delays, supervisors shall submit Request for Personnel Action, SF-52 to their District Command Staff Advisor (CSA) one month in advance of a CAMI’s anniversary date; provided that the CAMI meets the above criteria. Career ladder promotions can be enacted without further authorization as these positions are approved for a full performance level of GS-12. Performance evaluations are not required to accompany promotion requests.

k. **Relocation**: Relocation to perform marine inspection duties at a journeyman level is expected after completion of training. A CAMI that is promoted to a GS-12 and continues to occupy the training billet will be subject to the Mobility Certificate Agreement.

l. **Waiver**: A Feeder Port Commanding Officer that anticipates a CAMI not complete the requirements for promotion as prescribed in this policy and determines the reason was outside the CAMI’s control, he or she shall, prior to deviating from the above promotion track, submit a memo to Commandant (CG-CVC):

(1) Identifying the reason for deviation (examples may include: need to shift resources due to significant unplanned events such as spills of national significance, employee is recalled to an active duty obligation, or limited availability to perform vessel
inspection activity because of reduced vessel traffic); and,

(2) Propose an alternative training timeline for the CAMI to fulfill the required competencies.

C. FEEDER PORT PROGRAM

1. Designation

a. General. Feeder ports are designated by Commandant (CG-CVC) based on a unit’s attainable and sustainable competencies. Units that feel they possess the necessary inspection and examination workload, training program, and resource capacity to be designated as a feeder port must submit a request to Commandant (CG-CVC) in standard memo format. Commandant (CG-CVC) will coordinate the review of the request to include historical and current MISLE activities, competency cubes in CGBI, Personnel Allowance List staffing levels, Mission Management System and MITO peer audit results, and any other factors for consideration.

b. Attainable and Sustainable Competencies. Annual review of attainable and sustainable competencies at Feeder Ports will be conducted by Commandant (CG-741), validated by feeder ports and approved by the Prevention Performance Advisory Committee (PPAC). Since the Sector Staffing Model relies on historic MISLE data over a period of time, new activities or the removal of historic activities at a feeder port should be documented and forwarded to Commandant (CG-CVC) and Commandant (CG-741) for the annual review. (i.e., shipbuilding contracts, a new LNG terminal, removal of a MARAD fleet, etc; could impact activities and needed or “Sustainable” competencies.)

(1) Attainable competencies are those competencies that can be obtained at a specific unit due to the frequency of that particular activity. The minimum activity level in the Sector Staffing Model (SSM) for a competency to be considered attainable is 451 hours of training opportunities for each vessel type. SSM calculations are vetted by feeder port MITOs to account for recent changes or anomalies in the data and to validate workload in respective ports.

(2) Sustainable competencies are those competencies that can be maintained (for currency) at a specific unit due to the frequency of that particular activity. The minimum activity level in the SSM for a competency to be considered sustainable is between 29 hours and 450 hours of training opportunities for each vessel type.

2. Staffing
a. **General.** A sufficient ratio of Journeyman Marine Inspectors to Apprentice Marine Inspectors must be maintained. Due to larger needs of the service and availability of Journeyman Marine Inspectors, it is possible that OPM may have to assign Apprentice Marine Inspectors to Journeyman billets and in limited cases to Non-Feeder Ports. In these cases, these personnel must make every attempt available to attain requisite competencies.

b. **Marine Inspector Training Officer (MITO)**

(1) **Description.** MITOs are responsible for the technical development of marine inspectors as evidenced by competency attainment and the further development of proficiency. Examples of further development include Verifying Officer status and professional certifications.

(2) **Duties.** In their Position Description, a MITO is titled a Senior Marine Inspector/Training Officer. This means their responsibilities include a mix of performing inspections, training others and managing the unit’s marine inspector training program. The degree to which each MITO is a hands on trainer versus a manager of training has to be determined locally based on the unit’s specific workload, size and quality of the bullpen and availability of VO’s. MITOs should maintain currency of their certifications and should be a technical expert for the attainable qualifications at their unit.

(3) **Authority.** MITOs typically work directly for the Chief, Inspections Division because of the responsibilities of training marine inspectors. MITOs evaluate work performance of AMIs and VOs and provide feedback to both the individual and supervisor in a timely manner. MITOs are to take appropriate performance based action if necessary; giving advice, counsel, or instruction to employees on both work and administrative matters. Per their position description, MITOs have direct input into personnel evaluation marks to document performance and proficiency in keeping with unit training strategy and Individual Development Plans.

(4) **Supervisory Responsibility:** Depending on the terms of hiring documented in their individual position description, not all MITOs are considered “supervisors” in the sense of being able to formally evaluate active duty members or other civilian employees. Regardless, MITOs are responsible for supervising the training-related efforts of marine inspectors. Careful attention must be paid to the fact that the development of an officer as a marine inspector and CG officer overlap significantly but are not synonymous. MITOs train officers to become marine inspectors which is one aspect of their career development.

c. **Expectations.**
(1) Feeder Ports are expected to develop apprentices to attain a minimum of four attainable competencies, specific to that feeder port, with an emphasis on domestic vessel inspections and foreign vessel examinations.

(2) PSC Examiner (PSCE), Liferaft Inspector (LR), Commercial Fishing Vessel Examiner (CFV), and Uninspected Passenger Vessel Examiner (UPV) do not count as one of the four competencies an apprentice marine inspector must attain for a successful first tour.

(3) This does not prohibit marine inspectors from attaining any specific competencies, including those listed in paragraph D.1.d(2) above. Marine Inspectors are encouraged to make the most of every training opportunity and seek out additional opportunities.

(4) Progress is tracked through the Feeder Port Progress Report, administered by Commandant (CG-5P-TI). The report utilizes TMT and DA certification/qualification data and is published every three months, February, May, August and November. The data provides critical trend data to determine the effectiveness of training policy and decisions.

d. Use of Apprentices: Apprentice MIs will spend their full tour as Apprentice MIs. As such they will pursue all qualifications available at the unit and once qualified will conduct inspections independently to gain expertise in that competency. The ability of Apprentice MIs to work independently once qualified will offset the training loads experienced by the core Journeyman MIs at the unit. In some cases, Apprentice AMIs may have the opportunity to gain qualifications in competencies normally only sustainable at the unit. Non-MI related collaterals and duties should be minimized. For professional development reasons, junior officers training to be MI’s may need to assume certain collateral duties, those should only be assigned when necessary and taking into account the impact on the officer’s professional development as both an MI and Coast Guard Officer.

e. Apprentices as PQS Verifying Officers: Apprentice MIs should not be PQS Verifying Officers for other Apprentice MIs unless they meet the requirements contained in Section D.4 of this chapter.

D. TRAINING AND CERTIFICATION PROCESS

1. Performance Qualification Standards (PQS Books) and Inspection Guides
The most recent PQS Workbook must be utilized by Marine Inspectors and Vessel Examiners during training. The most recent editions of these PQS workbooks are available through the Coast Guard Learning Management System, under Maritime Safety in the Course Catalog.

All pre-requisites must be met unless the PQS specifically allows deferment or delay. See U.S. Coast Guard Sector Organization Manual, COMDINST M5401.6 (series), Chapter 8.E for specific requirements when deferring a PQS item.

Some PQS Workbooks have vessel specific addendums. For those types of vessels, the addendum is required to be completed prior to examination or inspection of that particular vessel type. For example, to qualify for an endorsement to examine Foreign Ro-Ro Passenger Vessels you will be required to complete the specific tasks and steps associated with Ro-Ro vessels which are incorporated in the addendum workbook.

Units may also develop unit-specific requirements in addition to the PQS that address local policies, procedures and operations.

All Verifying Officers (VO) must be familiar with the PQS content, particularly the task, condition, steps, and VO Guidance. Not all steps supporting a task need to be completed at the same time, however, all steps must be completed prior to signing off the task. Additionally, the VO must take into account the VO guidance when determining successful completion of a step and task.

2. Competency Applicability Tables

<table>
<thead>
<tr>
<th>Vessel Subchapter (46 CFR)</th>
<th>Vessel Type</th>
<th>Competency to be used</th>
<th>Competency Dictionary Code</th>
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<tbody>
<tr>
<td>C</td>
<td>Fishing Vessel</td>
<td>Commercial Fishing Vessel Examiner</td>
<td>CVSFSE</td>
</tr>
<tr>
<td>C</td>
<td>Uninspected Uninspected Fishing Vessel</td>
<td>Uninspected Towing Vessel Examiner</td>
<td>CVSUT</td>
</tr>
<tr>
<td>D</td>
<td>Tankship</td>
<td>Hull Inspector (Tankship) Machinery Inspector (Diesel) as appl. Machinery Inspector (Steam) as appl.</td>
<td>CVSHT CVSMI CSVSMS CSVBI</td>
</tr>
<tr>
<td>D</td>
<td>Tank Barge</td>
<td>Barge Inspector</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>Cruise</td>
<td>Hull Inspector</td>
<td>CSVSHI</td>
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### CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY

<table>
<thead>
<tr>
<th>Passenger Vessels</th>
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<th>Competency Codes</th>
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<tr>
<td>I Cargo &amp; Misc. Vessels</td>
<td>Freight Ship</td>
<td>Hull Inspector Machinery Inspector (Diesel) as appl. Machinery Inspector (Steam) as appl. (OSVs inspected under Subchapter I only requires the CVSOI competency)</td>
<td>CVSHI CVSMI CVSMS</td>
</tr>
<tr>
<td>I-A MODUs</td>
<td>Mobile Offshore Drilling Unit Inspector</td>
<td>CVSMU</td>
<td></td>
</tr>
<tr>
<td>K Small Passenger Vsl &gt;150</td>
<td>K-Boat</td>
<td>K-Boat Inspector</td>
<td>CVSKI</td>
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<td>L Offshore Supply Vessels</td>
<td>OSV</td>
<td>OSV Inspector (Some OSVs are inspected under 46 CFR Subchapter T; in these cases the CVSTI competency is also required.)</td>
<td>CVSOI CVSTI</td>
</tr>
<tr>
<td>R Nautical Schools</td>
<td>Schoolship</td>
<td>Hull Inspector Machinery Inspector (Diesel) as appl. Machinery Inspector (Steam) as appl. (Some schoolships are certificated under subchapters T or K. In these cases a CVSTI or CVSKI competency would be required)</td>
<td>CVSHI CVSMI CVSMS CVSTI CVSKI</td>
</tr>
<tr>
<td>T Small Passenger Vessels</td>
<td>T-boats</td>
<td>Small Passenger Vessel (T-boat) Inspector</td>
<td>CVSTI</td>
</tr>
<tr>
<td>U Oceanographic Research Vessel</td>
<td>ORV</td>
<td>Hull Inspector Machinery Inspector (Diesel) as appl. Machinery Inspector (Steam) as appl. (Some ORVs are certificated under subchapters T or K. In these cases a CVSTI or CVSKI competency would be required)</td>
<td>CVSHI CVSMI CVSMS CVSTI CVSKI</td>
</tr>
</tbody>
</table>

Note: The Competency Dictionary with all Competency Codes can be found at [http://www.uscg.mil/ppc/da/](http://www.uscg.mil/ppc/da/)
Competency Applicability (Foreign Flag Vessels)

<table>
<thead>
<tr>
<th>Vessel Service</th>
<th>Competency to be used</th>
<th>Competency Dictionary Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freight Ships</td>
<td>Foreign Freight Vessel Examiner</td>
<td>CVSFV</td>
</tr>
<tr>
<td>Tank Ships (Oil)</td>
<td>Foreign Tank Ship Examiner</td>
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</tr>
<tr>
<td>Chemical Carriers</td>
<td>Foreign Chemical Tank Vessel Examiner</td>
<td>CVSML</td>
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<tr>
<td>Gas Carrier</td>
<td>Foreign Gas Carrier Examiner</td>
<td>MARFGCE</td>
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<tr>
<td>Cruise Ship</td>
<td>Foreign Passenger Vessel Examiner</td>
<td>MARFPVE</td>
</tr>
<tr>
<td>MODU/Offshore COC</td>
<td>Foreign MODU/offshore installations requiring a COC</td>
<td>CVSMU</td>
</tr>
<tr>
<td>All</td>
<td>Port State Control Examiner – Cannot lead exam</td>
<td>MARPSC</td>
</tr>
</tbody>
</table>

3. Maintaining and updating PQS books and Inspector Guides

a. Ownership. Marine Inspector and vessel examiner PQS books and Inspection Books are owned by Commandant (CG-CVC). Commandant (CG-CVC) has final approval of PQS book changes in consultation with the Prevention Performance Advisory Committee (PPAC).

b. Administration and Maintenance. The administration and maintenance of PQS books and Inspection Guides lies with the Training Center Yorktown Marine Safety School (FC-TCY-TM) as follows:

(1) FC-TCY-TM maintains process guides to detail organizational relationships, procedures, and timelines for maintaining, reviewing and updating PQS books and Inspection Guides. Major and Minor changes are defined and their adjudication is also described.

(2) Specifically, FC-TCY-TM will:

(a) gather, draft, and issue changes to all Marine Inspection PQS and job aids,

(b) conduct routine annual review to assess the need for minor changes based on user feedback,

(c) Solicit input from Course Administrators and National Center of Expertise subject matter experts as well as field users to assess the need for a significant change
involving the addition or removal of a task recommended by user feedback. Additional or removal of a task requires Commandant (CG-CVC) concurrence.

4. **Verifying Officer Performance**

   a. Verifying Officers (VO) are the backbone of marine inspector training. Selection as a VO demonstrates that a Marine Inspector or Vessel Examiner has demonstrated exceptional professionalism and technical expertise. As such, it should be a highly sought after designation and assigned judiciously. It is not an automatic designation.

   b. Each VO must meet the following minimum requirements:

      (1) The VO shall have already obtained formal designation in writing by the OCMI and be current for the certification for which he/she is being considered as a PQS Verifying Officer,

      (2) The VO shall have the confidence of the Chief, Inspections Division, and Marine Inspection Training Officer or Training Manager and meet at least one of the following requirements:

         (a) Be a Journeyman Marine Inspector, or

         (b) Be an Apprentice Marine Inspector (AMI), a Civilian Apprentice Marine Inspector (CAMI) or a Vessel Examiner who has held the certification for which VO designation is being sought for a period of not less than six months.

   c. **Formal Evaluation as a PQS Verifying Officer.** Once the minimum requirements of paragraph 4.b. are met, units shall conduct a formal evaluation of the Marine Inspector’s or Vessel Examiner’s potential as a VO. Marine Inspectors or Vessel Examiners who already hold the VO designation for the certification being sought shall conduct the formal evaluation. The formal evaluation consists of two parts: an IPAT evaluation on a vessel specific to the competency and an evaluation of the VO candidate’s ability to train and evaluate a trainee’s performance using the criteria below:

      (1) Technical expertise (can effectively evaluate a trainee’s understanding of technical concepts),

      (2) Training knowledge (possesses an in depth understanding of the unit’s training program),
(3) Job-task knowledge (possesses comprehensive understanding of each of the PQS tasks for the competency in question),

(4) Interpersonal skills (can effectively interact with different trainees and evaluate their technical ability and comprehension),

(5) Attitude (possesses an attitude that promotes learning and professional development),

(6) Listening ability (can listen and understand different trainees during the verification process),

(7) Degree of patience (can adjust to different types of learners),

(8) Accessibility to trainees (is available to trainees),

(9) Communications skills (can effectively communicate when explaining inspection concepts to trainees),

(10) Willingness to follow certification requirements (committed to training and verifications in accordance with established policy), and

(11) Judgment (make recommendations to the OCMI regarding a trainee’s ability to effectively represent the Coast Guard as a certified inspector).

d. Expectations for PQS Verifying Officers. PQS tasks shall only be signed off by command designated VOs. Command designated VOs must have demonstrated an ability to effectively instruct and evaluate marine inspectors in the performance criteria established for their VO competency. In conducting the functions of a VO, the below sequence shall generally be followed. Under certain circumstances, steps below may be omitted given the experience level of the trainee, however this should only be done after the VO has carefully considered the trainee’s experience and knowledge concerning the task being conducted. At a minimum, steps (4) and (5) must be completed.

(1) Step One: VO Explains and Demonstrates. The VO shall demonstrate the performance of the task while explaining the process using proper nomenclature and procedures,

(2) Step Two: VO Demonstrates and Trainee Explains. While the VO demonstrates the task, the trainee is given the opportunity to verbalize his / her understanding of the concepts. This is not the evaluation of the task. The VO may coach the trainee through this process if necessary and reinforce trouble areas for comprehension.
(3) **Step Three: Trainee Demonstrates and VO Explains.** Hands-on is a must for performance training. The trainee will perform the task with as much coaching as needed from the VO. Communicate constantly during the process to ensure the trainee understands his / her actions. The VO must closely monitor the trainee’s performance for safety precautions and concerns.

(4) **Step Four: Trainee Explains and Demonstrates.** This is not the evaluation of the task. The trainee must be provided opportunities to practice the task. The number and frequency of this step will be determined by the VO depending on the proficiency of the trainee.

(5) **Step Five: Task Endorsement.** Once the VO is satisfied the trainee has demonstrated a satisfactory understanding of the task being performed using the guidelines above, the task item may be signed off. VOs must ensure that they are evaluating the trainee’s ability to meet the current requirements identified for the specific task and guard against requiring them to go beyond those requirements.

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5. **Commercial Vessel Compliance Personnel Verification Inspections/Exams**

   a. **Method.** Field practical verification inspection/examination (check ride) shall be conducted with the trainee as the team leader under the direct supervision of a VO. The VO shall assess whether the trainee has the necessary judgment, knowledge and communications skills to successfully conduct the inspection / examination. The VO should only intervene if absolutely necessary. Multiple trainees shall not be evaluated during the same vessel activity with the exception of U. S. flag deep draft vessels that require both a Hull and Machinery Inspector. The VO shall utilize the IPAT plus Appendix 1 to this Chapter to standardize assessment. Data from Appendix 1 is not uploaded into the IPAT data site. Feedback shall be provided to the trainee and IPAT data shall be entered in accordance with current IPAT processes.

   b. **Rigor.** Additionally, efforts shall be made on the part of the MITO/TO to ensure that the trainee has not only accomplished individual tasks for a competency but has a broader understanding of the competency requirements and can readily access and interpret regulations and policy. Methods such as a written test or pre-board will prove useful in this determination.

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6. **Merchant Marine Indoctrination Ship Rider Program and Industry Specific Orientation**

To provide an understanding of the maritime industry as well as specific segments of the industry and ships we regulate, the Coast Guard has developed two types of industry orientation
training for marine inspectors; the Merchant Marine Indoctrination (MMI) Ship Rider program and Industry Specific Orientation training. Completion of these training programs will provide valuable professional exchange opportunities for the mutual benefit of both the Coast Guard and the merchant marine industry.

a. **MMI Ship Rider Program.** The MMI Ship Rider Program is a cooperative educational program between the Coast Guard and participating host ship companies. By providing opportunities for Coast Guard Marine Inspectors to join a vessel’s crew while underway and act as a riding observer, the program gives the ship rider practical knowledge of the performance and operating characteristics of various vessels, equipment, waterways, and crews operating within the maritime industry. The program is designed for first tour Coast Guard marine inspectors as part of their introductory phase into vessel inspections. It’s especially useful for those new marine inspectors who have little or no shipboard experience, as it will provide the relevant background knowledge to assist in marine inspector training. It is expected that all first tour apprentice marine inspectors with little or no commercial shipboard experience will complete a MMI ship ride prior to completing their initial apprentice marine inspection tour. Details on the MMI Ship Rider Program can be found in Coast Guard Merchant Marine Indoctrination (MMI) Ship Rider Program, COMDTINST 16705.1(series).

(1) Coast Guard Merchant Marine Indoctrination (MMI) Ship Rider Program, COMDTINST 16705.1(series) states that “The program also serves to increase and expand marine inspector knowledge of the maritime industry in their unit’s area of responsibility. As such, the program may be utilized by Marine Inspectors to understand different operating requirements, characteristics or vessel types upon transfer to units with unique or different inspected vessels.” The Liquefied Gas (LG) Ship Rider Program is an example of such a program.

(2) The Liquefied Gas Carrier National Center of Expertise (LGC NCOE) manages the LG Ship Rider Program. The program’s intent is to give experienced Foreign Gas Carrier Examiners (FGCEs) a comprehensive understanding of LG ship operations. While the program is targeted at qualified FGCEs, units may arrange for a FGCE Verifying Officer to accompany an apprentice FGCE to assist in PQS completion. Requests for the LG Ship Rider Program should be coordinated through the LGC NCOE.

(3) During the LG ship ride, participants must complete the Liquefied Gas Ship Rider Performance Guide and the associated post-ship ride survey. The performance guide can be found on the LGC NCOE CGPortal site. LG ship rider participants must submit a copy of the completed Performance Guide to the LGC NCOE, through their chain of command, for feedback and action.
b. **Industry Specific Orientation.** Industry Specific Orientation training is designed to develop a foundational understanding of a specific vessel industry and includes a series of tasks that must be completed as part of the marine inspection qualification process. These tasks include ship rides or shoreside tasks appropriate for that particular industry and vessel type. All marine inspection performance and qualification standards (PQS) now include enclosures that require Industry Specific Orientation training. This orientation training is more easily adaptable to non-seagoing vessels or vessels with short voyage durations such as T-boats and certain towing vessels. All current PQS are available on the Learning Management System within the Coast Guard Portal.

c. Industry Specific Orientation training is not a substitute for conducting a ship ride as part of the MMI Ship Rider Program. However, a marine inspector may complete specific Industry Specific Orientation training PQS tasks while participating on a MMI ship ride. It is up to the marine inspection training officer (MITO) or unit training officer to properly manage a marine inspector’s training and qualification process to ensure the intent and goals of each program are met.

### 7. C-School Training

MITOs or Unit Training Officers should coordinate C-School training requests for their unit. Below are a list of mandatory and additional courses applicable to Marine Inspectors and Vessel Examiners as well as information regarding course waivers. Course prerequisites (and the process for requesting waivers from the prerequisites), descriptions, and requirements are available on the TQC website at http://www.uscg.mil/hq/tqc/.

a. **Mandatory.**

   (1) Marine Inspector Course (Domestic) – Course Code 501869

   (2) Port State Control (PSC) – Course Code 501864.

   (Note: Marine Science Technicians (MSTs) who have graduated from MST A-School after 27 January 2010 are not required to attend the PSC Course.)

b. **Mandatory for earning a competency.**

   (1) Advanced Foreign Passenger Vessel Examiner – Course Code 500317 (Required for Foreign Passenger Vessel Examiner certification)

   (2) Gas Carrier Inspector (Gas) (MS-513) – Course Code 351263 (Required for Foreign Gas Carrier Examiner certification)
c.  Additional.

(1) Chemical Tanker Safety (MS-525) – Course Code 250540

(2) Commercial Fishing Vessel Exam (MS-527) – Course Code 500304

(3) Crude Oil Wash/Inert Gas (COW/IG) (MS-404) – Course Code 250257

(4) Diesel/Steam Automation (MS-507) – Course Code 250015

(5) Fiberglass Reinforced Plastic and Wooden Boats (MS-454) – Course Code 340210

(6) Outer Continental Shelf Inspection (MS-514) – Course Code 250269

(7) T-Boat Structural Plan Review (MS-520) – Course Code 400479

(8) Uninspected Towing Vessel Exam – Course Code 502234

d.  Waivers from mandatory courses.  Due to high quota demand, Commandant (CG-CVC-2) instituted a waiver process for the Port State Control course.

(1) This process shall only be used when the following conditions are met:

   (a) The candidate has completed the PSCE PQS,

   (b) The candidate has successfully conducted the required verification exam,

   (c) The candidate has passed the oral PSCE certification board, and

   (d) The unit has submitted at least 2 previous electronic training requests (ETRs) for the course and has not received a quota.

OR

   (e) The candidate has completed (a) – (c) above and the command must have the candidate qualified before the next PSC course convening in order to effectively perform PSC activities.

(2) Personnel with the legacy EI, SFV or SFVA qualifications are eligible for a PSC course waiver, without completing (a) – (c) above, provided the unit has submitted at least 2 previous ETRs for the course and has not received a quota.
(3) Requests for a waiver shall be submitted in standard memo format, signed by the Chief, Prevention Department or higher, to Commandant (CG-CVC-2) with the following information:

(a) A statement that the candidate has completed the PSCE PQS, successfully conducted the verification exam, and passed the oral PSCE certification board.

(b) The amount of time the candidate has been conducting PSC exams and number and type of vessels examined during the certification process.

(c) How long the candidate has been waiting to attend the PSC course.

(d) A description of any other vessel or PSC related training or professional education.

(e) Any other input the unit wishes to submit to justify the waiver.

(4) Commandant (CG-CVC-2) will review the waiver package and determine if a waiver is appropriate. If so, Commandant (CG-CVC-2) will send a PSC Course Waiver Exam to verify the candidate has an equivalent level of knowledge as those who have completed the PSC course. The exam package will include specific instructions for the unit and the candidate on proctoring and returning the exam.

(5) Commandant (CG-CVC-2) will respond via memo with the exam results.

(a) Candidates that pass the exam will receive a memo that states that the PSC course requirement is waived.

(b) Candidates that fail the exam will receive a memo that the PSC course requirement is not waived and that they may request a retest after 6 additional weeks of on-the-job training. If the candidate fails the exam a second time, they must attend the PSC course prior to receiving any additional PSC certifications.

e. Waivers from mandatory courses for earning a competency. Units should refer to the preamble of the applicable PQS for information on course waivers and prerequisite deferment.

8. Competency Management

a. Training Management Tool (TMT).
(1) Use of the Training Management Tool is required by Mandatory Use of the Training Management Tool, COMDTINST 5270.2(series).

(2) Units must assign competencies to individuals when they are first directed to pursue those competencies. Once certified, units must reflect that change in TMT. The practice of assigning and certifying personnel simultaneously once they receive their certification is unacceptable.

b. Direct Access. Certain data systems draw information from Direct Access rather than TMT. For instance, Direct Access data is the basis for the Employee Summary Sheet which is routinely used by selection boards and other panels. Marine Inspectors and Vessel Examiners should ensure their competencies are correct in Direct Access in addition to TMT.

E. MAINTAINING CERTIFICATIONS AND CONTINUED PROFESSIONAL DEVELOPMENT

1. Currency

a. Twelve Month Currency Requirement: To remain certified, MIs, PSCOs and Vessel Examiners shall conduct at least one inspection / examination every twelve months for each competency required by the OCMI. This can be accomplished as the team leader, lead inspector or as a team member. The following are competencies listed with the activities that are acceptable towards meeting the twelve month currency requirement:

(1) Domestic Competencies:

(a) Life raft Inspector: Completion of a life raft servicing inspection.

(b) T-Boat Inspector (TI): Completion of a COI or annual inspection of a U.S small passenger vessel regulated under subchapter T or subchapter K.

(c) K-Boat Inspector (KI): Completion of a COI or annual inspection of a U.S. small passenger vessel regulated under subchapter K.

(d) Barge Inspector (BI): Completion of a COI, annual, or periodic inspection of a U.S. barge regulated under subchapter D, I, or O.

(e) Offshore Supply Vessel Inspector (OI): Completion of a COI, annual, or periodic inspection of a U.S. offshore supply vessel regulated under subchapter L.
(f) Hull Inspector (HI): Completion of the Hull Inspection tasks for a COI, annual, or periodic inspection of a U.S. deep draft vessel regulated under subchapter H, I, R, or U.

(g) Hull Inspector, Tankship (HT): Completion of the Hull Inspection tasks for a COI, annual, or periodic inspection of a U.S. deep draft vessel regulated under subchapter D or O.

(h) Machinery Inspector (MI): Completion of the Machinery Inspection tasks for a COI, annual, or periodic inspection of a U.S. deep draft vessel regulated under subchapter D, H, I, O, R, or U.

(i) Machinery Inspector, Steam (MS): Completion of the Machinery Inspection tasks for a COI, annual, or periodic inspection of a U.S. steam propelled deep draft vessel regulated under subchapter D, H, I, O, R, or U.

(j) Mobile Offshore Drilling Unit Inspector (MU): Completion of a COI, annual, or periodic inspection of a U.S. mobile offshore drilling unit regulated under subchapter I-A.

(k) Drydock Inspector (DI): Completion of a dry-dock inspection, internal structural exam, or cargo tank internal exam of a U.S. vessel of 100 gross tons or more.

Note: Completion of Streamlined Inspection Program, Alternate Compliance Program, or Maritime Security Program audits and oversight inspections conducted in lieu of traditional regulatory inspections satisfy certification requirements for applicable Marine Inspector competencies.

(2) Port State Competencies:

(a) Port State Control Examiner (PSCE): Completion of a PI, PII, Random Safety, COC-Annual, COC-Renewal, or COC-Quarterly examination on any foreign commercial vessel type. This competency is also considered certified if any other Foreign Vessel Examiner competency is maintained certified.

(b) Foreign Freight Vessel Examiner (FFVE): Completion of a PI, PII, or Random Safety examination on a foreign freight vessel.

(c) Foreign Tank Vessel Examiner (FTVE): Completion of a PI, PII, COC-TVE Annual, or COC-TVE Renewal examination on a foreign petroleum tank vessel.

(d) Foreign Chemical Tanker Examiner (FCTE): Completion of a PI, PII, COC-Chem Annual, or COC-Chem Renewal examination on a foreign chemical carrier.
(e) **Foreign Gas Carrier Examiner (FGCE):** Completion of a PI, PII, COC-Gas Annual, or COC-Gas Renewal examination on a foreign gas carrier.

(f) **Foreign Passenger Vessel Examiner (FPVE):** Completion of a PI, PII, COC-CVE Initial, COC-CVE Annual, or COC-CVE Quarterly examination on a foreign passenger vessel.

b. **Lapse of Twelve Month Currency Requirement:** Those MIs, PSCOs and Vessel Examiners who have not performed a particular inspection / examination type during any twelve month period will have lapsed in currency for that specific competency. They are therefore no longer certified and are not authorized to lead foreign vessel exams or domestic vessel inspections. Members with lapsed currency can only be recertified by completing a field practical (check ride).

c. **Documentation:** All Letters of Certification shall be documented in writing by the OCMI with appropriate entries made in TMT. The OCMI may issue a Certification endorsement to the member’s original letter of certification. Previously deferred items that have been satisfactorily demonstrated shall be clearly documented on the form and endorsement as they are no longer considered deferred. A copy of the form or endorsement shall be kept in the individual’s training record.

d. **Alternatives if Units Cannot Comply with Currency Requirements:** In instances where a unit could not fully comply with the currency requirements and an activity needs to be conducted by a certified MI/PSCO one of the following alternatives should be used:

   (1) **Deferral:** If possible, in accordance with existing policy/regulation, defer the activity to the next U.S. port.

   (2) **Request for Forces:** The OCMI should send a Request for Forces to their cognizant District to request assistance for a certified MI or PSCO.

   (3) **Competency Specific Refresher Training:** The OCMI shall ensure robust refresher training is conducted covering the applicable competency and the specific inspection / examination activity scheduled. The training should be conducted by the most competent and experienced member at the unit that holds the applicable competency provided the member has been certified for the competency within the last five years. MITOs shall document the refresher training as a task capture in TMT.

e. **Collaboration.** Units are encouraged to network with other units, Feeder Ports and NCOEs to maximize training opportunities, obtain training materials, maintain currency and ensure consistency with national standards.
NCOEs serve as subject matter experts and a repository of best practices, assist and collaborate with the Marine Safety School, and enter into working relationships with the maritime community. From a training perspective, NCOEs are available to assist with the inspection/examination of specific vessel types, endorse PQS workbooks (if designated as a National Verifying Officer) and participate in verification inspections/examinations (for qualification and currency) and qualification boards.

2. Newly Reported Personnel with Existing Certifications
   a. Requirements. Newly reported MIs, PSCOs and Vessel Examiners with existing certifications are required to be certified at their new unit before being authorized to lead vessel inspection/examination activities. A “field practical inspection/examination” under the supervision of a designated VO is required for at least one of the newly reported MI’s certifications. The Inspector Proficiency Assessment Tool (IPAT) will be used to assess the newly reported MI/PSCO. IPAT data shall be entered in accordance with current IPAT processes.
   b. Documentation. Each new member shall have their training records (PQS workbooks, Letters of Certification, certification documents) reviewed and have an interview conducted by the Division Chief. If deferred PQS items are applicable at the new unit, those tasks must be completed and documented in the member’s PQS workbook before certification is granted. Any local Sector-specific PQS tasks should also be completed.

3. Periodic Proficiency Testing
   a. Background. The 2010 Coast Guard Authorization Act 2010 requires an MI to have the training, experience, & qualifications equivalent to a classification society surveyor. A 2011 Industry Training report identified that classification societies periodically determine a surveyor’s proficiency using online testing or biennial meetings. Following certification, proficiency is managed by recency requirements to perform one inspection per year using a specific competency and when inspectors transfer to a new field unit.
   b. Measuring Proficiency: In addition to the Inspector Proficiency Assessment Tool (IPAT), proficiency following certification can be measured in a variety of ways such as requirements for recency, remote computer-based testing, refresher courses, and individual field assessments.

4. Informal Professional Development
Units should consider execution of a Professional Development Plan documenting activities that support their pursuit of proficiency. Certain members are required to comply with the Coast Guard Individual Development Plan (IDP), COMDTINST 5357.1 (series). Local formats may be utilized for all others. After completion, certain activities may also be documented on the Record of Professional Development, Form CG-4082.

Activities a Marine Inspector or Vessel Examiner should consider for inclusion in their professional development plan include:

a. Completion of a CG-Approved maritime training course.
b. Completion of a pre-planned industry familiarization opportunity
c. Completion of a marine-related, accredited college course.
d. Completion of advanced “C” schools (COW/IGS, Wood/RFP, Chemical Tanker Safety, etc.)
e. Attending a maritime industry event.
f. Providing instruction OJT during a unit training event.
g. Providing instruction or a presentation during a CG-led industry day event.
h. Providing instruction or presentation during an industry-led event.
i. Conducting an IPAT as an Assessor.
j. Becoming a VO.

5. Professional Certifications

Professional certifications, such as the ones listed below, are recognized (and sometimes required) within the maritime industry. Earning or working towards professional certifications will enhance a Marine Inspector’s or Vessel Examiner’s knowledge of the maritime industry and directly translated to conducting inspections and examinations.

a. Merchant Mariner Credential. The Merchant Mariner Credential (MMC) is proof of qualification for mariners serving in specific capacities on varying types of vessels. There are many levels and types of certification as depicted in 46 CFR Part 10 and 46 CFR Part 12. Additional information can be found at: www.uscg.mil/nmc/.
b. Merchant Mariner Credential Endorsement. Endorsements identify a mariner’s qualifications such as an officer capacity (Chief Mate), staff officer (Radio Officer), ratings (Able seaman) or STCW (GMDSS operator). Title 46 CFR Part 10.109 provides a complete list of endorsements. Additional information can be found at: www.uscg.mil/nmc/

c. National Association of Marine Surveyors. The National Association of Marine Surveyors (NAMS) certifies marine surveyors to a professional standard. There are three levels of membership: Apprentice, Associate and Full Membership/Certification. Additional information can be found at: http://www.namsglobal.org/.

d. Society of Accredited Marine Surveyors. The Society of Accredited Marine Surveyors (SAMS) certifies marine surveyors to a professional standard and also has three classes of membership: Accredited Marine Surveyor (AMS), Surveyor Associate (SA) and Affiliate Member (AFF). Additional information can be found at: http://www.marinesurvey.org/

e. American Welding Society Weld Inspector. The American Welding Society (AWS) focuses on enhancing the science, technology and application of welding and other joining/cutting processes. There are three levels of a welding inspector: Certified Associate Welding Inspector (CAWI), Certified Welding Inspector (CWI) and Senior Certified Welding Inspector (SCWI). Additional information can be found at: http://www.aws.org/

f. ISO Lead Auditor. The International Organization for Standardization (ISO) maintains a number of lead auditor certifications including ISO 9001 (Quality Management Systems), ISO 14001 (Environmental Management Systems), and ISO 27001 (Information Security Management Systems). Additional information on Lead Auditor certification can be found at http://www.iso.org/.

g. International Safety Management (ISM) Lead Auditor. The ISM Code requires companies/vessels subject to IMO standards to establish a safety management system. ISM Lead Auditors receive certification to conduct ISM audits. Additional information regarding the specific ISM Code can be found at http://www.imo.org/.

h. Certified Industrial Hygienist. The American Board of Industrial Hygiene (ABIH) provides a professional certification program which sets standards in industrial hygiene. An Industrial Hygienist focuses on evaluating and improving the work environment in regards to health and safety. Additional information can be found at http://www.abih.org/.

i. Professional Engineer. To become a PE, one must earn a four-year degree in engineering from an accredited engineering program, pass the Fundamentals of Engineering exam, complete four years of engineering experience under a PE and pass the Principles and
Practice of Engineering exam. There are several organizations dedicated to the certification of PEs. Additional information can be found at http://www.sname.org/Home/ or http://www.nspe.org/index.html or http://ncees.org/ or http://abet.org/.

F. TRAINING AND PERFORMANCE MEASUREMENT AND CONSISTENCY

1. Mission Management System (MMS)

The MMS is an ISO 9001 based quality management system (QMS) to ensure fulfillment of domestic and international obligations for marine safety and security. A quality management system is the organizational structure, procedures, and resources needed to direct and control an organization in order to continually improve the effectiveness and efficiency of its performance. Information on the MMS may be found in U.S. Coast Guard Mission Management System, COMDTINST 5200.4 (series).

2. Marine Inspector Training Officer (MITO) Peer Audits

a. Description. The MITO to MITO audit program is a peer-based, second party audit using the principles of ISO 9001:2008 and sponsored by the FORCECOM Mission Management System (MMS) Staff (FC-AEMMS). The audit program improves practices by promoting quality management principles thereby producing internal corrective actions and improving field personnel efficiency. It can be viewed as a subset to the larger MMS audit program.

b. Process. The audit is a process-based and product-based audit centered on performance support; this means the auditors examine internal processes through document review and interviews with the Unit. An inspector is accompanied by an auditor during an inspection (the inspector being the product) and assessed using the IPAT.

c. Method. Using sampling, auditors assess the effectiveness of the unit training program as it affects marine inspectors, and examine various aspects of the support climate to identify areas for improvement, capture best practices and assess alignment with policy and guidance. “Sampling” means auditors may vary their concentration and depart from the checklist when necessary to assess conformity to requirements. This is derived from ISO standard 19011:2002, Guidelines for Quality and Environmental Management Systems Auditing, clause 7.4.1. The audit team is made up of a MITO and a Traveling Marine Inspector, both of which are ISO Lead Auditor trained.
d. **Scope.** The scope of the audit is the unit’s training and performance support program. Auditors’ focus on training but may also touch on other factors that affect training such as safety and resource management. Additionally, inter-departmental and cross-division functionality is examined where units employ marine inspectors for waterways management or investigations duties/tasks.

e. **Results.** Audit results, non-conformities and best practices will be shared with other MITOs. Mechanisms for information sharing will include roundtable discussions. A roundtable discussion is a post-audit meeting or conference call to discuss audit findings amongst all MITOs and one guest from the audited command.

f. **Reporting.** Audit reports are confidential and only shared amongst the audit team and the command being audited. Copies of audit reports are available from the unit Commander (Sector) or Commanding Officer (Marine Safety Unit) who may include an explanatory cover letter. As needed, HQ, FORCENCOM, Areas and Districts may be apprised of audit highlights in a Traveling Marine Inspector Trip Report which acts as a partner document. Traveling Marine Inspector Trip Reports will be stored on the CG-5P-TI CG Portal page.

g. **Frequency.** MITO Peer Audits will be conducted at each feeder port approximately once every two years or as directed by Commandant (CG-5P-TI).

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3. **Inspector Performance Assessment Tool (IPAT)**

The IPAT measures proficiency of Marine Inspectors and Examiners. It provides a mechanism to validate, or identify areas for improvement in, our training, management and administrative processes by assessing the proficiency and effectiveness of inspectors while conducting vessel inspections. The data collected provides hard data to provide a foundation for overall assessment of the proficiency of Marine Inspectors and Examiners. The IPAT is designed to be used by seasoned Marine Inspectors who meet or exceed Verifying Officer requirements as specified in the Sector Organization Manual and this Chapter. Strict adherence to the rating scales and definitions as well as the qualification requirements for Assessors is crucial to ensure the integrity of the data collected and to provide a foundation for overall assessment of the marine inspections program. The IPAT is required to be used when a newly reported is being assessed at a new unit as part of the re-certification process after transfer. The IPAT may be used at any other time at the command’s discretion.

The IPAT can be found at [https://cgportal2.uscg.mil/communities/ipat/SitePages/Home.aspx](https://cgportal2.uscg.mil/communities/ipat/SitePages/Home.aspx).

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G. **AWARD FOR EXCELLENCE IN MARINE INSPECTIONS**
1. **Background and Purpose**

In 2013, Commandant (CG-CVC) established the Award for Excellence in Marine Inspections. The award is designed to:

a. Publicize the importance of marine inspections for the health of the maritime community and the safety of the public;

b. Raise the level of awareness of the Marine Inspection program;

c. Highlight superior quality inspections conducted by Prevention personnel; and

d. Identify processes that enhance safety and improve marine inspections and Port State Control examinations

2. **Award Administration**

a. Commandant (CG-CVC) will coordinate an administration notification in December of each year soliciting for award nominees. The closing period for submissions should be 31 January of the following year.

b. Each unit with field level inspectors (Sectors, MSUs, or Activities) may submit one nominee. Nominees should be an individual (not a team), and may be any active duty, civilian or reserve member filling a duty Marine Inspector billet (at the O-4 and below rank or GS-13 and below pay grade) who actively carries out the inspection mission (domestic inspections or Port State Control).

c. The nominee should exemplify the Core Values and display the traits of an optimal Marine Inspector as described in the Marine Inspector Strategic Needs Assessment of September 2012. Further, the nominee should lead inspection activities that demonstrate superior inspection skills with wide ranging safety improvements, substantial enhancements to the Marine Inspection program, or contributions to a fleet-wide or industry-wide change which improves Marine Safety. Their accomplishments should improve training, safety, expertise and demonstrate professionalism. The award will consider a nominee’s body of work over a full calendar year. Activities that result in safety notices, technical publications, or correction of a series of hard to find deficiencies that prevented eventual loss of life are examples of such accomplishments.

d. Nominations should be made by submitting a one to two page narrative in memo format signed by the unit Commander or Commanding Officer and sent to Commandant (CG-CVC) at cgcvc@uscg.mil. The subject line of the email should state, “Nomination for Excellence in Marine Inspections”. The nominee’s full name and title shall be listed.
The memo should briefly describe the individual’s role at the unit, specifically describe the actions for which they are being nominated, and explain how the actions impacted the Coast Guard, industry or safety onboard commercial vessels. If associated with activities in MISLE, the activity numbers should be referenced in the narrative. Additionally, any safety alerts or professional publications associated with the nomination may be attached as supplemental information.

e. Commandant (CG-CVC) will then convene a board of three to five Marine Inspectors to review submissions and select a winner. The results should be announced via administrative notification no later than 15 March of each year.

f. In accordance with reference (a), the winner of the award will receive an appropriate trophy, plaque or similar item embossed with the USCG inspections propeller. A flag letter will be sent to the winner as well. Honorable mention nominees will be sent a congratulatory letter from Commandant (CG-CVC).

3. **Award Evaluation Criteria**

There is no expectation for an award nomination to systematically address each of these criteria. Rather, nominations should highlight specific actions that provide evidence of these items:

a. **Training/Mentoring.** Did the nominee actively and skillfully pass along their expertise by training others and helping them to grow in their technical abilities and confidence?

   (1) What is the success of apprentice / junior inspectors with whom the nominee works?

   (2) Did the nominee inspire those around them to increase their proficiency?

   (3) Did the nominee supply the resources, time, tools and training to ensure the success of their fellow inspectors?

   (4) Did the nominee enhance the inspections knowledge of all personnel including leadership?

   (5) How effectively did the nominee share inspections knowledge with others (i.e., not keeping it all to themselves)?

   (6) Did the nominee reach out to industry/ other groups to present inspection issues and further enhance their knowledge?

b. **Impact on increasing safety.** Did the action of the nominee lead to fixing chronic problems with a demonstrable impact on safety of shipping, result in safety alerts, or
greatly enhance the Marine Safety Program? Did their actions lead to needed safety changes or build a strong case for change?

(1) Did an action of the nominee result in preventing a mishap or casualty?

(2) How well did the nominee foster a culture of safety and ISM compliance?

(3) Did the nominee ensure that Coast Guard personnel were properly equipped to safely perform their inspections?

(4) Did they identify an issue which led to a change of operations in industry or to a particular fleet of vessels?

(5) Did the nominee conduct safety outreach to industry/vessel owners?

c. Display of expertise. Was the level of knowledge displayed by the nominee beyond the normal level for someone in a similar position?

(1) Did the nominee clearly distinguish themself as a subject matter expert that understands and properly applies regulations, policies and technical information (the nomination should provide specific examples)?

(2) Has the nominee been asked to speak at a conference, workshop, training evolution, and/or at other units?

(3) If the nominee had not taken their actions, would a hazard go unnoticed or would a process be not as effective?

(4) Did the inspector bring to light a regulatory or policy conflict, material condition or safety concern that had previously gone unnoticed?

d. Professionalism. How well did the nominee work with industry and their peers to improve Coast Guard/ Industry partnerships?

(1) Did they conduct themselves in proper manner, exemplifying the Core Values of honor, respect, and devotion to duty (uniform appearance, speaking/listening and treatment of others)?

(2) Is the nominee recognized as a leader in the marine inspection community and committed to the Coast Guard’s Marine Safety mission?

(3) Did the nominee lead and encourage the use of teams to solve complex issues?
(4) Did the nominee make balanced decisions with consideration of how they affect commerce, public safety and environmental risk?

(5) Was the nominee tactful and poised even when dealing with a contentious situation?
### Verification Examination Form

<table>
<thead>
<tr>
<th>Name:</th>
<th>Vessel:</th>
<th>Inspection Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualification:</td>
<td>Date:</td>
<td>Exam Number:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Communication Skills</strong></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did the apprentice clearly articulate the inspection protocols and procedures?</td>
<td></td>
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<tr>
<td>Did the apprentice provide an accurate and timely drill evaluation critique?</td>
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<tr>
<td>Were the deficiencies and their corresponding regulations thoroughly explained?</td>
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<td></td>
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<tr>
<td>Did the vessel owner understand apprentices’ expectations and vessel limitations?</td>
<td></td>
<td></td>
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<tr>
<td>Did the apprentice provide the necessary documentation and information in MISLE?</td>
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<td></td>
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<table>
<thead>
<tr>
<th><strong>Knowledge</strong></th>
<th>Yes</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td>Did the apprentice gather the necessary information prior to the inspection?</td>
<td></td>
<td></td>
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<tr>
<td>Did the apprentice demonstrate an adequate working knowledge of vessel systems?</td>
<td></td>
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<tr>
<td>Were all deficiencies issued by the apprentice supported by regulation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the apprentice issue the proper documentation and certificates?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the apprentice use applicable references?</td>
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<td></td>
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</table>

<table>
<thead>
<tr>
<th><strong>Ability</strong></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did the apprentice systematically conduct an inspection?</td>
<td></td>
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<tr>
<td>Was the inspection thorough in accordance with the applicable job aid?</td>
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<td></td>
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<tr>
<td>Was the inspection conducted in a reasonable amount of time?</td>
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<tr>
<td>Did the apprentice utilize inspection personnel appropriately to complete the inspection?</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Judgment</strong></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did the apprentice make sound decisions and apply the proper enforcement action for the deficiencies?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did apprentice ensure all team members were adequately equipped with PPE?</td>
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<tr>
<td>Was the apprentice able to evaluate and apply equivalencies, actual or hypothetical?</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th><strong>Maturity</strong></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did the apprentice act in a professional manner even during conflict?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the apprentice bring all necessary references, equipment, and materials?</td>
<td></td>
<td></td>
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<tr>
<td>Did the apprentice act ethically and without discrimination?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the apprentice bring credit to the CG through actions, demeanor, and appearance?</td>
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</tr>
</tbody>
</table>

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Verification Officer (Print)  
Verification Officer (Signature)

### APPENDIX 1
e. **Sector Miami**: Bahamas

f. **Sector San Juan**: Caribbean

g. **Sector Honolulu**: Pacific Islands

h. **Sector Guam**: Pacific Islands

i. **Far East Activities**: Asia and Diego Garcia.

j. **Activities Europe**: Europe, the Mediterranean Sea, the Red Sea, the Persian Gulf, the Arabian Sea, and all of Africa.

**NOTE**: For areas in question or new construction projects, contact Commandant (CG-CVC).

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12. Overseas Inspection Fees

Payment of user fees and overseas inspection expenses (46 CFR 2.10-120). An overseas fee will be charged each time a set of travel orders are issued for an inspector to inspect a vessel overseas. Even if subsequent trips are for the same activity, an additional user fee will be charged prior to conducting the inspection/exam.

Policy Exception: Local Inspection - For overseas inspections performed within a reasonable travel distance, an overseas inspection fee will be charged ONCE for an inspection activity which provides CG credit (i.e. COI, annual, hull, certificates issued etc.) regardless of the number of visits. If no credit or certificate is requested (IE non-targeted ACP DD), no overseas inspection fee will be assessed.

   a. **New Construction** – An overseas inspection fee shall only be assessed ONCE for any new construction or conversion project that requires multiple visits.

   b. **Deficiency checks/damage survey** - If a TONO is issued for an inspector for sole purpose of clearing a deficiency or conducting a damage survey, then an overseas inspection fee will be assessed. If inspectors are already in the local area, an overseas inspection fee will not be assessed.
Policy continues on B1-9.
13. Certification of Vessels Undergoing a Reflag and/or Major Conversion

a. NVIC 10-81, CH-1, was developed to allow certain categories of existing foreign-flag vessels to be brought under the U.S. flag in a manner consistent with the principles and levels of safety in current Coast Guard regulations or, in some cases, to Coast Guard standards in effect at the time of the vessel's construction.

(1) The NVIC makes reference to acceptance of vessels between 2 and 10 years old for reflag and conversion. Older vessels will not be precluded if they can meet the SOLAS Method I-C Structural Fire Protection Requirements, as amended in 1981, in addition to all other requirements prescribed in NVIC 10-81 CH-1.

(2) In addition, this NVIC can be used as a guideline for existing vessels that undergo a major conversion, are brought under Coast Guard inspection, or wrecked vessels that are able to register under 46 U.S.C. 12107.

b. Major conversion determinations. Determinations of major conversions are made by Commandant (CG-CVC). It is important that vessel owners contemplating work that may constitute a major conversion contact Commandant (CG-CVC) as soon as they have a general concept of the work to be performed so it can be reviewed. The Coast Guard bases major conversion determinations on 46 U.S.C. 2101(14a). This defines major conversion as a conversion that--

(1) Substantially changes the dimensions or carrying capacity of the vessel;

(2) Changes the type of the vessel;

(3) Substantially prolongs the life of the vessel; or

(4) Otherwise changes the vessel so that it is essentially a new vessel.

c. Special provisions for the reflag of vessels participating in the Maritime Security Program (MSP):

(a) These privately owned and operated commercial vessels will normally be employed in commercial operations unless called upon by MARAD for military operations. Foreign flag vessels may apply for MSP but must reflag to U.S. flag as a condition of participation.

(b) MSP vessels are not (and will not become, even upon activation) public vessels as defined by 46 U.S.C. 2101 (24). MSP vessels must be U.S.-documented vessels, subject to inspection and certification by the Coast Guard.

(c) Separate legislation in the Coast Guard Authorization Act of 1996 (PL 104-324) provides that reflagged MSP vessels only need to comply with ABS class rules (or the rules of another classification society accepted by the Coast Guard) and international convention requirements if the vessel meets the eligibility conditions discussed in the following paragraphs.

Eligibility conditions for reflag under MSP. The Coast Guard may accept previously conducted class society surveys and previously issued international certificates in lieu of establishing equivalency to U.S. regulations for all vessel equipment and systems, provided that--

(a) The vessel is classed by and designed in accordance with the rules of the ABS or another classification society accepted by the Coast Guard;

(b) The vessel complies with applicable international agreements and associated guidelines, as determined by the country in which the vessel was documented immediately before becoming a U.S. documented vessel; and

(c) That the country under which the vessel is currently flagged has not been identified by the Coast Guard as inadequately enforcing international vessel regulations on the vessel making application for certification.

For MSP and application for inspection. In order to carry out the conditions described in the paragraph above, the following procedure must be followed to issue the initial COI and international certificates for a foreign vessel entering MSP.
100 GT. The resin should be subjected to the appropriate standard fire test as required by 46 CFR Part 72.

F. MACHINERY INSPECTIONS

1. General

At each subsequent inspection for certification, the inspector must examine a vessel’s machinery as required by law and regulations. Inspections and tests must be performed to ensure that main and auxiliary machinery, boilers and their appurtenances, and other equipment are in satisfactory operating condition and suitable for the intended service. To help with this determination, the inspector must ask the chief engineer or officer in charge of the machinery about possible defects or imperfections in the equipment, boilers, and machinery of the vessel.

The inspector should keep safety requirements foremost in mind during the inspection of engineering equipment. The requirements of 46 CFR Subchapter F (Marine Engineering) and the instructions in this manual are not intended to cover all contingencies that may be encountered during an inspection. The inspector may require any reasonable tests or inspections deemed necessary to ensure the safety of the vessel. It is incumbent upon the inspector to be alert to unsafe conditions and to require corrective measures before these conditions can cause casualties.

2. References

46 CFR Subchapters F and J contain the primary standards for the inspection of main and auxiliary machinery installations on all vessels except small passenger vessels inspected under 46 CFR Subchapter T. As indicated in 46 CFR 58.01-5, these standards are supplemented by the ABS’s standards. 46 CFR Subchapter F regulations apply to T-boats only insofar as they are made applicable by 46 CFR Part 182. As provided in 46 CFR 167.25-1, boilers and pressure vessels and their piping and appurtenances on public nautical school ships must conform to the requirements of 46 CFR Subchapter F, or to U.S. Navy or Coast Guard Standard Construction Specifications.

3. Vessels that are Not Classed

On vessels that are not classed by a recognized classification society, the inspector must, when practicable, require and observe an operational test on all main and auxiliary machinery to determine that its condition is satisfactory. The inspector may require an operational test of any machinery when necessary to determine its condition.
4. Inspection of Main Propulsion Machinery

a. The inspector shall be generally guided by section B.1.F.1 above in the inspection of main propulsion machinery for certification. Typically, main and auxiliary machinery and associated equipment are tested at each inspection for certification and periodic inspections; see 46 CFR 61.20-3.

b. **Overspeed and low oil pressure trips.** The inspector shall determine during inspection by whatever practical means may exist that the overspeed mechanisms, low lube oil pressure shut-down devices, turbine governor mechanisms, and throttle valves and their linkage are in proper operating condition. Where possible the inspector shall require operational tests to check these devices or mechanisms. Any malfunction of the foregoing items shall be corrected. Further references to low lube oil shutdowns can be found at 46 CFR 56.50-80(b), (g), and (i) and 46 CFR 58.05-10.

```
NOTE: Any operational tests of lube oil shutdown controls should not risk shutting off the oil supply to the bearings. Tests of the overspeed safety devices should be as per the approved automation procedures.
```

c. **Automated Machinery:** When main propulsion machinery is automated, the equipment shall be witnessed by an inspector and verified to the system design requirements and regulations provided in 46 CFR 62 ‘Vital System Automation’. This is, in part, intended to address system updates or modifications and to ensure continued safe operation. Testing of all systems should be conducted in accordance with the approved periodic safety test procedures (PSTPs) and as described in 46 CFR 61.40-6 and 61.40-10.

d. **Main engine gravity-type lubricating systems.** In one casualty reported aboard a C3-S-A2 cargo vessel, the propulsion turbines sustained extensive damage due to insufficient lubricating oil. Investigation revealed that a closed or partially closed valve in the piping system from the gravity tanks to the main engine caused a reduced flow of oil to the turbines. This valve was marked "L.O. GRAVITY TANKS TO GEARBOX" and was located approximately 4.57 m (15 ft) from the starboard gravity oil tank. The valve was not included in the original approved plans of the piping system and, since it was in addition to the shutoff valves at the tanks, there was no justification for its being in the system. Because a similar condition may exist on other vessels, the following actions must be taken:

```
(1) During the inspection or reinspecktion of vessels with gravity-type lubrication, the discharge piping from the gravity tanks must be examined.
```
(2) If shutoff valves are found in addition to those at the gravity tanks and unnecessary to the system, they must be secured in the open position or removed.

G. Inspection and Hydrostatic Tests of Boilers

<table>
<thead>
<tr>
<th>Hydro Test</th>
<th>Firetube boiler ≥150 psi</th>
<th>Watertube boiler</th>
<th>Any firetube boiler for propulsion</th>
<th>Firetube boiler &lt;150 psi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger Vessel</td>
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<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Other Vessel</td>
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<td>5</td>
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<td>5</td>
</tr>
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<td>Fireside Inspection</td>
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<td>2.5</td>
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1All intervals are in years.

2Where the 2.5-year interval is indicated: two tests or inspections must occur within any five-year period, and no more than three years may elapse between any test or inspection and its immediate predecessor.

3Intervals for hybrid boilers are the same as for firetube boilers.

1. General

Marine boilers have historically been classed into two general types: firetube (or "tank") boilers and watertube boilers. A new type of marine boiler, called a hybrid boiler, has since been approved for auxiliary steam use aboard U.S.-flag vessels. The American Society of Mechanical Engineers (ASME) Manufacturers' Data Report forms must be made available to the Coast Guard marine inspector for review at the time of any boiler installation, per 46 CFR 52.01-145. The marine inspector will inspect each boiler after installation and review the Data Report forms to ensure the boiler complies with Coast Guard regulations. See 46 CFR 52.01-135 and 53.10.
In addition, low pressure hot water boilers can be encountered on any number of Coast Guard inspected vessels. While they are typically small self contained units with limited safeties and controls, they do present a very real hazard to life and property if not in good repair, with all safeties and controls in working order.

a. Firetube boilers. The most common firetube boiler is the "Scotch" type. **Now obsolete in riveted form, they are limited to historic or** older vessels propelled by reciprocating engines with very simple boiler feed systems. **Some may be** coal-fired. Feed water control is primitive at best and, generally, no provision is made for keeping dissolved oxygen out of the boiler water.

  In modern welded form, fire tube boilers are rarely seen as propulsion boilers except on Western Rivers steamers. They are most commonly installed as auxiliary boilers on ships with diesel propulsion or on barges where heated cargo systems are required.

b. Watertube boilers. Watertube boilers are designed for operation under considerably greater stresses than firetube boilers.

  (1) Since the tube **metal temperatures are also** higher, scale deposits that **can be tolerated** in firetube boilers **at lower pressures** are unacceptable in watertube boilers. For these reasons, only distilled water can be used for boiler feed and close regulation of the feed water chemistry is essential to prevent pitting of the boiler metal and to reduce scale deposits to a minimum.

  (2) Compared to firetube boilers, the pressure-containing parts of **modern, welded** watertube boilers are of simple design, without complicated riveted seams and stayed surfaces. Repair frequency is considerably lower and, when repairs are necessary, they involve **relatively less complicated** operations, **such as** tube renewals, refractory and insulation repairs and renewals, and boiler casing maintenance.

  (3) **Watertube boilers are also more sensitive to improper operation and inadequate maintenance. Tube temperatures are normally so high that even a thin scale deposit on the tube interior seriously impairs heat transfer which may result in tube failure.** Cleanliness of the fireside is equally important to prevent loss of metal from corrosive elements in the fuel used. Economizers and air heaters located in gas passages must be kept free of soot deposits to reduce fire hazard.

c. Hybrid boilers. Hybrid boilers incorporate a design feature which combines the concepts of both firetube and watertube boilers. The concept makes efficient use of space and consumes less fuel than a traditional firetube boiler.
(1) Hybrid boilers usually burn number 6 fuel oil, but can also burn a variety of other 
fuels, including heavy oils, sludge, and solid waste with a few additional pieces of 
equipment.

(2) Current designs average about 1.53 m (5 ft) in outside diameter, 3.66 m (12 ft) in 
height, and consist of upper and lower chambers connected by a tube nest.

(3) Certain designs have incorporated engine exhaust gas firing along with in-port oil 
firing, thus eliminating the need for a ship's exhaust gas economizer. The burner 
and register unit is mounted at the boiler front on the lower chamber and is 
exactly the same type of unit that would be found on a traditional firetube boiler. 
Standard appurtenances such as safety valves, water glasses, feed and stop valves, 
steam gauges, and blow-off valves are also incorporated in present design 
features.

(4) Current furnace designs consist of horizontal cylindrical or vertical torispherical 
type configurations. Horizontal types are connected to the boiler shell by full 
penetration welds. The vertical furnaces are attached to the shell by an ogee ring 
which can either be integral to the furnace or be an external support flange. The 
ogee ring must be joined to the furnace by a full penetration weld. The connection 
of the ogee ring to the boiler shell must either be a full penetration weld if an 
external support flange, or a fillet weld if an integral type ogee ring. The integral 
type ogee ring must meet ASME Section I PFT 20.5.

(5) Depending upon size, the furnace may be supported by a number of stays that 
extend from the furnace to the boiler shell. The number of stays used for support 
depends on the furnace size and the maximum allowable working pressure 
(MAWP) of the boiler. In some cases, stiffening rings are used to add support to 
the furnace in lieu of stays.

(6) At the apex of the furnace, an exhaust pipe extends from the furnace into the 
lower boiler tube sheet. This pipe passes the exhaust gas over the steam generating 
tubes before the gas exits through the flue. Steam generating tubes connect the lower 
tube sheet to the upper tube sheet. There may also be downcomer tubes installed in 
the tube nest between the two tube sheets. Within the tube bundle are several stay 
tubes whose function is to add support to the tube sheets. Above the upper tube sheet, 
in the upper chamber, is the steam-generating area. The dry pipe is located near the 
center of the upper head. Future designs may incorporate variations on this basic 
theme.

d. Low Pressure Steam and Hot Water Boilers on Small Passenger Vessels (SPVs): 
Field observations indicate there is confusion on the inspection requirements for 
low pressure packaged boilers. In some cases, they are not being inspected at all 
when found on SPVs inspected under 46 CFR Subchapters K and T. These units 
may generate steam or supply hot water. A typical installation operate at
pressures ≤ 15 psi for steam, at ≤ 30 psi for hot water and are constructed of cast iron materials or operate ≤ 100 psi if constructed of wrought iron and are “fired”.

(1) OCMIs are encouraged to ensure properly qualified MIs are involved in oversight and/or inspection of these units because of the inherent safety risk.

(2) Requirements are in 46 CFR 119.310 for  and 46 CFR 182.310 for small passenger vessels. Applicability of 46 CFR Subchapter F is in Table 54.01-5(a). Regulations indicate there are inspection requirements if boilers are made of wrought iron operated at ≤ 15 psi for steam and ≥ 100 psi for hot water or have a hot water temperature ≥ 250 degrees F. Cast iron boilers operated at ≤ 30 psi or ≥ 250 degrees F for hot water also have requirements. These are provided in 46 CFR 54.01-10 and 54.01-15.

(3) 46 CFR 53.01-10(c)(2) indicates oil fired boilers must meet the requirements in 46 CFR Subchapter F, Part 53 regardless of size or heat input. However, it is important to note Subchapter F’s applicability for auxiliary and heating boilers on SPVs shall be “as determined necessary by the OCMI.” See 46 CFR 119.310(c) and 182.310(c), which also indicates that “heating boilers must be tested and examined every three years.” For low pressure packaged boilers, applying Subchapter F in its entirety may not be reasonable or necessary to ensure an appropriate level of safety.

If electrically fired, U.L. approved hot water supply boilers with a capacity < 120 gallons, and a heat input ≤ 58.6 KW (200,000 BTU/HR) are exempt from 46 CFR Part 53. However, this is provided there is a safety/relief valve installed in accordance with 46 CFR 53.01-10(c)(1). Also see Note 4 of 46 CFR Table 54.01-5(a) regarding relief devices.

(4) Boiler plates require an ASME stamp. If built to ASME Code Section I (Power Boilers) or ASME Code Section IV (Heating Boilers), the plate will be stamped with the “S” or “H” symbol.

(5) 46 CFR 63.10-1 requires two copies of detailed instructions for operational tests on each “automatic” auxiliary boiler. A certification report detailing compliance with, ASME and 46 CFR Part 63 is also required. All should be submitted to MSC for approval prior to installation or replacement of a unit. OCMIs should retain copies for local record.
2. Examination and Testing of Firetube Boilers

a. **Test and examination intervals.** Title 46 CFR Subchapter F, Part 61 requires annual **fireside, waterside and** hydrostatic tests for propulsion firetube boilers. No extension of these requirements is authorized. However, **auxiliary firetube boilers require fireside, waterside and hydrostatic tests less frequently at intervals specified in 46 CFR Table 61.05-10.**

b. **Hydrostatic tests.** Firetube boilers are particularly vulnerable to thinning of the plating, tubes, and staybolts (if not welded construction) by corrosion. This is often seen in the form of pitting, attributed to dissolved oxygen or the use of corrosive boiler water.

   (1) The hydrostatic pressure should be maintained at 1.5 times the MAWP throughout the inspection of the fireside.

   (2) When boiler repairs are necessary, the methods, materials, and workmanship employed must comply with the requirements of 46 CFR Part 59.

   (3) In Scotch-type boilers, pitting is commonly found on the outside of the tubes and the shell and head plating near the waterline, the combustion chamber top plating, the furnaces, and the bottom shell plating. If riveted, the numerous highly stressed joints in firetube boilers are prone to attack by stress corrosion cracking, generally resulting from the deposit of corrosive solids contained in the boiler water.

c. **Interior examination.** The interior examination of a firetube boiler should occur first and be conducted as follows:

   (1) The interior of the furnaces and combustion chambers should be examined first. Furnaces should be checked for distortion by measuring with a tram bar. When corrugated or plain furnaces are distorted and no longer in true circular shape, they must be repaired as required by 46 CFR 59.15-1(a) or the boiler pressure must be reduced as required by 46 CFR 59.15-1(c).

   (2) Combustion chamber wrapper plates and back plates should be hammer tested, and areas suspected of being thin should be drilled and gauged. Broken combustion chamber stays will generally be indicated by leakage from the drilled telltale holes. The combustion chamber back plate should be checked for evidence of bulging plating between the staybolts.

   (3) Riveted wrapper plate seams and the furnace connection to the combustion chamber should be checked for leakage. The back tube plate should be carefully
examined since leakage in this area, which cannot be corrected by rolling tubes, is sometimes due to cracks in the ligaments between tube holes.

(4) **Tube sheet examination.** The front tube sheet should be examined next. This is an area particularly susceptible to corrosion from leaking tubes, and to erosion caused by the use of saturated steam for soot blowing. Leaking tubes should be made tight by rolling, or should be replaced.

e. **Exterior examination.** The exterior examination of a firetube boiler should occur as follows:

(1) The exterior of the boiler shell and heads should be examined first. All lagging of the shell and heads is not normally taken off during annual inspections; however, all portable sections should be removed while the hydrostatic pressure is maintained. Wherever moisture appears, sufficient lagging should be removed to determine its source, whether leaking seams, broken staybolts, or defective boiler mounting gaskets.

(2) The plating in way of the boiler mountings should be examined for evidence of wastage due to leaks from valves and fittings. Leakage from the bottom of the front and back heads in way of the flanging of the plate should be noted for further examination of the inside of the head; cracks induced by flexing of the head sometimes penetrate the plating.

(3) Riveted seams showing evidence of leakage should be carefully examined; cracks occasionally occur between rivet holes or extend from rivet holes to the plate edge.

(4) The manhole gasket seats and adjacent plating should be checked for signs of wastage due to gasket leaks; the radial clearance between the manhole plate and the head should not be excessive.

(5) The boiler saddles, foundations, and collision chocks should be hammer tested to detect evidence of deterioration; these members are subject to severe wastage from the corrosive action of bilge water.

(6) The hydrostatic pressure should then be released and the boiler drained out.

f. **Examination of the boiler waterside.** The inspection of the waterside of the boiler should occur as follows:

(1) The inspection of the waterside of the boiler is most conveniently begun by entering through the top manhole. The dry pipe, internal feed lines, and surface blow pipe should be examined first; defective gaskets at the point of attachment of the internal feed lines to the boiler head are frequently the source of erosion of the plating.
(2) **In riveted construction, the** butt strap and the rivets attaching the heads to the shell should be sounded with a hammer. Where rivets are found to be loose or rivet heads missing, the rivet holes should be searched for cracks by nondestructive testing methods after the rivets are removed.

(3) **In other than welded construction and when installed, the** stay rods, girder stays, and combustion chamber tops should be examined for evidence of wastage due to corrosion. The screw stays at the back and sides of the combustion chambers are difficult to examine because of close clearances. However, a good evaluation of the condition of these members can be made with the use of a portable electric light lowered successively between the rows of stays. The most common deficiency found in these stays is "necking," a reduction in diameter near the plate surface caused by corrosion and stresses from expansion of the combustion chamber.

(4) The boiler tubes are so closely spaced that visual inspection must usually be confined to the top and side rows. Pitting is frequently seen in these tubes. **Shallow**, widely scattered pits can usually be disregarded, but deep pits extending over a large area may so reduce the wall thickness that replacement of tubes is necessary (from the standpoint of stress, tubes will satisfactorily function with a reduction of wall thickness of up to 50 percent). In any event, when evaluating the condition of boiler tubes, a distinction must be made between plain tubes and stay tubes; stay tubes have a much greater initial wall thickness.

g. **Completing the boiler examination.** Finally, the lower part of the boiler interior is inspected as follows:

(1) The most common defects in this area are corrosion of the plating of combustion chambers, furnaces, shell, and heads by pitting, and grooving of the flanged plating of the heads and furnaces.

(2) Pitting often attacks the plating of the furnaces, combustion chamber wrapper plates, back plates, and the bottom plating of the boiler shell.

(3) Grooving due to thermal stresses is frequently seen in the flanges of the front and back heads, and at the connections of the furnaces to the combustion chambers.

(4) Radial grooving, originating in the holes drilled in the front and back heads for the stay rods (when installed) and extending in a "spider web" from these holes, is occasionally encountered.
3. Inspection of Watertube Boilers

Test and examination intervals.

a. Inspection of watertube boilers. Title 46 CFR Subchapter F, Part 61 requires hydrostatic tests for all watertube boilers every five years (twice in 5 years with no more than 3 years between any test or inspection and its immediate predecessor, in the case of passenger vessels) as specified in 46 CFR Table 61.05-10. Watertube boilers require fireside and waterside inspections twice in 5 years with no more than 3 years between any test or inspection and its immediate predecessor.

Following repairs and at the conclusion of inspections, watertube boilers should always be hydrostatically tested to a minimum of 1.25 MAWP per 46 CFR 61.05-10. (If substantial modifications or repairs have been made, or if the marine inspector has reason to question the strength of the boiler, to 1.5 MAWP).

Substantial repairs are welding on a header or a drum. Tubes that are welded rather than expanded into headers should be considered substantial repairs. New piping or welded repairs on piping attached to the boiler as well as waterwall or superheater headers newly fabricated and installed would be substantial repairs.

Replacing or plugging tubes is not a substantial repair. Boiler tubes that have been replaced should be hydrostatically tested to 1.25 MAWP. Tubes that have been plugged can be hydrostatically tested to operating pressure.

Questionable boiler strength would be the existence of widespread pitting, header grooving, a recent history of tube failures or sitting idle for a long period of time. An inspector should have a reasonable level of confidence that the boiler will steam at normal operating pressure without leaking, and questions of boiler integrity should be resolved through testing.

b. Interior examinations of watertube boilers. The inspection is most conveniently begun inside the furnace, as follows:

(1) The waterwall tubes and screen tubes should be examined with the aid of a spotlight for evidence of blistering or distortion. Severely blistered tubes should be renewed. A minor amount of tube distortion is acceptable if the insides of the tubes are clean. If there is evidence of tube leakage at the ends of the waterwall tubes, sufficient refractory should be removed to expose the waterwall headers so that the leakage can be traced to its source.
(2) The superheater and part of its support structure can generally be seen from inside the furnace. In this area, burned support brackets and badly warped superheater elements are common defects.

(3) The baffles above and below the superheater in D-type boilers should be examined. Some boilers of this type are fitted with feeder tubes in the furnace floor, which can be examined only when the brickwork is removed. Defects in these tubes, however, are rarely encountered; the furnace floor should be disturbed only when leakage is suspected or for refractory repairs.

(4) Furnace refractory is subject to damage from erosion due to direct flame impingement, fusion occurring at high rates of combustion, and destruction of insulation due to improper drainage during water-washing operations. When the damage is local, the defective area may be repaired; however, it is sometimes necessary to rebuild the walls or floor.

c. **Exterior examinations.** The inspector should continue with an exterior examination, as follows:

(1) The tubes and headers of economizers and gas air heaters are vulnerable to external corrosion due to condensation and should be examined through the access openings.

(2) The steam drum and its accessories should be carefully checked; if a hydrostatic pressure test is applied, the nozzles, gaskets, and welded pipe connections should be searched for leakage.

(3) In D-type boilers, the sliding feet that permit linear expansion of the water drum should be examined.

(4) Expansion of the generating tubes of straight tube boilers is accommodated by bolting the front headers rigidly and securing the back headers with loosely fitted bolts; the condition of these bolts should be checked.

(5) In sectional header boilers, the riser tubes, drum nipples, and top row of generating tubes can be reached for examination from the access opening below the steam drum.

(6) Removal of the superheater access doors in D-type boilers will permit access to the superheater and the lower part of the steam drum. In both boiler designs, the casing in way of the steam drum should receive attention; gas leakage in this area is common. The casing below the steam drum should be examined; burning or bulging of this casing or distortion of access door frames is usually due to destruction of the insulation. If these conditions are found, the buckled casing must be removed so that the insulation can be replaced.
d. **Header examinations in sectional header boilers.** The headers of sectional header boilers should be examined next, as follows:

1. Leaking handhold plates should be marked for later removal and renewal of gaskets. The gasket surface should be examined with the aid of a mirror; chronic leakage is sometimes due to steam cuts across the seating surface.

2. The handhold plates of superheater headers should be similarly examined, and the superheater tubes should be checked for leakage where these tubes are rolled in the headers.

3. The short nipple connections of the transverse mud drum to the front headers and the bottom blow valve connection to this header should be checked for leakage; external corrosion of the nipples is sometimes encountered.

4. The tube joints, handhold plates, and drain nipples of the waterwall headers should be checked for evidence of leakage and external corrosion. The air duct beneath the furnace floor should be examined to ensure that it is free from accumulation of oil.

e. **Header examinations in D-type boilers.** The superheater headers and waterwall headers of D-type boilers should be examined as follows:

1. The vestibule below the economizer or air heater should be opened and cleaned. In this area, the ends of the generating tubes, at the connections to the bottom drum, can be seen. Because of the close spacing of the tubes, inspection is usually limited to the outer rows; however, external corrosion of these tubes, due to soot deposits and improper water-washing, is not uncommon.

2. The bottom drum manhole opening, bottom blow valve connection, and drum support saddles should be examined. In this area, leakage and associated wastage are rarely seen; however, the foundations of boilers installed directly on the tank tops are subject to wastage from the corrosive action of bilge water.

f. **Examinations of the waterside.** The waterside should be examined as follows:

1. The interior of the steam drum is the best starting point for inspection of the waterside of the boiler.

2. The flanged piping connections of the desuperheater and internal feed lines should be hammer tested; if the tightness of the desuperheater piping is in doubt, it should be hydrostatically tested. **Typical hydrostatic test pressures to test a desuperheater range from 150 to 300 psi. The actual hydrostatic test**
pressure to be used, of course, must be obtained from the tested boiler technical manual.

(3) The steam drum should be thoroughly cleaned prior to inspection; portions of the drum internal platform should be removed to permit a close examination of the drum interior and the tube ends. Pitting along the waterline, in the bottom of the drum, and in the ends of the riser tubes and generating tubes, is occasionally found.

(4) The brackets supporting the dry pipe, internal feed lines, and desuperheater should be examined to ensure that the securing bolts are tight.

g. Examination of tubes. Tubes should be examined as follows:

(1) A sufficient number of handhold plates should be removed from the headers of the generating tube bank, superheater, economizer, and waterwall tubes to permit a comprehensive examination of these tubes.

(2) In addition to tube inspection, handhold plates should be opened to permit inspection of header baffle plates, orifice plates, drain locators, branch lines, inlet/outlets, elbows, thermometer wells, and other locations subject to high stresses or corrosion.

(3) Generally, removal of 5 percent of the handhold plates will suffice; however, if internal pitting or an excessive amount of scale is found, it may be necessary to remove all of the handhold plates for a complete examination.

(4) Scale deposits exceeding 1/32" in thickness will seriously impair heat transfer, especially in screen tubes and waterwall tubes, and may result in bulging and distorted tubes. Scale should be removed by mechanical means or by chemical washing.

(5) Examination of tube interiors is difficult in D-type boilers because the tube bends preclude sighting more than a short distance inside each tube. However, the tubes should be inspected from within the lower drum and, with the aid of a mirror, from the waterwall and superheater headers. The inside surface of the bottom drum should be examined for evidence of pitting; this is occasionally seen in boilers that have been out of service for long periods of time.

4. Examination of Hybrid Boilers

a. Hybrid boilers are very compact in their construction as a result of the design efforts to comply with size restrictions imposed by ship builders. They are considered to be
auxiliary heating boilers, and their operating controls are regulated under 46 CFR 63, depending upon fuel consumption and rated heat output.

b. **Tests.** For test purposes, these boilers are considered to be of the firetube type and must be hydrostatically tested at least annually, per 46 CFR 61.05-10.

c. **Fireside and waterside examinations.** The limited access available for internal examinations of these boilers presents some unique inspection problems. Methods available to perform internal examinations are few and certain areas of these hybrid designs demand special attention by the marine inspector.

   (1) The tube sheet ligaments, if accessible, should be thoroughly examined for cracks, especially near the furnace area. To the extent possible, the tube sheets should be examined for distortion or other indications of surface deterioration.

   (2) Uptake/flue pipe between the top of the furnace and the lower tube sheet should be examined for possible yielding of the material caused by excessive heat either from normal firing with a low water level or extreme high firing rates for extended periods of time. The external pressure exerted on a horizontal cylindrical furnace or an uptake pipe will eventually cause the pipe to fail after being subjected to these conditions.

   (3) The fireside of the furnace should be examined for brickwork damage or deterioration.

   (4) All accessible waterside areas of the furnace should be examined for signs of pitting, cracks, and scale. A serious scale build-up or pitting on the furnace plate's waterside can be indicative of a poor boiler water treatment program.

   (5) During the waterside exam, the furnace and shell surfaces in the vicinity of the ogee ring (and the ring itself) should be thoroughly examined. This area supports a majority of the load and is susceptible to very high stresses. If evidence of deterioration or distortion is found, nondestructive testing should be performed on the welds, which connect the ogee ring to the shell, and to the furnace. Any problem involving the ogee ring should be investigated from both the internal and external vantages, on the ring’s inner and outer diameters.

d. **Stays.** Boiler stays should be carefully examined for cracks, especially in way of the welds. Stays should be examined to detect "necking" or similar evidence of deterioration.

   (1) One method to evaluate the condition of a boiler stay is to strike it with a hammer and listen carefully to the resulting sound. Generally, if the stay is in good condition, it will make a ringing sound when struck. A dull sound is indicative of a cracked or otherwise deteriorated stay and; a stay that produces a dull sound upon testing should be thoroughly inspected for defects.
(2) Other forms of nondestructive testing, such as dye-penetrant or magnetic particle, can be used to determine a stay's condition. When several stays in one area are found to be defective, the problem is nearly always due to uneven loading on the support structure, a condition that should receive immediate corrective action.

5. Examination of Low Pressure Steam and Hot Water Boilers on SPVs

   a. Fireside/Waterside (Internal) Exams: These are prescribed in 46 CFR 61.05-10(a) and the Table to 61.05-10. In order to fully comply with 46 CFR Subchapter F, the removal of the discharge or outlet valve and the safety/relief valve will be required. This will provide sufficient access to the waterside and allows MIs to identify the presence of scale or rust accumulation on internal components. If the internal condition of the heating element is suspect, additional action would be required to assess the condition of the boiler. Removing the burner assembly for a visual exam of the furnace should generally satisfy the requirements for a fireside exam. If the condition of the heating element or refractory is suspect, removal of the first section of the unit’s stack casing should provide enough access to determine if further action is necessary.

Enforcing the internal exam requirements on automatic low pressure packaged heating boilers, although applicable, is problematic on SPVs. The waterside has limited access through boiler drains, outlets and safety/relief valves. The fireside exam, although more accessible, may not be necessary if the unit was examined by an accepted third party and found satisfactory. More importantly, a SPV operator’s experience may be limited for disassembly and proper re-assembly of these units. Conducting such work may cause more harm than good.

To address the lack of operator experience, some OCMI's have a local policy which ensures untrained operators do not disassemble these units, conduct internal exams or hydro tests. In lieu, they allow an acceptable third party (e.g. state licensed boiler service provider or manufacturer certified technician) to perform “servicing” of boilers. Servicing should be completed every 3 years or more often if recommended by the manufacturer. When the OCMI accepts a service report in lieu of inspection, MIs should require removal of the burner assembly for a cursory furnace exam. This should be followed by a subsequent external visual exam while the unit is operating.

b. Hydrostatic Tests: 46 CFR 61.05-10(c) indicates that a boiler hydro should be completed at 1.5 times MAWP if the findings from a visual exam of the heating element identifies a suspect condition. A hydro at 1.25 times MAWP may also be required at regular intervals if the OCMI deems it necessary to meet 46 CFR Subchapter F. Hydro water temperature should range between 70 and 100
degrees °F in accordance with 46 CFR 61.05-5(b). The hydro pressure should be held for 10 minutes and should remain constant.

c. **Safety/Relief Valves:** Tests should be completed per 46 CFR 61.05-10 with the valves in-service or they can be removed and bench tested. Hand lifting gear should be exercised when the boiler is in-service. Caution should be taken when exercising hand lifting gear due to the discharge of steam/hot water. All safety/relief valves must have an ASME “H” or “HV” stamp in accordance with 46 CFR 52.01-2. The discharge should be per 46 CFR 56.50-25(c).

If the unit is a hot water boiler, it requires a combination pressure/temperature relieving device in accordance with 46 CFR 53.05-2(c). Some OCMI policies allow valves to be visually examined and ‘popped’ while in service. This is typically done during annual inspections. MIs should be aware that this test method only ensures the pressure functionality of the valve. To ensure safety, these valves should be properly tested for temperature and/or pressure accuracy by the accepted third party to satisfy regulation. This test is normally required every 3 years as implied in 46 CFR 119.310(c) and 182.310(c).

d. **Boiler Mountings:** Mounting inspections on low pressure boilers include the water inlet/outlet valves and the safety/relief valve. However, any valves installed as the first valve isolating boiler pressure also need to be inspected. Mounting inspections are required every 5 years and removal every 10 years in accordance with 46 CFR Table 61.05-10 and Marine Safety Manual Volume II, COMDTINST 16000.7 (series). Boiler valves must meet ANSI Standard Class 150 or higher, be constructed of acceptable material as specified in 46 CFR 56.60 and be marked in accordance with 46 CFR 56.20-5. Bolts, studs and nuts may be in the low strength bolting category defined by ANSI B16.5(a).

(1) If the unit is low pressure steam, mounting inspections are recommended in accordance with 46 CFR Table 61.05-10 because of the increased risk and obvious personnel safety hazard.

(2) If the unit is low pressure hot water boilers, the risk is less Enforcing mounting requirements may be unnecessary if there is routine servicing which includes valve inspection by an accepted third party or if all piping connections are threaded, making mountings removed/studs examined not applicable. The scope of mounting inspection on a hot water boiler should be at the discretion of the attending MI for cause.

e. **Automatic Controls:** Low pressure steam or hot water boilers are required to have automatic controls. If a unit is deficient in this area, it should be taken out of service until the OCMI determines appropriate compliance to 46 CFR Subchapter F. 46 CFR 63.10-1 requires a boiler manufacturer to list each control and safety device prior to installation. This should be accompanied with
a description of the operational tests to be performed and a certification report. The test procedures and certification report should be used as a guide for checking safety shutdowns and controls as prescribed in 46 CFR 61.35.

f. **Documentation**: These units are pressure vessels, so should be listed on the vessel’s COI and entered into MISLE to ensure regular inspection. OCMIs should vet third party service providers, either by observation or other practical means, prior to accepting their reports in lieu of inspection. Experience, certification and training are all methods an OCMI should consider. It is also recommended that OCMIs identify accepted third party service providers in writing so a record is made. Periodic review of service providers work and/or credentials should also be considered.

Retention of equipment specifications and model numbers is highly recommended to ensure that proper servicing, repair and documentation of the installation takes place.

6. **Repairs to Boilers**

a. It is difficult to describe all of the types of boiler repair procedures that the inspector may have to consider.

   (1) Boiler defects will seldom involve only certain specific areas. Severely pitted tubes will often be accompanied by pitting in headers or in steam and water drums. Similarly, a distorted corrugated furnace frequently is evidence of wastage of combustion chamber plates or adjoining furnaces.

   (2) All repairs must comply with the requirements of 46 CFR Part 59.

b. **Firetube boilers.** In firetube boilers, close tube spacing limits visual inspection of the outside of the tubes is limited to the outer rows. Heavy scale buildup on these tubes is common, and thorough cleaning of the tubes may necessitate chemical cleaning. *(See figure B1-2 for examples of defect and repairs to fire tube boilers.)*

   (1) In addition to pitting on the waterside, these tubes are subject to wastage of that part of the tube that projects beyond the tube sheet, particularly in the smoke box area. This condition is easily detected. When it is found, the defective tubes should be renewed.

   (2) On the other hand, thinning of the tube walls due to corrosion can usually be discovered only by cutting out and sectioning tubes. This procedure should be followed only when a substantial number of the tubes are found to be leaking or plugged. In general, when tubes look satisfactory on the waterside, the boiler has no history of tube failure, and leakage can be corrected by rerolling, the tubes
may be kept in service. Tubes from which the beading has been burned off should not be built up by welding, but must be renewed.

Figure B1-2: Examples of Defect and Repairs to Fire Tube Boilers

Wastage of Scotch Boiler Front Head Below Manhole Opening

Repair consists of thorough cleaning or grinding to sound metal, magnetic particle testing to ensure no fractures exist and building up of original thickness by welding.

Grooving of Front Head Below Furnace

Grooving in this area, when it is not extensive, may be repaired by chipping out the groove to sounds metal, non-destructive testing and subsequent welding. Extensive grooving, or fractures stemming from old grooving previously welded can be repaired only by cutting gout and renewing a portion of the head plating.
Distorted Corrugated Furnace

Repair in conformity with procedure outlined in 46 CDR 59.15-1

c. Watertube boilers. In watertube boilers, tube replacement is one of the most frequently encountered repair procedures. Boiler tube life is influenced by such factors as original wall thickness, thermal stresses due to location within the boiler, waterside corrosion, fireside damage, and service history of the boiler. The external surfaces of tubes are exposed to loss of metal from corrosion by sulfur and vanadium in the oil burned, as well as overheating and slag damage. Deterioration of this type may result in abnormal bends, bulges, blisters, ruptures, and mechanical fatigue cracks that are fairly obvious during visual inspection of the firesides. The following procedures are recommended for inspection of boiler tubes:

(1) Conduct a visual inspection of all uncovered tubes.

   (a) In general, when tubes look satisfactory from a visual inspection, they may be kept in service until some degree of failure is encountered.

   (b) When the same type of tube failure occurs often, a major tube replacement should be considered. A number of failed tubes may be plugged in an operating boiler, generally not exceeding 10 percent of the tubes in any one tube bank, section, or pass. However, this 10 percent figure is for guidance purposes only, and any recommendations for tube replacement by the manufacturer's representative should be followed.

   (c) Tube location is important in determining whether the tubes can be plugged. Superheater tube plugging should be limited to 10 percent of each pass. Renewal of tubes at less than 10 percent may be justified if the tubes in question are in a group or may cause poor gas flow or overheating. Defective support tubes should be renewed. Defective major circulating tubes, such as downcomer or riser tubes, should be replaced.
(2) If there is a suspicion that deep corrosion produced scabs exist in waterside pits, or if any other condition prevents minimum thickness determination, chemical cleaning to bare metal should be required.

(a) If this process shows pits in a large number of tubes, and more than one or two in many tubes, a sample tube should be cut out of the boiler and sectioned and its minimum thickness determined.

(b) If the sample tube has deteriorated generally to less than 50 percent of the original thickness, a representative number of tubes (20-30) should be cut out of the tube bank and the process repeated.

(c) If more than half of the sample tubes are found to be in the same general condition of deterioration, consideration should be given to retubing the boiler.

7. Inspection of Boiler Mountings

a. Inspection of boiler mountings. The regulations concerning boiler mountings in 46 CFR 52.01-3 and 61.05-15 were written when more attachments were connected directly to the steam drum or boiler shell than in today's more modern boilers, which have welded mountings. However, the intent and concerns of these regulations apply to modern boilers regardless of mounting types.

(1) The inspector should recognize the importance of all connections and piping to the first isolation valve. It should not be necessary to require removal of all first isolation valves to comply with the "mounting" inspection intent. All major valves, which are the first isolation or control of steam or feedwater, should be treated as "mountings" for inspection of the valve and piping toward the boiler.

(2) At a minimum, the following valves are subject to valve and mounting inspection requirements: main steam stop, generator steam stop, auxiliary steam stop, main and auxiliary feed stop, blowdown (surface and bottom), superheater vent, superheater drain, and soot blower stop.

b. Inspection criteria. The following inspection criteria must be observed during inspections of boiler mountings:

(1) 5-year valve inspection. This should be adequate to ascertain the condition of the valve body, adjacent piping, and valve condition to ensure isolation of the system down from the valve.

(2) 10-year mounting survey. This includes studs that are subject to high heat and stresses. Valves should be required to be removed if internal piping and valve
conditions cannot be adequately examined from inside the steam drum or other open connections.

(3) **Studs.** Boiler mounting studs must be manufactured in accordance with ASME Standard 193. Studs are heat treated and marked on one end with a grade and manufacturer's symbol. A common stud grade is "B7," which indicates a heat-treated, austenitic steel alloy for "high strength" bolting materials.

(a) Studs should be checked for proper heat number. The stud may be examined in place. If the stud is removed, it should be examined for cracks, "necking" down, or deterioration.

(b) If studs are bend tested, experience and sound judgment is necessary to determine whether the studs are brittle. Even a new stud will break at the notch of a thread when bent more than 30 degrees. Therefore, bend testing is not recommended.

(4) **Flanged valves.** When flanged valves are removed from the boiler pads for any reason, the condition of the studs or bolts that connect the valves to the pads must be determined.

(a) When valves are bolted to pads or spools that are riveted or welded to the boiler, the riveted or welded joints should not be broken unless there is evidence of leakage or deterioration. These examinations may also be made at intermediate periods if there is any evidence that defects have developed or that excessive corrosion has occurred.

(b) When one or more flanged joints intervene between a stop valve and the boiler drum or superheater outlet, such flanged joints need not be opened at the time the valve is removed from its flanged joint. An inspector may open a flanged joint at any time if the inspector considers examination to be necessary.

c. **Removal of mountings and attachments on high-pressure boilers.** The requirement to remove boiler mountings at 10-year intervals has been modified for certain vessels with unusually high steam pressures. This modification has been permitted due to the difficulty of attaining a steamtight joint and the fact that some valves are welded directly to the steam piping.

(1) For these vessels, only the bonnets of the valves need be removed to permit the inspection required at 10-year intervals. Valves, mountings, and attachments need not be removed unless defects are found that require their removal for further examination, repair, or replacement.
(2) Credit must be given for an 10-year boiler mounting inspection for these vessels if the boiler valve bonnets are opened and the inspector is satisfied with the examination.

(3) A mirror must be used to check all inaccessible parts of the mountings.

(4) A record of the inspection of the mountings must be made on Inspection Book, checklist and a notation made on the COI. This notation must be carried on each succeeding certificate until the next inspection.

d. Boiler safety valves. Testing of boiler safety valves is typically conducted at the inspection for certification. Extensions are not authorized for the testing of safety valves. In most cases, the testing of these devices can be accomplished without taking the vessel out of service. Proving satisfactory operation of boiler safety valves is now especially important given the potentially increased intervals between boiler internal examinations and hydrostatic tests. The inspector shall observe the lifting and reseating pressures of the boiler safety valves and examine the valves to determine if there are any signs of weakness or malfunctioning. Whenever evidence of leakage appears, the inspector may require the safety valves to be opened at intermediate periods for examination. The inspector shall carefully check the setting of each boiler drum and superheater safety valve and require any adjustments necessary to maintain the boiler within MAWP.

(1) The inspector shall observe that boiler safety valves are installed correctly and operate satisfactorily. These valves shall be tested to determine if they can prevent the build-up of excessive pressure. Verification of the safety valve settings shall be checked at each inspection and adjusted if necessary. Guidance on in service setting of safety valves is in NVIC 1-71 Para. 5.c. and 5.d., ASME Section 1 PG-72.3 and Marine Safety Manual, Volume IV – Technical, COMDTINST M16000.9 (series) are applicable.

(2) Inspection of piping. The safety valve escape piping shall be examined for freedom of expansion and proper drainage. At the time the safety valves are tested, the inspector shall also ascertain that the drain opening in the valve body and the escape piping are free. Improper drainage or plugged drains may result in serious corrosion of the valve body and internal parts. The inspector shall examine the boiler casings to ascertain that there is no accumulation of soot, ash, or scale that may drop into the escape piping and cause malfunctioning of the safety valve. The inspector may require the discharge connections to be removed to determine the freedom of discharge from the safety valves.
e. Cast-iron valves, water columns, test clocks, and gauges. The inspector must carefully examine water columns and gauge glasses at each annual inspection.

²NOTE: ABS Rules allow safety valves to exceed the boiler MAWP. This should not be allowed in accordance with 46 CFR 52.01-120(a)(6).
SECTION B: DOMESTIC INSPECTION PROGRAMS

CHAPTER 1: INSPECTION OF VESSELS FOR CERTIFICATION

(1) The inspector must ascertain that water cannot accumulate in the pipe forming the steam connection to the water column. The connections to the boiler should be free, as indicated by the action of the water in the glass.

(2) The water columns and gauge glasses must be blown down on each boiler to determine the freedom of the connections to the boiler and to see that the blow off piping from the water columns and gauge glasses is free.

(3) The operating condition of the gauge cocks must be determined by test.

(4) All steam gauges on the boilers and main steam lines must be checked for accuracy.

8. Inspection Procedures for Externally Fired Lap Seam Boilers

a. Before inspections. Before inspection, all lagging or other material covering longitudinal lap joints must be removed on the entire length of the seam to a width of at least 4 inches from the nearest course of rivets, after which the seam must be thoroughly scaled and wire brushed outside (and inside if possible).

(1) All deposits of electric welding, whether on rivets or plates, must be entirely removed.

(2) The joints must then be thoroughly examined for indications of grooving or other defects.

(a) Grooving in the initial stages is characterized by a line of irregular surface cracks extending along the caulking edges or running parallel with the line of rivets, and is particularly noticeable on the waterside.

(b) When grooving is evident, steps should be taken to ascertain its depth and extent so that a lower working pressure may be calculated, based on the premise that the groove exceeds the maximum measurable depth by 10 percent.

b. During inspections. During inspection, and while the boilers are under full hydrostatic stress, the exposed seams must be shock tested over their entire length by striking the plates in the vicinity of the rivets with a smooth-headed hammer weighing at least 7 pounds. Should this procedure reveal a leak, however slight, in the solid plate, it means there is a crack. In this case, the lap seam must be cut away and butt straps installed or the shell plate renewed.
c. **Fusion welding.** Fusion welding for any purpose or to any degree must not be applied or allowed to remain on rivets or solid plate forming a longitudinal lap joint. Should leaks develop as a result of slack seams or rivets, a sufficient number of rivets must be renewed in order to obtain a tightly caulked joint.

   (1) Rivet removals, when necessary, should be accomplished by chipping off the rivet points (heads) and driving out the shank, but never by burning.

   (2) In every case where rivets are removed, appropriate nondestructive testing should be used to detect the presence of cracks. Seams found to be satisfactory may be relagged or otherwise covered so that the covering can be easily removed intact at subsequent inspections.

d. **Reports of defective seams.** Commandant (CG-CVC) must be provided with a detailed report, including photographs, if obtainable, in each case where defective seams are detected.

e. **Alternative repair methods.** Should a departure from these methods of repair become necessary, full details must be transmitted to Commandant (CG-CVC) for approval before alternative action is taken. A separate entry must be made on Inspection Checklist, CG-840 in each such case, indicating that the foregoing procedures have been carried out. A statement of the conditions found and the nature and extent of repairs, if any, must be included.

9. **Lessons Learned About Boiler Operation**

   a. **Explosions in firetube boilers.** Facts discovered during the CAPT C. MATHIASEN investigation indicated that a weakened condition of the flanged plate, forming part of the combustion chamber, escaped detection during the annual inspection.

   b. It is evident that hydrostatic and hammer tests alone are not sufficient to establish the integrity of a boiler for continued service. Defects that show up under hydrostatic tests can easily be observed from the outside or fireside of conventional boilers. Often, however, the most serious defects are indicated only by the surface condition of the plates or other parts seen from the waterside or steamside. Some of these interior defects are:

   (1) Grooving, which is usually found along the edge of lapped plates and **fatigue cracking on the knuckles of flanged plates** and on the underside of the first corrugation forming the horse collar of Morison-type furnaces; and

   (2) General deterioration of plates and stays caused by corrosion, which is often concealed by a thick layer of scale.
(3) The extent to which these defects have advanced can be determined only through most careful examination after the boiler has been thoroughly scaled and cleaned.

10. Superheater Erosion

a. **Inspection procedures.** When inspecting boilers that have superheater headers installed vertically or nearly vertically, the inspector must use all means available to determine if there is grooving or pitting of the header in the area of the baffle. This examination should include the use of mirrors and finger touch, as necessary.

(1) If serious pitting or erosion is found in such superheater headers, the drain holes should be relocated in the baffle near the center thereof and the original holes welded closed.

(2) Whenever pitting or erosion is noted, necessary repairs should be made to prevent a potential boiler casualty.

b. **Cast-iron and malleable iron valves.** Failures of cast-iron boiler valves used in main and auxiliary steam feed and blow off lines installed prior to 1 July 1935 have resulted in a number of serious casualties and deaths.

(1) Because of the thinning down of the valve bodies due to corrosion and wear, with a consequent decrease in the factor of safety, cast-iron valves and fittings used in boiler mountings and in steam feed and blow off lines should be subjected to thorough examination, particularly at the time of the annual inspection. Since the brittle properties of cast iron may produce fractures under conditions of shock and sudden applications of load, such as "water hammer" and rapid changes in temperature, cast-iron valves and fittings should be carefully and thoroughly examined for cracks and corrosion defects at the time of inspection.

(2) At the end of the 5-year period when boiler mountings are opened and the end of the 10-year period when they are removed, in accordance with 46 CFR 61.05-15, cast-iron valves and fittings should be subjected to a thorough visual inspection, both internally and externally.

(a) The valve bodies should be inspected to ascertain whether there has been a reduction in wall thickness below the requirements specified in 46 CFR 56.60-10. If the thickness of the material has fallen below the specifications, such valves and fittings should be removed from service.
(b) Special consideration should be given to installations in which cast-iron valves and fittings have been repaired or have had parts replaced or altered. The bodies of cast-iron valves and fittings should not be tapped for drainage or bypass connections, etc., except when a boss has been cast integral with the valve.

(c) Because cast iron and Grade B malleable iron have somewhat similar properties, valves of this latter material should receive the same thorough inspection as required for cast iron.

c. Steam piping to soot blowers. In one reported casualty, a 600 psi steam supply line to the soot blower elements ruptured, causing serious injuries to the person who was blowing tubes. Examination of the ruptured pipe showed that the rupture occurred in a bend where erosion had, over a period of years, virtually eaten away the pipe from the inside. During periodic inspections, particular attention must be given to areas where erosion or corrosion is likely to occur in soot blower piping. The location of these areas can best be determined from a visual examination of the piping installations aboard the vessel.

H. INSPECTION OF AUXILIARY MACHINERY AND EQUIPMENT

The purpose of tests and examination of auxiliary equipment is the same as for main equipment. Inspectors need to ensure that auxiliary equipment will operate safely at the design pressure, temperature and condition for a specified minimum period of time.

1. Turbine Driven and Diesel Driven Auxiliary Machinery

   a. Overspeed trips, low-lube oil pressure trips, and low-lube oil pressure alarms on turbines or diesel driven auxiliary generators should be tested at each inspection. Any operational tests of lube oil shutdown controls should not risk shutting off the oil supply to bearings. Other turbine driven auxiliary machinery, such as ‘steam’ driven feedwater pumps and fire pumps, require examination under operating conditions. This is to ensure proper functioning of the local and remote startups as well as shutdown and speed controls while under various load conditions.

2. Steam Driven Feedwater Pumps

   a. A manufacturer of feedwater pumps, Coffin, issued a letter in the 1980’s recommending against operational tests of the overspeed shutdowns because it introduces conditions which may result in damage to the water end of the pump. Coffin suggested an alternative, which was to send the O/S tripping mechanism to their repair facility in conjunction with the five year ABS survey of the pump. To
verify the conditions of the pumps, Coffin checks the overspeed mechanism by measuring the tension of the spring and accuracy of the weight on the trip then issues a letter certifying that the pump will trip at the required speed. However, this is only done upon the request of the operator.

b. The overspeed shutdown on a steam driven feedwater pump is a safety device and its proper operation needs to be confirmed. Depending on the feedwater system type, a minimum number of operable feedwater pumps are required and should be tested each inspection in accordance with 46 CFR 56.50-30. Duplication of these pumps is required so that the loss of one feedwater pump doesn’t cause the loss of water being fed to the boilers. Loss of feedwater to the boilers due to pump failures results in a loss of propulsion casualty because there is no means to generate steam. There are several options to verify the proper operation of overspeed controls on steam driven feedwater pumps. Regardless of the test method marine inspectors should give operators pre-inspection notification of the intent to test these pumps. The identified test methods are:

(1) At a minimum, the manual or ‘hand’ trip on the pump should be tested annually. This test will verify the functionality of the overspeed linkage and steam shutoff valve. However, this test does not verify the overspeed mechanism is set to the proper tripping point. This test should be done with the pump running. If the manual trip does not work, then the entire overspeed mechanism needs to be restored to an operational condition or replaced prior to the ship’s departure.

(2) Another options is for the ship’s crew to operationally test the pump overspeed trip. This requires the crew to be knowledgeable with the procedure for testing the trip. A turbine shaft extension must be installed to the pump’s turbine to accommodate a tachometer. If the shaft extension is not available or if the crew is not familiar with its necessity, the inspector should consider another method of testing. In addition, the crew must have the overspeed tripping RPM for the pump available. This is typically found in the pump manufacturer’s manual.

(3) If the marine inspector is not satisfied with the crew’s capabilities, arrangements can be made for a manufacturer’s technical representative to attend the vessel and test the pumps. Some pump manufacturers prefer this over the crew testing the shutdown to avoid turbine casualties.

(4) As previously mentioned, the manufacturer can also certify the tripping mechanism’s spring is set to overspeed at the proper tripping RPM. This typically requires bench testing of the spring and can cause lengthy delays due to removal of the tripping mechanism from the ship. Having the manufacturer certify the tripping mechanism may be the safest method of ensuring the proper operation of the safety device.
NOTE: Not all feedwater or fire pumps are steam driven. If pumps are electrically driven they require no overspeed testing. If the crew is unfamiliar with ‘steam’ driven feedwater pump testing, consultation with the pump manufacturer should be considered due to potential safety hazards that can result in failed turbine casings and turbine blade debris.

3. Other Vital Steam Auxiliaries

a. The marine inspector shall determine the following pumps are operable and are provided in duplicate prior to sailing. The Vessel/Facility Inspection Requirements, Form CG-835 shall be written for inoperable or lack of duplication of the following pumps because they are necessary to prevent loss of power casualties;

(1) Boiler Feedwater Pumps; 46 CFR 56.50-30(a)
(2) Condensate Pumps; 56.50-35
(3) Fuel Oil Service and Transfer Pumps; 56.50-65(b)
(4) Lube Oil Service Pumps; 56.50-80(b)
(5) Main Seawater Pumps (for condenser cooling); 56.50-45(a).

4. Steering Gear

See MSM Volume II, Material Inspection, COMDTINST M16000.7 (series), Chapter C4 for guidance on inspections of steering gear.
I. **INSPECTION OF PIPING SYSTEMS**

1. **General Considerations**

   The inspector should be generally guided by 46 CFR Subchapter F and ANSI B31.1 for the inspection of piping systems. The inspector should pay particular attention to material type and rating, pipe securing arrangements, couplings, and alignment. The material and equipment must be suitable for the service intended and meet melting point, ductility, strength, and compatibility requirements for the system. Piping must be well secured to reduce vibration and stresses. Couplings must be suitable for the pressure and service. Proper alignment of piping systems should also be checked. See MSM Volume II, Material Inspection, COMDTINST M16000.7 (series), Chapters B3 and C2 for information regarding expansion joint and dresser coupling requirements.

2. **Test and Examination Intervals**

   The hydrostatic test interval for firetube boilers' main steam piping must be in accordance with the intervals permitted in Paragraph G.2 of this Chapter. The hydrostatic test interval for watertube boilers' main steam piping must be in accordance with the intervals permitted in G.3 of this chapter. Hydrostatic testing of steam piping subject to main boiler pressure, other than main steam piping with a nominal size of more than 3 inches should be subjected to a hydrostatic test at a pressure of 1 ¼ times the maximum allowable working pressure of the boiler after every five years of service.

3. **Pressure Relieving Devices**

   The marine inspector shall observe that pressure relieving devices operate satisfactorily. Verification of proper installation for the intended service is a necessary safety precaution. Recent field observations indicated that some relief valves were removed and blanked off when systems required them. Often relief valves are removed after they fail and no suitable replacement is available while vessels are underway.

   Field observations also indicate that some vapor relief valves have been installed on liquid piping (or liquid relief valves installed on vapor piping) which is a safety concern. Marine inspectors can verify if valves are installed for proper service, whether liquid or vapor, by checking ship-piping diagrams. Liquid relief valves generally have the spring enclosed and do not have lifting gear. Liquid valves also have a cap on the top and the pressure adjusting nut is under the cap. Marine inspectors can also verify the relief valves by checking their nametags.
Marine inspectors should observe bench or operational testing with a calibrated pressure gauge to ensure pressure relief devices open at proper pressure. Details on testing and setting relief valves can be found in Marine Safety Manual, Volume IV-Technical, COMSINST M16000.9 (series), Chapter 3. Relief valves should be installed where the ship’s equipment manuals and piping diagrams indicate. The following are systems/equipment that marine inspectors should verify against ship’s equipment manuals:

a. Low pressure side of reducing stations,¹ 46 CFR 56.07-10(b)
b. Unfired pressure vessels,² 46 CFR 61.10-5 (i)(1) and (2)
c. All evaporators and heat exchangers, 46 CFR 54.15-15
d. Discharge side of all fuel oil service pumps, 46 CFR 56.50-65(c)
e. Liquefied petroleum gases for cooking and heating, 46 CFR 58.16-15 and 58.16-16
f. Refrigeration machinery, 46 CFR 58.20-10 and 58.20-20

¹NOTE: Reducing stations should also have pressure gauges on the low pressure side in accordance with 46 CFR 56.50-10.

²NOTE: Relief valves are required on Direct Contact (DC) heaters and de-aerating (DA) tanks on steam or feedwater systems. These and all other inspected pressure vessels should be indicated on the vessel’s Certificate of Inspection in accordance with 46 CFR 61.10-5.

4. Internal Bilge Suction Valves

a. Internal valves are required to be installed on bilge suction lines on passenger vessels by 46 CFR 56.50-50. They are not required on cargo or tank vessels, but are fitted, in many instances, as an additional safety measure.

(1) These valves often consist of screw-down valves that, in many instances, become frozen in the open position. In some collisions and groundings, damage to the vessels could have been greatly reduced if the proper precautions and maintenance had been taken with internal valves. Often, the initial damage was confined to one watertight compartment but because internal valves had been left open, other compartments were flooded, cargo holds were damaged, and personnel were endangered.

(2) In the course of some investigations, it was reported that no officers knew the purpose of the valves, or even that they existed.

(3) The inspector must check such valves and require them to be operable, whether or not the valves are required under 46 CFR 56.50-50. The inspector must also ensure that the ship's officers understand the purpose of these valves.
b. **Neutralizing valves or incapacitating remotely operated valves.** Should the operator of a cargo vessel equipped with remote control suction valves in bilge suction lines wish to remove these valves or render them permanently inoperable in the open position, the following are examples of acceptable procedures:

(1) Removing the remote control rod, operating wheel, and suction valve and replacing the valve with a spacer of equivalent size.

(2) Removing the remote control rod, operating wheel, remote control suction valve bonnet, valve disc, body seat ring, and guide bridges and replacing the valve bonnet with a steel cover plate of appropriate size.

(3) Removing the remote control rod, valve stem, and disc and installing a screwed plug or bolted gasket and washer over the stuffing box hole to create a tight valve bonnet.

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5. **Cargo and Vital or Critical System Piping Repairs**

Repairs to cargo and vital or critical system piping systems are classified as emergency, temporary, or permanent in nature. Emergency repairs are made to permit the completion of cargo discharge. Temporary or permanent repairs must be required prior to loading of another cargo. Temporary repairs may be acceptable for isolated defects in otherwise good piping; such as a pit. Temporary repair methods include the use of substantial pipe clamps, repair sleeves, and similar devices capable of withstanding operating pressures and temperatures. Permanent repairs are made by an isolated welded doubler or renewal in kind, and are required upon the next gas-freeing or repair period, whichever is sooner. Generally, piping with a localized, isolated defect and otherwise in good condition may be repaired permanently with a doubler.
Policy continues on B1-52.
j. **Disconnect switches.** The presence and location of disconnect switches required for motor starters, fuses, etc., must be checked. When a switch or circuit breaker is intended to serve as a motor and controller disconnect switch, the inspector must ensure that the applicable requirements have been met (see 46 CFR 111.55 and 111.70 and National Electrical Code Article 430, Part H).

k. **Accessibility.** The inspector must observe the accessibility of electrical apparatus for inspection and maintenance.

   (1) The inspector must also note the accessibility of junction boxes and similar apparatus in way of paneling.

   (2) The inspector must check hinged doors of motor starters and similar apparatus for interference with adjacent structural parts or apparatus.

l. **General alarm systems.** The inspector must check the general alarm system with a sound level meter and measure the sound level of the bells in each stateroom with the doors closed. Where the background noise level is questionable, the sound level should be measured while the vessel is underway (see 46 CFR 113.25-9).

m. **Electric installations in hazardous locations.** During the initial inspection for certification, the inspector must check the emergency loudspeaker system with a sound level meter at each lifeboat handling station, each lifeboat embarkation station, each passenger assembly station, and throughout the crew's quarters. Where the background noise level is questionable, the sound level should be measured while the vessel is underway or the required sound levels.

n. **Emergency loudspeaker systems.** The inspector must check electric equipment and wiring in hazardous locations for compliance with 46 CFR 111.105.

   (1) Intrinsically safe systems must be checked to ensure that they are installed in accordance with the plans and instructions required by 46 CFR 111.105-11.

   (2) Equipment required to be explosion-proof or intrinsically safe must also be checked for proper Underwriters Laboratories, Inc. (UL), Factory Mutual Research Corporation (FM), Canadian Standards Association (CSA), or MET Electrical Testing Company (MET) labels.

o. **Steering gear circuits.** Steering gear circuits must be separated. Steering gear motor controllers must be located in the steering gear room.

p. **Emergency firepump circuits.** Circuits for emergency firepumps must not pass through the engine room or boiler room.
q. **Low voltage release tests.** The inspector must determine that motor controllers have low voltage release and that motor controllers prohibited from having low voltage release have low voltage protection.

(1) All motors should be run simultaneously and all generators then tripped off the line. One generator should be placed back on the line; it should not trip because of the oncoming load.

(2) Motor controllers requiring low voltage release should re-start their motors automatically; those prohibited from having low voltage release should not re-start their motors automatically. If the motor load exceeds the total ship's service generating capacity, this test should be conducted with all motors that have low voltage release and sufficient motors with low voltage protection, adding up to the total generating capacity running.

(3) A second test must then be conducted with the remaining motors; none of the motors in this second test should start automatically.

5. **Equipment**

a. **Miscellaneous electrical.** The Coast Guard no longer grants type approvals for miscellaneous electrical equipment. Electrical equipment can be divided into the following categories, although some equipment approvals may require a combination of categories:

(1) **Required to be approved.** Equipment that is required to be approved is listed in 46 CFR Subchapter Q and will have an approval number assigned.

(2) **Required to meet various standards.** Equipment that is required to meet various standards is discussed in 46 CFR Subchapter J. It is important to note that the requirement is to meet the standard, not to be listed by a listing service. The burden of proof that the standard is met rests with the manufacturer.

(3) **Having specific requirements in 46 CFR Subchapter J.** The index following Subchapter J may be used to identify if certain equipment must satisfy additional 46 CFR requirements.

(4) **Required to be explosion-proof or intrinsically safe.** Equipment required to be explosion-proof or intrinsically safe must be listed by UL, FM, MET, or CSA.

b. **Use of miniature thermal overcurrent circuit breakers on small passenger vessels.** In 1997, Commandant (G-MSE-3) concurred based on supporting...
documentation from MSO New Orleans that the “new” standard noted in the CFR is excessive,

and the use of miniature thermal overcurrent circuit breakers on small passenger vessels is acceptable for low voltage DC circuits less than 50 Volts, provided:

(1) Circuit breakers may meet UL 489, or

(2) Circuit breakers may meet UL 1077, Supplementary Protectors for use in electrical equipment, if:

i. an NRTL has verified that they meet UL 1077;

ii. they are installed in a panelboard; and

iii. there is at least one UL-listed fuse or UL 489 certified breaker protecting the main feeder to the panelboard to provide primary branch circuit protection.
Policy continues on B1-59.
(2) While aboard the vessel, the inspector should interview the chief engineer or the master, as appropriate depending upon the class of vessel, to obtain their opinions on the condition of the vessel's hull, tailshaft(s), and associated machinery. In addition, the inspector must obtain a written statement from the chief engineer, master, or both, attesting that the vessel is in suitable condition for operation during the period of extension requested.

(3) The inspector should then examine the vessel to the extent necessary to ensure that the condition of the vessel is, in his or her opinion, satisfactory for the extension requested and does not contradict the opinion of the master or chief engineer. The inspector should also examine the vessel's bridge record card, if applicable, for any deficiencies that may have been issued recently by another port and not yet entered into MISLE.

**NOTE:** The requirement for a written statement is in addition to the owner's written request for DE extension.

c. **Additional considerations for extension.** A request for an extension of a hull exam must include an inspection of the vessel and also take into consideration other U.S., international, and class requirements. Any conflicts with other requirements must be resolved before an extension request is forwarded to Commandant (CG-CVC) or granted by the OCMI per Subparagraph A.4.d of this Chapter.

(1) **International Convention for the Safety of Life at Sea (SOLAS).** SOLAS requires an examination of the outside of a ship's bottom every 12 months on passenger vessels and at intervals not to exceed 5 years on all tankers. In addition, SOLAS requires that tankships 10 years of age and older undergo an examination of the outside of the ship’s bottom at the required intermediate survey, which may take place between 6 months before and 6 months after the midpoint of the period of validity of the Cargo Ship Safety Construction Certificate. A Cargo Ship Safety Construction Certificate must not be extended beyond 5 years.

(2) **Load Line Regulations (46 CFR Part 42).** The Load Line regulations require a vessel to be drydocked before issuance of a new Load Line Certificate and then every 5 years thereafter. An existing Load Line Certificate may be extended up to 150 days maximum, except for those vessels with Great Lakes Load Line Certificates, which can be extended for up to 365 days. (Until MSM Volume IV, Technical, COMDTINST M16000.9 (series) is updated; see MSM Volume II, Mechanical Inspection, COMDTINST M16000.7 (series), Chapter E4 for policy on load line extensions.)
(3) Tailshaft examination. The tailshaft examination requirements of 46 CFR 61.20-17 through 61.20-23 and D of this chapter provide regulatory and policy guidance on tailshaft examinations. A tailshaft examination extension may also require consideration if a drydock examination extension will delay the tailshaft exam.

d. Delegation of extension authority. As set forth below, the Commandant delegates limited authority to extend hull examination intervals for certain specific vessels to OCMIs and District Commanders, as follows:

(1) Tank barges, not gas free and not in service. Under current industry needs, a large number of not gas-freed tank barges with current COIs have been laid-up for indefinite periods of time. The OCMI is authorized to grant consecutive 12-month extensions of hull examinations for laid-up tank barges, not to exceed a total of 4 years from the original drydock due date. Each extension must be subject to the following:

(a) The barge must maintain a valid COI, including annual and periodic inspections.

(b) In addition to meeting the requirements of 46 CFR 35.05-15, the barge must be boarded and checked for damage or cargo tank integrity at least once a week by an owner's representative.

(c) A Vessel/Facility Inspection Requirements, Form CG-835 must be issued requiring the barge to undergo all required hull examinations prior to being placed in service, with an expiration date to coincide with the expiration date of the COI.

(d) At the end of the fourth lay-up extension, the barge must undergo all required hull examinations and associated repairs made, or its COI must be surrendered.

NOTE: The barge must be gas free prior to the surrender of the COI.

(2) Extension of the CTIE (gravity tanks only) and ISE.

(a) At the vessel owner's request, OCMIs may grant two 12-month extensions to all vessels that require these exams to effect coincidence with a regularly scheduled DE.
[2] A deficiency letter must be sent to the vessel owner to require completion of the appropriate exam prior to the vessel returning to service or renewing the COI, whichever occurs first.

(8) Great Lakes vessels. The Commander, Ninth Coast Guard District, is authorized to grant DE extensions for Great Lakes vessels under the following guidelines:

(a) Extensions must not exceed 365 days.

(b) Extensions should be considered on a ship-by-ship basis and will be based on the results of a non-credit ISE, the extent of which should be to the satisfaction of the Commander, Ninth Coast Guard District.

(c) The Great Lakes load line assignment authority has been notified and there are no outstanding conditions that would impact the decision for the extension.

(9) Inland passenger vessel special drydock extension criteria. Drydock extensions of up to 30 months are available to inland passenger vessels that operate on restricted routes in a benign environment. Such extensions require the vessel to successfully complete a special drydock extension survey. The survey criteria outlined below is similar to the traditional underwater survey program presented in Navigation and Vessel Inspection Circular (NVIC) 1-89 with the exception that it is more detailed and comprehensive.

(a) Eligibility criteria.

[1] Any passenger vessel (inspected under 46 CFR Subchapter H, K, or T) that requests a drydock extension beyond 1 year must meet the following criteria:

aa. The vessel must be constructed of steel or aluminum. Wood and FRP hulls are excluded from eligibility.

bb. The vessel must have operated exclusively in fresh water since its last drydock examination. (To further clarify, this means year-round operation in fresh water.)

cc. Vessel operation must be restricted to rivers or protected lakes. This restriction must be indicated on the vessel’s COI. The definition of a protected lake will be left to OCMI discretion.
dd. The vessel must operate exclusively in shallow water or within 0.5 nm from shore. For shallow water operation, the maximum water depth may be defined as the depth at which, if the vessel sinks, the uppermost deck(s) that could safely accommodate all passengers and crew remains above water. To make this determination, vessel stability (passenger heeling moment) must be considered.

NOTE: Water clarity is not included as a condition of eligibility. If water clarity is a problem, then the use of a clear box of at least 18 inches in diameter must be used for the underwater video.

[2] The cognizant OCMI will determine eligibility for drydock extensions. In addition to the above criteria, decisions of acceptability will be based on the following:

   aa. The overall condition of the vessel (based on inspection history) and the hull protection system (cathodic protection is required, as a minimum).

   bb. The vessel’s history of casualties involving the hull and other hull-related deficiencies.

   cc. Review of the written extension request.

NOTE: Although a vessel age limitation has not been included as a criterion, the OCMI must consider the impact of vessel age on the overall condition of the hull when determining vessel eligibility.

[3] Unlike the traditional underwater survey program, a pre-survey drydocking is not required. Permanent hull markings, hinged sea chest grates, and reference videos are optional.

(b) Drydock extension applications. The information required for the drydock extension application is identical to the requirements for the traditional underwater survey program (see Section 2 of Enc. (1) to NVIC 1-89), with the following exceptions:

[1] Hull maintenance and condition assessment program. The extension request must include a hull maintenance and condition assessment program which must, as a minimum, contain the following:
aa. A preventative maintenance plan for the vessel’s hull and related systems/equipment. A preventative maintenance plan should consider the following:

(i) Inspection and replacement (as needed) of zinc anodes.

(ii) Inspection and cleaning (as needed) of the underwater hull.

(iii) Inspection and maintenance of rudder and shaft seals.

(iv) Inspection and operational testing of sea valves.

(v) Flushing of sea chests and sea strainers.

bb. Provisions for an annual condition assessment of the hull in the presence of a third party examiner.

(i) The third party examiner should be a qualified marine surveyor (recognized by a national marine surveyor association) or have prior experience as a Coast Guard marine inspector or classification society surveyor. As a minimum, the third-party examiner should have at least 3 years experience in the examination of steel or aluminum-hulled vessels.

(ii) The OCMI has the discretionary authority to accept or deny the use of a particular third party examiner and may, as an option, require the presence of a marine inspector. The condition assessment plan should include the following:

(aa) Evaluation of the vessel’s underwater hull and appurtenances (using qualified divers and appropriate video equipment). This is primarily to verify that hull coatings remain intact and check for fouling of hull appurtenances. This can also be used as an opportunity for preventative maintenance.

(bb) Hull gaugings (representative sampling) of suspect areas.

(cc) A mechanism for providing a written hull assessment and preventative maintenance report or checklist to the cognizant OCMI on an annual basis.

[2] Internal structural examination. A thorough ISE must be conducted during the survey. All internal spaces must be made accessible for examination and gas-freed as appropriate. However, integral fuel oil tanks must be
examined as required by 46 CFR 71.53, 115.610, or 176.610 (as applicable).

[3] Vessels of 15 years of age or older. Vessels 15 years of age or older are eligible for drydock extensions under this policy.

(c) **Preparatory meeting.** Before conducting the drydock extension survey, a preparatory meeting must be held. See Section 4 of Encl. (1) to NVIC 1-89 for details.

(d) **Survey criteria.** The drydock extension survey must be conducted in accordance with Section 5 of Encl. (1) to NVIC 1-89, with the following additions or modifications:

1. **Duration of the drydock extension survey.** The survey should take as long as the inspector considers necessary to ensure that the ship is in a safe condition to continue operation for the next 30 months. At least 5 days should be allowed to conduct the examination. However, with use of a third party examiner, the marine inspector’s time on-site may be reduced. With the exception of those portions of the survey that require marine inspector presence, the duration and scope of participation by a marine inspector must be subject to OCMI discretion.

2. **Site selection.** The site must be in an area with sufficient water depth under the keel and sufficient clearance adjacent to both sides of the vessel to allow the diver to safely survey the entire underwater hull of the ship. Current velocity must be minimal to ensure diver safety. If air temperatures are below freezing, dive equipment must be designed for use in sub-freezing conditions. Diving should not take place when ice exists on the water surface.

**NOTE:** Water clarity is not a great concern because use of a “clear box” will enable a clear, albeit limited, view of the hull regardless of water conditions.

3. **Hull markings.** If permanent hull markings required by NVIC 1-89 are not in place, a temporary underwater grid system must be used. The temporary grid system must consist of stainless or galvanized steel cables, spaced not more than 10 feet apart, with sequentially numbered tags spaced at 1-foot intervals. The grid system must remain in place during the entire survey.

4. **Preliminary examination.** Prior to holding the preparatory meeting as noted in Section 3 of NVIC 01-89, a third-party examiner (acceptable to the OCMI) together with qualified divers must conduct a preliminary
examination of the hull. The preliminary examination must be used to assess the overall condition of the vessel hull and identify specific concerns that should be addressed. A marine inspector does not need to be present during this portion of the survey process.

[5] **Underwater inspection.** A complete underwater hull examination (as defined below) must be supervised by the third-party examiner and recorded on videotape. The third-party examiner will identify areas requiring further examination by a marine inspector. The videotape will be indexed to enable the marine inspector to readily identify and review important sections of the tape.

aa. As a minimum, the underwater survey must include a general examination of the hull plating and a detailed examination of all hull welds, propeller, rudder, other hull appurtenances, sea chests, and sea valves. As a guide, examination of the hull plating should cover all welds and at least five points on each plate, evenly spaced, where ultrasonic gaugings will be taken. The plugging of sea chests and gauging of rudder and tailshaft bearings must also be recorded on videotape. The attending marine inspector may require a detailed examination of other areas of the hull as deemed necessary.

bb. In addition to the above gaugings, divers must take belt gaugings at the bow, stern, and midships and along the wind and water strake. The number and exact location of belt gaugings will be subject to OCMI discretion.

c. A Coast Guard marine inspector must be present during critical portions of the underwater survey process. Critical portions include, as a minimum:

(i) Examination of critical welds (identified at preparatory meeting), propeller, rudder, other hull appurtenances, sea chests, and sea valves.

(ii) Plugging sea chests and removal of sea valves.

(iii) Gauging of rudder and tailshaft bearings.

(iv) Any other portions identified by the OCMI.

dd. Sea valves must be removed and examined in accordance with the guidance in NVIC 1-89. The OCMI must be completely satisfied that
CHAPTER 3: HULL EXAMINATIONS

sea valves can be removed safely. Passengers must be removed from the vessel during this evolution.

ee. This special drydock extension program is an option that the vessel’s owner/operator has elected to use. Responsibility for the management of the vessel, its personnel, and maintenance of necessary safety and service systems remains at all times with the master and owner/operator.

ff. The vessel owner must provide the OCMI with a detailed examination report, including a gauging report, bearing clearances, and a copy of the videotape.

[6] Underwater inspection techniques and equipment. Underwater inspection techniques and equipment must be in accordance with Section 5 of Encl. (1) to NVIC 1-89. If water visibility will affect the quality of the underwater video, the video camera must incorporate use of a “clear box.”

aa. A clear box is a device which uses clean, fresh water to displace the surrounding water and provide a clear view for the camera. In order to provide an adequate field of view, the clear box must measure at least 18 inches in diameter (or, if rectangular, at least 18 inches in height and width).

bb. As a general rule, modern video and audio equipment must be used to assure the best quality results.

[7] Internal Structural Examination (ISE) and integral fuel oil tank examination. A complete ISE must be conducted as part of the drydock extension survey. All internal areas of the hull must be accessible for examination.

46 CFR 39.20-11 requires that cargo tank Pressure vacuum (PV) valves be set not lower than 1 psig and 0.5 psig on the vacuum side. Some inland tank barge cargo tanks are not structurally designed for pressures and vacuums. During Vapor Control System (VCS) plan review, these barges were approved by the Coast Guard with PV valves set below those required by 46 CFR Part 39, to protect the structure of the barge.

a. The lower PV valve settings have resulted in problems at some facilities attempting to conduct VCS operations with these barges.

(1) Such problems range from very slow transfer rates to the inability to conduct transfer. Provided that transfer procedures are followed, these are operational, not safety issues, since the tank venting system still serves to protect the cargo tanks from over/under pressurization during VCS operations. Vessel operators may continue to operate with these PV valve settings if they so desire.

(2) However, if the owner/operator decides to upgrade the pressure settings or if the barge is displaying obvious signs of over-pressurization, then additional plan review or approvals may be necessary.

b. The Marine Safety Center (MSC) will enter PV valve settings in the MISLE database (Vessel File Cargo Systems product set) for all future planned reviews of VCS. OCMIs must make these entries when they are not made by MSC and verify the PV valve is approved for the set pressures during routine scheduled inspections.

9. **Great Lakes Barges**

46 USC § 2101 defines a “Great Lakes barge" as a "non-self-propelled vessel of at least 3,500 gross tons operating on the Great Lakes." Inspection is required under Public Law 102-587. This guidance is provided pending promulgation of regulations.

a. **Plan Review.** Full plan review is required prior to initial certification of any Great Lakes barge. Certain hull structure and system plans may be exempt from review, based on load line surveys, recognized classification society certificates, or operating history, as deemed appropriate by the cognizant Officer in Charge, Marine Inspection (OCMI).

b. **Hull Survey and Credit Drydocking.** A complete internal inspection and credit drydocking are required at intervals not to exceed 5 years, not withstanding extensions approved under Section B.3.A.4.d.8 of this Manual.
c. **Inspection for Certification.** Application of all requirements for seagoing barges contained in Title 46, Code of Federal Regulations (CFR) Subchapter I, is required, along with associated subtitles related to pollution prevention, navigation safety, and marine transportation security. Manned and permissively manned barges must meet the applicable requirements for cargo vessels on a Great Lakes route contained in 46 CFR Subchapter W.

d. **Operation.**

(1) For tug/barge combinations operating in the Push-Mode, as defined in Navigation and Vessel Inspection Circular (NVIC) No. 2-81, or when equipment on the barge unreasonably restricts the visibility of the tug operator, or when the configuration of the tug/barge combination is such that "the person in charge of navigation maintains control from a fixed steering station on the barge," the following manning requirements will apply:

(a) The tug/barge configuration shall be manned as a single vessel utilizing a three watch system.

(b) The master and mates must hold inspected vessel licenses with tonnage limitations appropriate to the combined tonnages of the tug and barge.

(c) The manning scale below should be used as a guide.

   i. 1-Master/1st Class Pilot
   ii. 1 - Chief Engineer
   iii. 3-Mates/1st Class Pilots
   iv. * Assistant Engineers
   v. 6-Able Seamen
   vi. *Oilers

   Note: * Dependent on automation level of equipment.

(2) For tug/barge combination operating in the Dual-Mode, as defined in NVIC 2-81, with navigation control of the tow exclusively on the tug, the manning level shall be commensurate with that required for the tug (ref: 46 U.S. Code part F).

(3) For barges that require specially trained personnel on board to operate self-unloading equipment/systems, or to monitor cargo and ballast systems, an endorsement shall be placed on the certificate of inspection.
(similar to that for tankermen), as deemed appropriate by the cognizant OCMI.

F. MOBILE OFFSHORE DRILLING UNITS (MODUs)

1. Introduction

MODUs are inspected and certificated under 46 CFR Subchapter I-A, which requires an inspection for certification every 2 years and a reinspection between the 10th and 14th month after issuance of the certificate. MODUs operating on the U.S. Outer Continental Shelf (OCS) are required to have annual onsite inspections in accordance with the OCS Lands Act Amendments of 1978 (43 U.S.C. 1331, et seq). Self-propelled MODUs of 500 or more GT engaged in international voyages are subject to the requirements of SOLAS 74/78. These units have the option of compliance with SOLAS or with the IMO MODU Code. U.S. flag MODUs are subject to Coast Guard inspection requirements any time the vessel is operating (46 U.S.C. 3311). Therefore, unless "laid-up," a U.S. flag MODU must be in compliance with its COI regardless of its location or whether floating or bottom bearing. Consequently,
regardless of the vessel's location, mode of operation, or types of international certificates, a U.S. flag MODU will receive an inspection or reinspection annually.

2. IMO MODU Code

   a. On 26 July 1982, the Commandant advised the Secretary General of the IMO that the United States accepted the organization's MODU Code as equivalent to the requirements of SOLAS 74/78 for such vessels. As noted above, MODUs may comply with SOLAS or with the terms of the IMO MODU code. In addition, there will be a number of MODUs not subject to SOLAS for which IMO Code certificates are desired. Revision of 46 CFR Subchapter I-A has been initiated by Commandant (CG-543). One of the stated objectives of the regulatory workplan is to dovetail Subchapter I-A with the IMO MODU Code.

   b. Administration. Upon request of the vessel owner, U.S. MODUs should be inspected to verify compliance with the IMO MODU Code. It is anticipated that such inspections will be conducted in conjunction with inspections for certification.

      (1) Should a conflict exist between the IMO MODU Code and the provisions of 46 CFR Subchapter I-A, the owner must either request an exemption under paragraph 1.4 of the IMO MODU code or the Coast Guard must determine equivalency under paragraph 1.5 of the IMO MODU code.

      (2) Upon satisfactory completion of the inspection, a MODU Safety Certificate, CG-5334 must be issued to the vessel. The certificate should be dated to expire 2 years from the date of the inspection.

3. U.S. Flag MODUs Operating in Foreign Waters

   a. Full compliance with the U.S. regulations may be difficult for MODUs operating in foreign waters and subject to coastal state requirements. When another country's requirements conflict with U.S. requirements, U.S. Coast Guard regulations must take precedence unless an exception is specifically authorized by the cognizant OCMI.
provide inspection oversight to any craft that intends to operate as a PMC or that cannot demonstrate that it is or will be a vessel as described in this part.

7. Change of Status

a. The OCMI must take appropriate action to determine PMC status in accordance with the provisions of this Part when a certificated vessel changes its operations or configuration such that it may no longer be considered a vessel.

(1) An operator must advise the OCMI of their intent to convert a vessel to a PMC.

(2) An operator must also advise the OCMI of their intent to operate as a PMC storing oil for transfer to or from shore. See Section B.4.D.1 of this Manual for risks and other government agency notifications that should be evaluated for Permanently Moored Tank Craft.

(3) An operator must submit a Letter of Intent to the COTP requesting designation as a 33 CFR Part 154 facility if they intend to operate as a PMC storing oil or hazardous materials for transfer to or from a vessel.

(4) The OCMI should be satisfied that the proposed operation and craft configuration are such that the craft is no longer considered a vessel in accordance with the guidance in this Part. If the OCMI determines the craft in question is no longer a vessel, the COI must be surrendered and the action documented in MISLE.

(5) The OCMI/COTP should coordinate regulatory oversight transition to the appropriate federal, state and local government agencies; e.g., USACE, EPA, and fire marshal.
8. Local or State Authorities

Any craft that has been determined to not be a vessel is not subject to Coast Guard inspection law and regulation and becomes the jurisdiction of the state or local government. The craft must comply with either local building codes or applicable standards as stipulated by the appropriate state or local government entity.

9. Waterways Management

a. PMCs are considered to be structures on the water and must be permitted by the United States Army Corps of Engineers (USACE) as appropriate.

(1) The USACE has the sole authority to issue site permits.

(2) Per the Coast Guard/USACE Memorandum of Agreement in MSM Volume X, Interagency Agreements and Acronyms, COMDTINST M16000.15A (Series), the USACE will seek COTP input on new site permit applications and approvals at the earliest opportunity.

(3) The COTP may address concerns for navigation safety or other waterways management issues by providing comment to the USACE during the permitting process.

b. As PMCs are not vessels, the COTP cannot compel operators to undergo a formal risk assessment prior to placing the craft in its location or intended operation.

(1) COTPs should work closely with the cognizant USACE District Engineer to identify and mitigate navigation safety concerns.

(2) Mooring arrangements must be acceptable to the COTP; they must pose no risk to the port, waterway, or environment and must be capable of withstanding the location’s wind, ice, and water conditions.

(3) Special consideration must also be given to extreme weather that may occur, including, but not limited, to hurricane force winds, current, or high water.

(4) PMCs storing oil or hazardous materials for transfer to or from a vessel must satisfy 33 CFR Parts 154, and 156 requirements.

c. PMCs storing oil for transfer to or from shore must satisfy EPA secondary containment requirements.

(1) The EPA’s Oil Pollution Prevention requirements (spill prevention, control and countermeasure plans) in 40 CFR Part 112 are applicable to non-transportation related facilities (Permanently Moored Tank Craft).
d. OCMIs should notify the cognizant USACE District Engineer and the Regional EPA Administrator when vessel owners/operators initiate a change in a craft’s status to a PMC. The OCMI should also advise the craft owner/operator to seek the appropriate permits from the USACE and EPA.

(1) Permits are the responsibility of the owner/operator and are not tied to any determination by the OCMI or COTP.

(2) OCMIs should not delay determinations of PMC status, nor should OCMIs compel continued compliance with Coast Guard Vessel Inspection regulations, in the absence of or while waiting for the owner/operator to obtain an USACE permit.

e. The COTP may require lighting of the PMC under the provisions of 33 CFR Part 64.

10. Vessel Documentation

a. Craft that are determined not to be vessels are ineligible for vessel documentation. In situations where such a craft holds a valid Certification of Documentation (COD), that COD would become invalid because the craft no longer meets the requirements of 46 U.S.C. 12135. The owners would then be required to surrender the COD. The OCMI shall notify the National Vessel Documentation Center (NVDC) of any craft that holds a Certificate of Documentation and is determined no longer to be a vessel. The OCMI must also advise the craft operator of its ineligibility.

b. When the craft is the subject of an outstanding mortgage properly filed or recorded in accordance with 46 U.S.C. Chapter 121 and applicable regulations, the COD, but not the trade endorsement thereon, remains valid for certain purposes. The COD would remain valid for the purposes of 46 U.S.C. Chapter 313 and instruments filed or recorded before the date of invalidation, including the craft’s current, preferred, mortgage and assignments or notices of claim of lien filed after that date. See 46 CFR 67.161.

c. If the craft owners plan to refinance or obtain additional financing, the new mortgage could not be recorded as outlined in 46 U.S.C. Chapter 313 and would not be able to enjoy the protections of preferred mortgage status under that chapter. The same is true for any mortgages the owners might plan to obtain in the future after the current mortgage has been satisfied, unless the craft is altered so that it is eligible to regain its status as a vessel.
11. MISLE Activity

a. Newly built craft that are not deemed vessels will not be entered into the MISLE database as vessels. Field units will change the MISLE status of any former vessels in MISLE that becomes permanently moored such that they no longer meet the definition of vessel to “DEACTIVATED.” COIs will be removed from these craft and deactivated.

b. Newly built craft and vessels converted to PMCs that operate as a Facility Transferring Oil or Hazardous Materials in Bulk to or from a vessel should have their 33 CFR Part 154 facility status noted in MISLE.

c. Retain all historical vessel inspection records in MISLE for vessels converted to PMCs. These records should be provided to federal, state or local agencies that have jurisdiction over the PMC.

12. Correspondence

An example of a PMC determination letter is provided in the following page.
Owner or Operator

Dear Sir or Madam:

The Officer in Charge, Marine Inspection (OCMI) of Coast Guard Sector Homeport, USA, has determined that your craft NEVER SAIL, for which you submitted an Application for Inspection on January 1, 2010, is not a vessel as defined in 1 U.S.C. 3 due to its configuration, intended use, or mooring arrangement that prohibits it from a practical use as transportation on the water. Therefore, it is not subject to U. S. Coast Guard vessel inspection regulations and the Coast Guard cannot provide inspection oversight or issue a Certificate of Inspection to it. This craft is also ineligible for documentation as a vessel.

As the craft is considered to be substantially a land structure on the water, you will need to apply for an appropriate permit from the U. S. Army Corps of Engineers. If you operate the craft as a floating oil storage facility you will need to comply with Environmental Protection Agency spill prevention, control and countermeasure plan requirements. If you intend to operate the craft as a floating oil storage facility that transfers oil or hazardous materials to or from a vessel you will need to submit a Letter of Intent to the cognizant Captain of the Port (COTP) and comply with the spill prevention requirements in 33 CFR Part 154.

You may also be required by the COTP to verify the suitability of the mooring arrangements to withstand the forces of wind, current, ice and high water. If there is a change in the approved mooring arrangements, you shall contact the cognizant COTP to update the statuses. Lastly, you may also be required to comply with appropriate local building codes or other standards as may be stipulated by the state or local government.

If your craft’s status changes such that it is placed into navigation or otherwise has a practical use for transportation on the water, you must then fully comply with all applicable vessel inspection laws and regulations. Such a change in status must be reported to this office or cognizant OCMI prior to any return to navigation so that an appropriate inspection may occur.

If you have any questions about this determination you may contact LCDR M. I. Inspector, Chief, Inspections Department at (123) 555-1234.

Sincerely,

J. A. SMITH
Captain, U. S. Coast Guard
Officer in Charge, Marine Inspection
CHAPTER 4: INSPECTION PROCEDURES APPLICABLE TO VESSEL TYPES, CLASSES, AND CATEGORIES

COPY: COMMANDER (DP), COAST GUARD DISTRICT X
U.S. ARMY CORPS OF ENGINEERS, HOMEPORT, USA DISTRICT
NATIONAL VESSEL DOCUMENTATION CENTER
EPA [APPROPRIATE REGION] ADMINISTRATOR
(APPLICABLE STATE OR LOCAL AGENCY)
POLICY CONTINUES ON B4-50.
J. BOY SCOUT VESSELS

1. Introduction

To assist local Boy Scout councils, chartering organizations, and leaders in complying with Coast Guard inspection regulations, the Boy Scouts of America's (BSA's) Exploring Division and the Coast Guard entered into formal agreement on 1 October 1979. Vessels associated with the BSA’s Exploring Division are known as Sea Explorer vessels. Although the agreement principally addresses the Sea Explorer program, it applies equally to all vessels operated in the interests of the BSA. The Exploring Division intends that all Sea Explorer vessels, except pulling boats carrying no more than six passengers, will be inspected and certificated.

2. Inspection Procedures

a. **Vessels inspected under 46 CFR Subchapter T.** All Sea Explorer vessels under 100 GT that carry more than six Boy Scouts must be inspected and certificated under 46 CFR Subchapter T.

   (1) These vessels are subject to inspection because the Boy Scouts carried are considered to be passengers, as defined in 46 U.S.C. 2101(21)(B).

   (2) In the past, a strict interpretation of the law did not require inspection and certification of vessels over 65 feet in length used exclusively for Sea Explorer activities. However, to ensure maximum safety, it was BSA policy that all Sea Explorer vessels over 65 feet possess a valid COI when carrying more than six persons in addition to the crew. Therefore, Sea Explorer vessels over 65 feet in length are now required to be inspected and certificated (46 U.S.C. 3301). The section of the 1 October 1979 agreement with BSA that deals with these vessels will be revised to reflect that change.

b. **Vessels inspected under agreement.** Sea Explorer vessels of more than 100 GT are not required to be inspected under 46 U.S.C. 3301 et seq., because they do not meet the definition of passenger vessels. Sea Explorer vessels are inspected and certificated in accordance with the existing agreement with BSA. Such vessels may be inspected under the 46 CFR Subchapter T standards. When these standards are inadequate, the provisions of 46 CFR Subchapters F (Marine Engineering), H (Passenger Vessels), and J (Electrical Engineering) may be used.

**NOTE:** Seagoing motor vessels over 300 GT operated by the Sea Explorers are required to be inspected under 46 U.S.C. 3301 et seq.
3. Operational Tests

a. The operation of both audible and visual alarms should be observed in the cargo control room, the engine control room, and the pilothouse. The marine inspector must consult the manufacturer instruction manual and the ship’s operation and maintenance manual for guidance in establishing proper test procedures. Simulation may be necessary for some tests. However, simulation tests of the alarm panel must not be accepted as evidence of satisfactory operation of the following alarm and safety shutdown systems:

(1) High oxygen content of gas in IGS main; alarms activated at an 8 percent concentration.

(2) Low gas pressure in IGS main downstream of all non-return devices; alarms activated at 100mm (4 inches) water gauge. An automatic shutdown of the cargo pumps may be fitted on some vessels. Also, high gas pressure in the IGS main downstream of all non-return devices.

(3) IGS blower high discharge temperature alarm that will automatically shut down the IGS blowers and the gas regulating valve; alarms activated at 150°F (65.6°C) or less for U.S. vessels and at temperatures indicated in approved operation manual for foreign vessels.

(4) A low water level alarm fitted to the deck water seal.

(5) High gas pressure of the inert gas supply forward of the non-return devices.

(6) IGS blower failure alarm and automatic shutdown of main or regulating valve.

(7) Power supply failure for the automatic control system gas regulating valve and the indicating devices showing the proper quantity and quality of the inert gas supply.

(8) Insufficient fuel oil supply to the IGG and the failure of the power supply to the IGG.

b. Conduct backflow pressure test of water seal and non-return valve.

c. Test interlocking of soot blowers. The IGS will automatically shut down if soot blowers are operated.
d. Test for automatic shutdown of the gas pressure regulating valve when the IGS blowers are secured.

e. Test the automatic combustion control features of the IGG (if used) in accordance with standard combustion test procedures for automatic auxiliary heating equipment (see 46 CFR Part 63).

f. Test IGS remote shutdown required by 46 CFR 111.103-9.

G. SAFETY PRECAUTIONS

1. Introduction

The purpose of an IGS is to establish positive pressure in a cargo tank with an atmosphere that will not support combustion. If an atmosphere will not support a fire, it will not support life. Clearly, such an inerted, pressurized atmosphere is highly dangerous, producing unconsciousness and death in a short period. The following guidance is intended to make inspectors aware of the fundamental steps that must be taken to ensure IGS safety.

2. References

In addition to this chapter of the MSM, the inspector should consult the following sources:

a. 46 CFR Subchapter D, Part 32.53.


c. SOLAS 74/78, Chapter II-2, Regulation 4, and amendments.

d. The manufacturer instruction manual.

e. The vessel's operating and maintenance manual.

(c) The COTP/OCMI may evaluate proposed substitution of life rafts for a damaged lifeboat (with the approval of the Flag Administration, or other organization that issued the Safety Equipment Certificate), to ensure that 100 percent of the crew will be accommodated, provided that another boat (rescue or lifeboat) is available for marshalling rafts.

c. Machinery spaces. The PSCO should assess the condition of the machinery and the electrical installations such that they are capable of providing sufficient continuous power for propulsion and auxiliary services.

(1) Operation. The PSCO may determine if responsible personnel are familiar with their duties related to operating machinery such as:

(a) Emergency and standby electrical power sources;

(b) Auxiliary steering gear;

(c) Bilge and fire pumps; and

(d) Any other equipment essential in emergency situations.

(2) Maintenance. During examination of the machinery spaces, the PSCO should form an impression of the standard of maintenance. Frayed or disconnected wires, disconnected or inoperative reach rods, quick closing valves or machinery trip mechanisms, missing valve hand wheels, evidence of chronic steam, water and oil leaks, dirty tank tops and bilges, extensive corrosion of machinery foundations, or a large number of temporary repairs, including pipe clips or cement boxes may be indicative of poor maintenance.

(3) Tests and trials. While it is not possible to determine the condition of vital machinery without performance trials, the PSCO may only require operational tests or trials if there is objective evidence that the machinery does not operate.

(4) Oil and oily mixtures. By taking into account the quantity of oil residues generated, the capacity of sludge and bilge water holding tanks, the capacity of the oily water separator, and reviewing the oil record book, the PSCO may determine if the vessel uses reception facilities and note any alleged inadequacies of reception facilities.

(5) Sufficient power. If one electrical generator is out of commission, the PSCO should investigate and test whether power is available to maintain essential and emergency services.

(6) Remote shut-off valve for tanks more than 500 liters. Regulation II-2/4.2.2.3.4 of
SOLAS 74 (amended) requires every fuel oil pipe from a storage, settling, or daily service tank to be fitted with a means to secure flow from outside the space in which the tank is situated.

(a) The United States accepted the IMO interpretation that was adopted at the 69th session of the Marine Safety Committee in May 1998.

(b) Therefore, vessels with emergency generator fuel tanks installed on or after May 14, 1998, of 500 liters (0.500 cubic meters) and greater must have valves installed that meet this regulation. Existing installations with a capacity of 500-1,000 liters (0.500-1.000 m³) are grandfathered.

d. Navigation safety equipment check. The PSCO should examine vessel navigation equipment required by SOLAS Chapter V and 33 CFR Part 164, paying particular attention to the equipment requirements tied to the vessel's gross tonnage. The PSCO should also determine operator competence and whether all equipment was working properly during the last voyage. If required equipment is not working, the PSCO should determine when the vessel will complete repairs. If a major piece of electronic equipment (like the radar or Automatic Radar Plotting Aid (ARPA)) is not operational, the PSCO should contact the COTP or OCMI for direction. The PSCO should conduct a thorough check of the bridge and navigation spaces for compliance with the Navigation Safety Regulations (33 CFR Part 164) and ask to have the electronic equipment operating if cargo operations permit. The PSCO should check the complete list of navigation safety items, paying special attention to the extra requirements for vessels over 10,000 GT. The PSCO should check or test the equipment, paying particular attention to the following:

(1) **Position Fixing Device (LORAN C, Satellite Navigation System (SATNAV) or GPS).** The PSCO should have the crew operate the equipment. The PSCO should check that the receiver is able to lock on and track the signals for these readings. For SATNAV, the PSCO should verify that the Mate is able to set up the receiver to obtain the vessel's position on the next usable satellite pass.

(2) **Automatic Radar Plotting Aid (ARPA).** The PSCO should ensure that each vessel over 10,000 GT is equipped with an ARPA as required by the Port and Tanker Safety Act and the Navigation Safety Regulations. The PSCO should take the time to spot targets on the screen and to follow a vessel's movement across the screen, if possible.

(3) **Echo Depth Sounder and Recorder.** The PSCO should have the crew operate the equipment to see if it gives a reading. The recorder should show recent performance if it was operational as the vessel entered the harbor.
d. Changes in security levels. Vessels should keep records of the date, time, and location of the ship, and a description of changes to the vessel’s security level.

e. Communications relating to the direct security of the ship. At a minimum, vessels should keep records of all communications pertaining directly to the security of the vessel. Communications include reports made to Contracting Governments and flag States concerning security threats and breaches, security instructions received by the ship from Contracting Governments and flag States, and any responses acknowledging such instructions. The PSCO should examine any report of security incidents and breaches and should find associated records of security communications. Similarly, the PSCO should examine records of changes in security levels, and should find associated records.

f. Internal audits and reviews of security activities. Vessels should keep records of audit and review dates, and the results of such audits and reviews.

g. Periodic review of the ship security assessments. Vessels should keep records of the dates of periodic reviews and the results of such reviews.

h. Periodic review of the SSP. Vessels should keep records of the date of periodic reviews and the results of such reviews. SSP review is an annual requirement.

i. Implementation of any amendments to the SSP. The vessel should immediately implement all SSP amendments approved by the Administration. The vessel should maintain documentation of such approvals on board and the PSCO should review such documentation. These records should include installation records of new security equipment installed after issuance of the original ISSC.

j. Maintenance, calibration and testing of security equipment. Vessels should keep records of the date and description of all maintenance, calibration, and tests of security equipment.

8. Manning

In establishing the minimum safe manning level of a vessel, the flag Administration should take into account the manning level of the vessel such that persons with responsibilities for safe navigation of the vessel do not have extensive security-related responsibilities. The PSCO should be sensitive to manning on board the vessel and if there is adequate personnel for both navigation responsibilities and security responsibilities. The PSCO should be satisfied that the vessel manning provides for crew work and rest hours established in STCW Chapter VIII as set by the Administration. For further guidance, refer to the ISPS Code, Part

Foreign cargo vessels that are not subject to SOLAS yet are above 100 gross register tons, as defined in 33 CFR 101.105, and vessels that would be subject to SOLAS, but are not because their flag States are non-signatory to SOLAS, must meet the requirements of 33 CFR Part 104 or be approved by the USCG to hold an ISSC issued by its flag administration as previously coordinated/approved with Coast Guard Headquarters. Non-SOLAS foreign commercial vessels subject to MTSA should have USCG-approved Vessel Security Plans (VSP) that meet the requirements of 33 CFR 104.405. As an equivalent, these vessels may have an Alternative Security Program (ASP), approved by the USCG, as discussed in 33 CFR 104.120(a)(3) and 33 CFR 104.140. Such vessels must have on board documentation attesting to USCG approval of its VSP, or ASP, as applicable. This would generally be in the form of a plan review approval letter from the MSC, or in the case of an ASP, an approval letter from Commandant (CG-5P).

Since the VSP is a Coast Guard-approved document, the PSCO may ask to look at the VSP when necessary to verify on board security processes. The PSCO must examine non-SOLAS foreign commercial vessels subject to MTSA for compliance with applicable maritime security requirements following the guidance contained in NVIC 04-03. For non-SOLAS foreign vessels that hold a valid ISSC, the PSCO must use the examination guidance contained in C.1 through C.7 above.

10. Stowaways

a. Focus. Coast Guard port state control action involving a stowaway located aboard a foreign vessel in, bound for, or arriving in a U.S. port should focus on resolving the breach of security represented by the stowaway(s).

b. All Stowaway Incidents. The COTP/OCMI should require the Flag State or RSO to examine the SSP and its implementation and report any deficiencies upon notification of a stowaway incident. This examination and report should address how the stowaway, an unauthorized person for the purposes of the ISPS Code, gained access to the vessel and whether ship security plan implementation contributed to the stowaway incident. The COTP should evaluate the report from the RSO and take appropriate actions to ensure that the vessel corrects or mitigates all deficiencies prior to the vessel’s departure.

c. Clear Grounds. Receipt of a stowaway report on a foreign vessel where the crew
does not report a stowaway or the crew discovers a stowaway after U.S. arrival, or the Coast Guard learns of the stowaway incident from a source other than the vessel, are clear grounds to conduct an “inspection of the ship” (an ISPS examination for Coast Guard purposes) as authorized by SOLAS XI-2/9.1.3 to determine the circumstances by which the stowaway circumvented the ship security plan.

d. **Relationship to Security Boarding.** The U.S. Coast Guard Maritime Law Enforcement Manual (MLEM), COMDTINST M16247.1 (series)(FOUO) provides governing policy for law enforcement in stowaway cases. Generally, a security boarding is an initial response to a stowaway case. PSCOs should only go onboard after a security boarding has been commenced or been completed to ensure that no additional stowaways remain onboard undetected and that sufficient measures have been taken so that any stowaways that have been detected are under positive control.

e. **Exam Location.** With clear grounds, the COTP/OCMI may conduct the ISPS examination at the dock after the security boarding if it is also determined that all critical safety, security and environmental protection systems are operating properly.

f. **Exam Procedures.** PSCOs should conduct an ISPS exam as described in this chapter of the Marine Safety Manual and pay particular attention to the vessel’s records of security breaches and security incidents, the vessel’s response actions. Additionally, if it appears that ship security plan implementation contributed to the stowaway incident, the COTP may require the Flag State or RSO to examine the SSP and its implementation and report any deficiencies. This examination and report should address the items discussed above and include recommendations for all necessary corrective action to prevent further stowaway incidents.

g. **Detention Considerations.** Certain stowaway incidents, and the follow-on ISPS exam, may uncover serious deficiencies with the implementation of the ship security plan, rendering the vessel substandard and warranting a detention. These include situations where the crew does not report a stowaway, the crew discovers a stowaway after U.S. arrival, or the Coast Guard learns of the stowaway incident from a source other than the vessel. However, there may be circumstances that do not warrant a detention. If the security plan implementation did not contribute to the stowaway incident and the vessel is otherwise in compliance with SOLAS, Chapter XI-2 and ISPS Code, Part A, a vessel detention based solely on the stowaway incident is not warranted. Additionally, a detention is not warranted if the vessel discovered the stowaway, confined the stowaway, notified the Coast Guard and Administration prior to arrival into a U.S. port of the stowaway incident and the vessel’s owner demonstrates intent to
take appropriate corrective action to prevent further stowaway incidents. See Section D, Chapter 2 of this manual for guidance on detainable deficiencies under the ISPS Code.

h. **Documentation.** PSCOs should make appropriate and timely MISLE entries detailing actions taken in accordance with MISLE Data Entry Requirements for Foreign Vessel Arrivals, Examinations, and Operational Controls Work Instruction.

### 11. ISPS-related Deficiencies.

a. When the COTP/OCMI discovers ISPS-related deficiencies that render a vessel substandard, the COTP/OCMI should initiate a major control action. For additional information regarding vessel major control actions, see MSM Volume II, Material Inspection, COMDTINST M16000.7 (series), Section D, Chapter 2.

b. The PSCO must document deficiencies noted during the exam on the Port State Control Report of Inspection – Form B, CG-5437B. The PSCO should note the description of the deficiency in a direct and succinct statement that should contain two important elements.

1. First, the description should describe the standard the ship does not meet.
2. Second, the description should state why the ship does not meet the requirement.
3. The PSCO should not describe deficiencies as an inspector would for a merchant vessel inspection requirement, Vessel/Facility Inspection Requirements, Form CG-835.

c. PSCOs shall only use cites from Part A of the ISPS Code or from SOLAS Chapter XI-2 when issuing ISPS-related deficiencies. Part B of the ISPS Code is guidance and must not be used as a primary deficiency cite.

d. When drafting the Form B, the PSCO should attempt to order deficiencies in order of severity, listing detainable items or more serious SOLAS-based deficiencies first.

## I. **Examination Books**

PSC exams must be conducted according to the guidance in the appropriate examination book available on Homeport or the CG Portal.
J. **Record Keeping**

   a. A file must be maintained on each foreign vessel examination which includes copies of Forms A and B (as applicable), detention reports, and related message traffic or other correspondence as directed by the Coast Guard Information and Lifecycle Management Manual, COMDTINST M5212.12 (series).

   b. Records documenting targeting and examination decisions do not need to be maintained, as the targeting scheme has been embedded into MISLE for auto-scoring.

   c. If required boardings are missed, the notations should indicate why (e.g. hurricane, available boarding teams assigned to higher priorities, major oil spill, etc.).
member expectations. Note also that the Coast Guard tracks IMO detentions and uses detention information to target vessels that have a higher risk of being substandard due to past history or associations with higher risk owners, flag States, and Recognized Organizations. Refer to Chapter 2.D of this Section for specific examples of detainable deficiencies under their corresponding authorities.

c. **Captain of the Port Order.** A COTP Order is an important tool to protect the safety and security of the port. The COTP may use such an order to implement a variety of control actions, including controlling the vessel's movement as it enters or departs a port. The COTP may also use such an order to expel a vessel out of port. Also, there are potential civil and criminal penalties for violating a COTP Order. The COTP Order is not a substitute for pursuing and processing a detention under the applicable provisions of SOLAS, the ISPS Code, MARPOL, STCW, or the Load Line Convention.

1. **Controlling the Ship’s Movement for Security.** If there is a concern that the vessel poses a risk to the port or vessel from sabotage or other subversive acts, a COTP Order requiring the presence of armed escort personnel onboard the vessel during the transit is warranted. Note: COTP Orders issued for ISPS or MTSA related issues should be treated as Sensitive Security Information (SSI) and clearly marked as SSI to prevent inadvertent public disclosure or release under the Freedom of Information Act.

2. **Controlling the Ship’s Movement for Safety.** If the deficiency relates to the vessel's navigational equipment, the COTP Order might require an assist tug or may restrict a vessel to daylight operations. If the deficiency relates to pollution prevention equipment, the COTP Order may prohibit a vessel from bunkering or lightering until the vessel takes corrective measures.

3. **Controlling the Ship’s Operations for Pollution Prevention.** U.S. regulations pertaining to cargo handling and pollution prevention general apply to foreign vessels operating in U.S. waters. When deficiencies related to these U.S. regulations adversely affect the safety of cargo or bunkering operations but do not make the vessel unfit to proceed to sea, these operations may be prohibited or terminated until corrective measures are accomplished.

d. **Customs Hold.** Under the authority of 46 U.S.C. 91, vessels intending to depart the U.S. for a foreign port should obtain a clearance from Customs and Border Protection (CBP). If allegations exist that a vessel has violated certain U.S. safety and pollution laws, the Coast Guard may request that CBP deny or withhold the required clearance from the vessel until the vessel posts a letter of undertaking or surety bond. Before requesting a Customs Hold, the COTP or OCMI should encourage the vessel to obtain proper surety. In cases involving alleged violations of the MTSA regulations,
the COTP or OCMI should first consult with the appropriate District legal office for guidance. This control should not be relied upon when a PSC detention is the appropriate option.

e. **Restrictions of Operations/Vessel Movement.** The COTP or OCMI may impose restrictions on vessel operations or movements if vessel deficiencies pose security or safety threats. The COTP or OCMI may order a vessel to correct deficiencies even when these do not affect the vessel’s fitness to proceed to sea. In such cases, the vessel is not substandard and the COTP or OCMI should not detain the vessel. Whenever the COTP or OCMI issues a COTP Order solely to comply with U.S. regulations, the authority for the order should be the PWSA.

f. **Delay.** The COTP or OCMI may delay a vessel until it corrects certain deficiencies. For example, if the port is at MARSEC level 2 (generally equivalent to security level 2) and the arriving vessel is at security level 1, the ship should implement the additional security requirements of security level 2 plus the additional requirements of MARSEC level 2 before the vessel may be allowed to enter port.

g. **Comprehensive Security Inspection.** This is the minimum control action to take when clear grounds of a security deficiency are established. Similar to the expanded exam for a safety violation, this expanded security inspection is very detailed, possibly including a review of relevant portions of the ship security plan. Since these plans include sensitive information, the COTP or OCMI may only examine the SSP if the only means available to verify or rectify a security requirement in question is through review of relevant portions of the SSP. The COTP or OCMI must also obtain authorization from the Master and/or flag Administration (as appropriate) before reviewing portions of the plan. If the Master or flag Administration does not authorize PSCO review, and the only means to determine compliance is through SSP review, the COTP or OCMI may consider the vessel for denial of entry, expulsion from port, or an IMO detention, depending on the circumstances. The prevailing need to keep U.S. ports secure justifies the potential delays to commerce that may result from this control action.

h. **Letter of Deviation.** The COTP or OCMI may authorize, upon written application, a deviation from any rule in 33 CFR Part 164. However, the COTP or OCMI must consider risks imposed by equipment failures reported in accordance with 33 CFR 164.53 and casualties reported in accordance with 46 CFR 4.05-1, before issuing a Letter of Deviation. The COTP or OCMI should require a vessel examination prior to issuing a Letter of Deviation in those cases involving vessels at high risk from a safety perspective (i.e. vessels with a history of safety-related deficiencies or detentions or repetitive Letter of Deviation requests). Issuance of a Letter of Deviation does not preclude the possibility of pursuing civil penalty action and is not an appropriate control action for security deficiencies.
A. BACKGROUND

The United States enforces an expanded and comprehensive Port State Control (PSC) program in order to identify and eliminate substandard foreign merchant shipping that does not comply with international conventions and domestic rules. Title 33 CFR Part 160, Subpart C, requires that certain arriving vessels provide Notice of Arrival (NOA) to the National Vessel Movement Center (NVMC) prior to entering the United States. The Coast Guard screens these vessels prior to arrival at the first U.S. port of call using three risk-based tools. These tools use a process known as Risk-Based Decision Making (RBDM) to determine the threat a vessel poses to a U.S. port. These RBDM tools, collectively referred to as the Compliance Verification Examination Matrices, will prioritize vessel compliance examinations and security boardings.

The High Interest Vessel (HIV) Matrix is a classified, risk-based tool used to evaluate the security risk of a vessel entering into port. This manual does not provide details on the HIV screening process. For more information on the HIV Matrix and the HIV screening process refer to the High Interest Vessel Targeting Policy, COMDTINST 16614 (series). The second screening tool, the ISPS/Maritime Transportation Safety Act (MTSA) Security Compliance Targeting Matrix, evaluates risk factors applicable to a foreign-flag vessel’s compliance with international and domestic security standards. Because this matrix evaluates foreign vessel compliance with security standards, this screening is not classified. The third risk-based screening evaluates risk factors applicable to a vessel’s compliance with international safety and environmental standards. This analysis, called the PSC Safety and Environmental Protection Compliance Targeting Matrix, is also not classified.

Use of both the ISPS/MTSA Security Compliance Targeting Matrix and the PSC Safety and Environmental Protection Compliance Targeting Matrix allows for the Captain of the Port (COTP) or Officer in Charge, Marine Inspection (OCMI) to identify those vessels that pose the greatest risk of being substandard. When applied consistently, the targeting regime will identify the appropriate risk level and corresponding examination frequency for each vessel and ensure that the Coast Guard examines vessels that pose a higher risk for noncompliance more frequently than vessels that pose a lower risk. The PSC program consistency builds upon experienced and qualified PSC Officers (PSCOs) who are vital to ensuring sound judgment and professionalism of all enforcement actions.

In addition to the compliance verifications matrices discussed above, personnel should be familiar with Annex I of the Maritime Operational Threat Response (MOTR) Plan and the Condition of Entry program. The MOTR Plan is a Presidentially approved plan to achieve a coordinated government response to threats against the United States and its interests in the maritime domain. The MOTR Plan contains operational coordination requirements to ensure quick and decisive action to counter maritime threats. Annex I of the MOTR plan addresses National Security Vessels of Interest (VOIs) and NON-ENTRANT vessels. The latest policy and guidance regarding Annex I of the MOTR Plan can be found on the Foreign Vessel Security page of the CG portal website.
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The Condition of Entry (COE) Program is administered by the Coast Guard’s Office of International & Domestic Port Security (Commandant (CG-PSA)). The International Port Security Program assesses effectiveness of anti-terrorism measures in foreign ports. If effective anti-terrorism measures are not in place, there is an increased risk of terrorist transfer and/or weapons of mass destruction being introduced into the United States. To reduce that risk, COEs are imposed on vessels bound for the U.S. from ports with inadequate anti-terrorism measures. Commandant (CG-PSA) publically releases Port Security Advisories indicating which countries/ports are not maintaining effective anti-terrorism measures and what actions vessels should take when conducting operations in non-compliant ports. The latest COE policy on vessels arriving from ports not maintaining effective anti-terrorism measures can be found on the Foreign Vessel Security page of the CG portal website.

B. ACTION – USING THE MATRICES

The Marine Information for Safety and Law Enforcement (MISLE) database automatically screens all foreign-flag vessels that submit an NOA using the ISPS/MTSA Security Compliance Targeting Matrix and the PSC Safety and Environmental Protection Compliance Targeting Matrix. COTPs/OCMIs shall follow the targeting review process as outlined in the MISLE Data Entry Requirements for Foreign Vessel Arrivals, Examinations and Operational Controls Work Instruction located on the Commandant (CG-CVC-2) page of the CG Portal website. Units may view the assigned scores and manually change the final multiple based on local COTP/OCMI input (Intel, security/safety concerns, etc.).

In addition, the COTP or OCMI shall screen all vessels for the security risk they pose to U.S. ports. Vessels selected in this process are designated as High Interest Vessels (HIVs). While all vessels may be subject to random security boardings, these vessels are of higher interest to law enforcement authorities. As previously mentioned, this doctrine does not provide details on the screening process, since a separate, classified instruction outlines the relevant procedures. Figure D4-1 provides a pictorial view of the three screening processes related to vessel compliance examinations and security boardings for arriving vessels.

1. Targeting Philosophy – ISPS/MTSA Security Compliance

   a. Applicable factors. The ISPS/MTSA Security Compliance Targeting Matrix is a screening tool that promotes systematic evaluation of several risk factors related to a vessel’s compliance or noncompliance with domestic and international maritime security standards. The risk factors are ship management; flag State; Recognized Security organization (RSO); and the individual vessel’s security compliance history (the degree that vessel met both domestic and international maritime security standards during previous visits and exams).
b. **Functionality.** The ISPS/MTSA Security Compliance Targeting Matrix risk factors are integrated into MISLE as an automated MISLE-embedded targeting tool. The MISLE data fields regarding these risk factors are maintained and updated by Commandant (CG-CVC-2).

(1) MISLE scores a vessel and assigns the examination priority (ISPS I, II or III) based on existing MISLE data and NOA information. The total points and the vessel’s priority status does not signify that the vessel is substandard, but does indicate that certain risk factors exist and that the Coast Guard should examine the vessel for compliance with domestic and international standards. Total points/priority status also determines where an examination should take place.

(2) PSCOs should familiarize themselves with the targeting matrix and risk factors and possess a working knowledge for manually evaluating a vessel using the matrix.

c. **Consistency.** To be effective, it is important that the COTP or OCMI applies this targeting regime consistently. In addition to focusing Coast Guard resources, the ISPS/MTSA Security Compliance Targeting Matrix serves to place the responsibility for maintaining vessels to accepted security standards on those entities most responsible, including ship management, RSOs, and Flag States. Linking examination decisions to the performance records of the ship, the ship’s management, the RSO and the Flag State information helps ensure accountability.

d. **Random vessel targeting.** The COTP or OCMI may randomly examine vessels that do not screen for an ISPS/MTSA security compliance examination. Normally, the COTP or OCMI can perform random examinations when the vessel is in port, but may perform this examination prior to port entry if another examination is scheduled for the vessel prior to port entry.

2. **Targeting Philosophy - Safety and Environmental Protection Compliance**

a. **Applicable factors.** The Safety and Environmental Compliance Targeting Matrix is a screening tool that promotes systematic evaluation of several risk factors related to a vessel’s compliance or noncompliance with domestic and international maritime safety and environmental protection standards. This risk-based approach evaluates vessels using five factors: ship management, flag State, recognized organization (RO), compliance history, and vessel type. The risks associated with each of these factors are evaluated using Coast Guard examination data developed over previous years.
b. **Functionality.** The PSC Safety and Environmental Protection Compliance Targeting Matrix risk factors are integrated into MISLE as an automated MISLE-embedded targeting tool. The MISLE data fields regarding these risk factors are maintained and updated by COMDT (CG-CVC-2).

(1) MISLE scores a vessel and assigns the examination priority (PI, PII or NPV) based on existing MISLE data and NOA information. The total points and the vessel’s priority status does not signify that the vessel is substandard, but does indicate that certain risk factors exist and that the Coast Guard should examine the vessel for compliance with domestic and international standards. Total points/priority status also determines where an examination should take place.

(2) PSCOs should familiarize themselves with the targeting matrix and its processes, below, and possess the working knowledge for completing and manually processing a vessel for determination of whether or not an examination should take place.

c. **Consistency.** To be effective, it is important that the COTP or OCMI applies this targeting regime consistently. In addition to focusing Coast Guard resources, the PSC Safety and Environmental Protection Compliance Targeting Matrix serves to place the responsibility for maintaining vessels to accepted standards on those entities most responsible, including ship management, classification societies, and flag States. Linking targeting decisions to the performance records of the ship, the ship’s management, classification society, and flag State helps ensure accountability.

d. **Random vessel targeting.** The COTP or OCMI may randomly examine vessels that do not screen for a PSC Safety/Environmental compliance examination. Normally, the COTP or OCMI can perform random examinations when the vessel is in port, but may perform this examination prior to port entry if another examination is scheduled for the vessel prior to port entry.

e. **EQUASIS Information.** The EQUASIS data system ([http://www.equasis.org](http://www.equasis.org)) is an online database created by the European Commission and French Maritime Administration to collect and disseminate quality and safety-related information on the world’s merchant vessel fleet. Currently, this system displays PSC inspections and detentions that occurred within the Paris MOU, the Tokyo MOU, and the United States.

(1) The website contains a wealth of statutory information from International Association of Class Societies (IACS) Member and Associate Member Classification Societies, P&I information and a wide variety of other data.
(2) Although the EQUASIS system is not listed as a criterion on either the safety of security matrices, the use of the system by PSCOs is highly encouraged. By performing this review, PSCOs will undoubtedly gain a better overall sense of the previous condition of the vessel.

(3) To assist with this review, the MISLE system allows direct access to EQUASIS, bypassing the website log-in and search screens. The PSCO can access this hyperlink function by searching for the vessel in MISLE and then clicking the button at the bottom of the Activities tab on the Vessel Description Summary Page.
Figure D4-1: Targeting Decision-Making Process for Each Vessel Arrival

- COTP or OCMI Receives NOA
- Arrive Vessel in MISLE

**MISLE Functionality**

**ISPS/MTSA Security Compliance Targeting Matrix**

Evaluation Criteria:
- Ship Owner, Charterer, Operator
- Vessel flag State
- Vessel RSO
- Vessel ISPS/MTSA Compliance History

**PSC Safety and Environmental Protection Compliance Targeting Matrix**

Evaluation Criteria:
- Ship Owner, Charterer, Operator
- Vessel flag State
- Classification Society
- Vessel Type
- Vessel Safety Compliance History

**Subject to an ISPS/MTSA Security Compliance Examination**

- ISPS-I (Prior to entry)
- ISPS-II (In Port)

- Selected for Random
  - Yes
  - No

- ISPS-III (In Port*)

- No Exam

**Subject to a PSC Safety/Environmental Compliance Examination**

- P-I (Prior to entry)
- P-II (In Port)

- Selected for Random
  - Yes
  - No

- NPV (In Port*)

- No Exam

**Security Boarding Y/N**

**SECURITY (HIV) BOARDING DECISION MATRIX**
(4) Release of information. Commandant (CG-CVC-2) will publish the targeted flag Administration list for security compliance performance in the PSC Annual Report as well as on the Port State Control tab of the Coast Guard’s Homeport website.

c. Targeted RSOs.

   (1) RSO. An RSO is the organization with the appropriate expertise in security and anti-terrorism matters recognized by the Administration (or Designated Authority) and authorized to carry out assessment, verification, approval and/or certification activities, required by the ISPS Code.

   (2) Targeted RSO. Commandant (CG-CVC-2) reviews every case involving an ISPS-related major control action (denial of entry, expulsion from port, or detention) and determine whether RSO action or inaction contributed to the major control action. If so, Commandant (CG-CVC-2) will associate the major control action with the RSO for targeting purposes.

   (3) Application. All vessels represented by an RSO associated with three or more major control actions in the past 12 months are designated ISPS I. All vessels represented by an RSO associated with two major control actions in the past 12 months will receive five points towards the security compliance examination decision. All vessels represented by an RSO associated with one major control action in the past 12 months will receive two points towards the security compliance examination decision.

   (4) Removal. On a monthly basis, Commandant (CG-CVC-2) monitors RSO performance. As performance improves, Commandant (CG-CVC-2) will adjust targeting information applicable to a targeted RSO (specify fewer points or remove the RSO from the list).

   (5) Release of Information. Commandant (CG-CVC-2) will publish the targeted RSO list for security compliance performance in the PSC Annual Report as well as on the Port State Control tab of the Coast Guard’s Homeport website.

d. Vessel ISPS/MTSA Compliance History. As part of the case review process, Commandant (CG-CVC-2) will update each vessel’s compliance history in MISLE to reflect major control actions. Commandant (CG-CVC-2) will continue to enter an inspection note after reviewing detention reports received from field units.
2. **Safety and Environmental Protection Compliance Targeting Criteria**

   a. **Targeted ship management.** Targeted ship management includes any owner, operator, charterer, or managing operator whose vessels have been detained in the United States more than once within the previous 12 months under the provisions of an international Convention. Under the Coast Guard’s Large Fleet Designation Program, if a vessel owner, operator or charterer has at least 25 vessels that visit United States ports each year, and they request Large Fleet Designation, Commandant (CG-CVC-2) will not target the company unless it accumulates three or more detentions within a 12-month period.

   (1) **Targeted ship management list.** Commandant (CG-CVC-2) develops and maintains a current listing of targeted ship managers based on detention reports received from field units. Commandant (CG-CVC-2) updates the list monthly.

   (2) **Application.** All vessels associated with a targeted owner, operator, charterer, or managing operator will be assigned points in the PSC Safety and Environmental Protection Compliance Targeting Matrix.

   (3) **Removal.** Commandant (CG-CVC-2) removes a targeted owner from the list if they become associated with less than two detentions carried out under the authority of an international convention within the previous 12 months.

   b. **Targeted flag Administration.** A targeted flag Administration is a country with a safety-related detention ratio exceeding the average safety detention ratio for all flag Administrations with vessels operating in U.S. waters.

   (1) **Flag Administration safety detention ratio.** Commandant (CG-CVC-2) calculates a flag Administration's safety detention ratio by dividing the number of its vessels detained under the authority of an international convention by the number of vessels under its registry which entered U.S. waters. Commandant (CG-CVC-2) calculates the average safety detention ratio for all flag Administrations with vessels operating in U.S. waters by dividing the number of vessels detained under the authority of an international convention by the number of vessels that entered U.S. waters. Commandant (CG-CVC-2) calculates individual flag Administration detention ratios based on the previous 3 years’ data to reduce the effects of single year anomalies.

   (2) **Targeted Flag Administration list.** This list consists of the targeted flag Administrations compiled by Commandant (CG-CVC-2) on an annual basis for use with the PSC Safety and Environmental Protection Compliance Targeting Matrix. The list can be found on the Port State Control tab of the Coast Guard’s Homeport website.
### COLUMN I: SHIP MANAGEMENT

**ISPS II**
- Owner or operator, if new owner or operator since last ISPS exam.

### COLUMN II: FLAG STATE

- **ISPS II**
  - If new flag since last ISPS exam.

### COLUMN III: RECOGNIZED SECURITY ORGANIZATION

- **ISPS I**
  - 3 or more RSO-related major control actions in the past 12 months.

### COLUMN IV: SECURITY COMPLIANCE HISTORY

- **ISPS I**
  - Vessel with an ISPS-related denial of entry/expulsion from port in past 12 months (3).

#### ISPS II
- If matrix score does not result in ISPS I priority & no ISPS compliance exam within the past 12 months or a stowaway incident (5).

<table>
<thead>
<tr>
<th>Column I</th>
<th>Column II</th>
<th>Column III</th>
<th>Column IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHEIP MANAGEMENT</td>
<td>FLAG STATE</td>
<td>RECOGNIZED SECURITY ORGANIZATION</td>
<td>SECURITY COMPLIANCE HISTORY</td>
</tr>
<tr>
<td>ISPS II</td>
<td>ISPS II</td>
<td>ISPS I</td>
<td>ISPS I</td>
</tr>
<tr>
<td>Owner, operator, if new owner or operator since last ISPS exam.</td>
<td>If new flag since last ISPS exam.</td>
<td>3 or more RSO-related major control actions in the past 12 months.</td>
<td>Vessel with an ISPS-related denial of entry/expulsion from port in past 12 months (3).</td>
</tr>
</tbody>
</table>

#### 5 Points
- Owner, operator, or charterer associated with one ISPS-related denial of entry or ISPS-related expulsion from port in past 12 months or 2 or more ISPS/MTSA Control Actions in a 12 month period.

<table>
<thead>
<tr>
<th>Column I</th>
<th>Column II</th>
<th>Column III</th>
<th>Column IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISPS II</td>
<td>ISPS II</td>
<td>ISPS I</td>
<td>ISPS II</td>
</tr>
<tr>
<td>7 Points SOLAS Vessels(^{(1)}) Flag State has a CAR 2 or more times the overall CAR average for all flag States.</td>
<td>If new flag since last ISPS exam.</td>
<td>2 RSO-related major control actions in the past 12 months.</td>
<td>If matrix score does not result in ISPS I priority &amp; no ISPS compliance exam within the past 12 months or a stowaway incident (5).</td>
</tr>
</tbody>
</table>

#### 2 Points
- SOLAS Vessels\(^{(1)}\)
  - Flag State has a CAR between the overall CAR average and up to 2 times overall CAR average for all flag States.

<table>
<thead>
<tr>
<th>Column I</th>
<th>Column II</th>
<th>Column III</th>
<th>Column IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISPS II</td>
<td>ISPS II</td>
<td>ISPS I</td>
<td>ISPS II</td>
</tr>
<tr>
<td>2 Points SOLAS Vessels(^{(1)}) Flag State has a CAR between the overall CAR average and up to 2 times overall CAR average for all flag States.</td>
<td>If new flag since last ISPS exam.</td>
<td>1 RSO-related major control actions in the past 12 months.</td>
<td>Vessel with an ISPS/MTSA-related detention in the past 12 months.</td>
</tr>
</tbody>
</table>

#### 7 Points
- Non-SOLAS Vessels\(^{(1)(2)}\)
  - Flag State has a CAR 2 or more times the overall CAR average for all flag States.

<table>
<thead>
<tr>
<th>Column I</th>
<th>Column II</th>
<th>Column III</th>
<th>Column IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISPS II</td>
<td>ISPS II</td>
<td>ISPS I</td>
<td>ISPS II</td>
</tr>
<tr>
<td>7 Points Non-SOLAS Vessels(^{(1)(2)}) Flag State has a CAR 2 or more times the overall CAR average for all flag States.</td>
<td>If new flag since last ISPS exam.</td>
<td>2 Points Vessel has had 1 or more other ISPS / MTSA control actions in the past 12 months.</td>
<td>Vessel has had 1 or more other ISPS/MTSA control actions in the past 12 months.</td>
</tr>
</tbody>
</table>

### Total Targeting Score: __________

### Vessel Priority: __________

Sum of Columns I-IV and/or column specific designation determines priority: 17 or more points = ISPS I

- 7 to 16 points = ISPS II
- 0 to 6 points = ISPS III

1. Pertains solely to flag States with more than one major control action in a 12-month period. The COTP/OCMI may downgrade a vessel hailing from a targeted flag State scoring 7 to 11 points to ISPS III in accordance with the Downgrading Clause.

2. Includes vessels from non-SOLAS signatory countries and non-SOLAS vessels from signatory countries.

3. COTP or OCMI may downgrade a vessel’s priority from ISPS I to ISPS II and ISPS III in accordance with the Downgrading Clause. If denial of entry is solely from failure to provide a Notice of Arrival prior to entry in the U.S., assign 2 points.

4. Includes vessel delays, restriction of operations, and restriction of movement related to vessel security deficiencies. Does not include routine examination of the ship or lesser administrative actions.

5. COTP or OCMI may downgrade a vessel with a stowaway incident if vessel’s master notified the COTP and Administration prior to arrival into a U.S. port and vessel’s owner demonstrates intent to take appropriate corrective action to prevent further stowaway incidents. The COTP or OCMI should still require a report from the Flagstate/RSO. Additional guidance is provided in Chapter 1 of this section (D1-50 to D1-51).

Most recent guidance will be posted via the intranet on CG Portal.
a. **Downgrade clauses.** If the vessel is downgraded, it will be added to the pool of random examinations. Under the following conditions, the COTP/OCMIs may downgrade the ISPS examination priority as follows:

1. The COTP/OCMI may downgrade a vessel hailing from a targeted flag Administration scoring 7 to 11 points to ISPS III if the vessel meets all of the following criteria:

   a. Removal of the flag Administration targeting points results in 6 or fewer points; and

   b. The Coast Guard previously examined the vessel within the past 6 months and found no serious security deficiencies (i.e., no ISPS major control actions imposed or no restriction of operations).

   [1] Units should not rely on just a MISLE activity number alone appearing in MISLE for verification that an ISPS exam has taken place. Units are required to open and review the activity (to include review of the narrative) for verification that an ISPS exam was completed.

   [2] There may be instances when there is no MISLE data available (system is down for repair, consecutive port calls — unit performing ISPS exam at a previous US port has not entered results into MISLE) indicating an ISPS exam has taken place, but the vessel has visited a U.S. port in the previous 6 months. Units may downgrade the vessel to an ISPS III if no MISLE data is available only after confirming with the unit at the vessel’s previous US port(s) that an ISPS exam was completed.

2. The COTP/OCMI may downgrade any vessel that scores ISPS II (7 to 16 points) to ISPS III (six or fewer points) if the vessel meets all of the following criteria:

   a. The Coast Guard performed an ISPS/MTSA Compliance Examination in the past 6 months and found no serious deficiencies during the examination that resulted in an ISPS control action (delay of vessel, restriction of movement or operation). The COTP/OCMI should not include the “Inspection of the Ship” per SOLAS Reg. XI-2/9.1.3 as an ISPS control action for this criterion.

   b. The COTP/OCMI does not have clear grounds or reliable information that the vessel does not correspond with SOLAS Chapter XI-2 and the ISPS Code (e.g., if the NOA report indicates that the ship found and detained stowaways on board, this information would provide clear grounds and would disqualify the downgrading clause).
CHAPTER 4: TARGETING OF FOREIGN VESSELS

(3) The COTP/OCMI may downgrade any vessel that scores ISPS I based solely upon Column III (RSO) to an ISPS III if the arriving vessel’s last port of call (LPOC) was a U.S. port, and the LPOC’s COTP or OCMI examined the vessel and found it in substantial compliance (i.e. no major control action).

(4) The COTP/OCMI may downgrade the ISPS I status resulting from a denial of entry or expulsion assigned in Column IV as follows:

(a) The Coast Guard performed an ISPS I examination subsequent to the denial of entry or expulsion and found the vessel in substantial compliance, i.e. no major control action resulted from the examination. The ISPS I exam may only be downgraded to an ISPS II (at the dock) examination unless the following exception is true.

(b) The COTP/OCMI may only downgrade an ISPS I examination and assign an ISPS III status to the vessel if the Coast Guard has performed three or more ISPS examinations since the denial of entry or expulsion and, in each case, no major control action resulted.

(c) If the Coast Guard previously denied a vessel entry to port due solely to lack of proper NOA, assign two points in lieu of ISPS I.

(5) An additional downgrade clause that applies to ISPS II exams based on PSC resources available on a particular day are described in paragraph D.2.b(3) of this chapter.

2. Step II: PSC Safety and Environmental Protection Compliance Targeting Matrix

When a vessel submits a NOA, the NVMC collects, reviews and verifies specific ship information including: vessel type and size, cargo, crew and passenger lists, ship management information, security and safety compliance documentation, etc. The NVMC makes the NOA available to the National Maritime Intelligence Center (NMIC) and to the COTP/OCMI's through the Ship Arrival Notification System (SANS). The NVMC also makes the NOA accessible through MISLE.
The NMIC analyzes vessel, owner, operator, charterer, crew composition, history, etc. to determine whether there is pertinent intelligence regarding the vessel. The COTP/OCMI must prioritize and coordinate all vessels entering their AORs. As previously stated, the PSC Safety and Environmental Protection Compliance Targeting Matrix is a MISLE-embedded targeting tool for the COTP or OCMI to screen a particular vessel scheduled to arrive and determine the examination priority for resource allocation.

This matrix applies to all foreign vessels (signatory and non-signatory) destined for a port or place in the United States (as defined in 33 CFR 160.204) regardless of which international conventions (SOLAS, MARPOL, ICLL, etc.) is applicable. For example; a 450 GT foreign cargo vessel arriving in the United States has submitted their NOA accordingly; SOLAS (with a few exceptions) is not applicable; MARPOL and ICLL are applicable. PSCO should familiarize themselves with the matrix and its processes as downgrading clauses or other external factors may be applicable which are not automatically calculated/considered by MISLE, subsequently affecting the total score/priority results.

In the event that manual screening of a vessel is required, Commandant (CG-CVC-2) will provide the relevant information for completing the matrix via message traffic or other designated means. The COTP or OCMI must refer to the NOA information, MISLE data and the provided guidance from Commandant (CG-CVC-2) for screening a vessel utilizing this matrix. The score calculated for a particular vessel will determine whether the Coast Guard will examine a vessel at sea, examine a vessel in port, or not target the vessel for examination (note that vessels not targeted for examination may be subject to random examination). For details regarding these requirements, refer to the MISLE user guides at https://cg.portal.uscg.mil/communities/misle/SitePages/Home.aspx.
(4) Column V: Ship Particulars. The criterion contained in this column is self explanatory for scoring. For vessels currently enrolled in the QUALSHIP 21 program, points should not be added based on ship type, but can be subtracted for age.

b. **Downgrade clauses.** If the vessel is downgraded, it will be added to the pool of random examinations. Under the following conditions, the COTP/OCMIs may downgrade the PSC examination priority as follows:

1. If the vessel has scored either a PI or PII and has had a Coast Guard PSC examination within the last 6 months with no serious deficiencies, the exam may be downgraded to an NPV.

2. Priority II status for vessels not receiving a PSC exam in the previous 12 months may be relaxed to an NPV status for freight vessels enrolled in the QUALSHIP 21 program (which is subject to biennial PSC examination). Annual exams are no longer required (freight ship only) provided the vessel remains in a QUALSHIP 21 status and has received a PSC exam within the last 2 years. The relaxing of the PII designation is not applicable to any vessel required to hold a COC (tank, chem., etc.) as U.S. domestic law dictates that an annual exam must occur to maintain a current COC.

3. **Downgrade options based on PSC resources.**

   a. When local PSC resources do not permit examination of all Priority II/ISPS II vessels on a particular day, certain foreign freight vessels may be downgraded to an NPV/ISPS III status. The downgrade option (Option A) may be applied when the vessel is not targeted by points (but is targeted solely based on not being examined by the Coast Guard within the past 12 months) and when the vessel has been satisfactorily examined by the Coast Guard within the previous 24 months.

   b. If downgrading Priority II/ISPS II examinations as discussed in paragraph (a) above does not alleviate excessive PSC workload on a particular day, an additional downgrade option may be considered for vessels target by points. This option (Option B) may be applied when a Paris or Tokyo MOU member has examined the vessel within the past 6 months and found no deficiencies. To determine this, access the vessel’s global PSC history by accessing EQUASIS through the MISLE database.

   c. The downgrading options in paragraph (a) and (b) above should not create a situation where one unit’s resource shortfall creates an additional PSC burden for the next U.S. port or ports. To minimize this,
downgrading PSC priority at the first port of a multiple U.S. port call voyage can be extended to the entire U.S. port call voyage.

(d) The unit that downgrades a vessel based on Option A or B above must enter an Administrative Inspection activity and a Note in MISLE stating, “This vessel has been downgraded to an NPV/ISPS III (as applicable) in accordance with Option A (or B) as outlined in Marine Safety Manual Volume II, COMDTINST 16000.7 (series). Units may apply this downgrading of examination priority until (date).” The date shall not exceed 30 days from the date the note is entered. Additionally, the date shall not carry the vessel past 24 months since its last satisfactory Coast Guard examination (Option A) or 6 months since its last deficiency-free Paris or Tokyo MOU examination (Option B). In order to measure the frequency in which these downgrading options are applied, units must use “Freight Vessel Downgrade” as the title for the Administration Inspection activity. The activity narrative should match the MISLE Note.
E. RANDOM PSC EXAMINATION SELECTION PROCESS

1. Random PSC Examination Philosophy

Random PSC examinations, in addition to the examinations that result from the targeting process, are important tools that provide a strong deterrent against subversive actions or substandard operations. If vessel targeting falls into a predictable pattern, we leave open an avenue for organizations to understand and study ways to subvert the targeting systems and possibly allow substandard ships into U.S. ports without examination. A random examination selection process injects unpredictability into the targeting process and undercuts those intending to subvert our targeting systems. Accordingly, we must ensure that our random examination selection process has no pattern. A truly random pattern plays a role in the success of our program and provides a nationwide methodology for making random examination selections. COTPs/OCMIs should conduct random PSC examinations at their discretion.

2. Concept and Applicability

Our stated goal is to encourage random examinations on vessels that arrive in the United States which the Coast Guard does not already target for an ISPS/MTSA Security Compliance Examination or a PSC Safety and Environmental Compliance Examination. At
the COTP’s discretion, the COTP may target a vessel not targeted for one of these examinations for a random examination comprised of both a PSC safety and environmental compliance examination and an ISPS/MTSA Security Compliance examination. The COTP must conduct a random examination to the same scope as targeted PSC and ISPS examinations. Note in particular that vessels currently enrolled in the QUALSHIP 21 program and vessels that hold a valid Certificate of Compliance are subject to random ISPS/MTSA Security Compliance Examination but not random PSC Safety and Environmental Compliance Examination. The Coast Guard will conduct security examinations on a random basis for vessels not designated as high interest vessels. Separate guidance addresses this random selection process.

3. Process

For a truly random process, select vessels for examination from the population of vessels not targeted for ISPS/MTSA Security Compliance Examination or PSC Safety and Environmental Compliance Examination. For example, a vessel targeted for a PI PSC examination should not be selected for a random ISPS/MTSA Security Compliance Examination, as this will affect the quality of the randomness and will not enable us to meet vessel examination goals. Using this method will allow the Coast Guard to visit more vessels, during which PSC personnel will effectively check for evidence of non-compliance with all applicable domestic and international standards.

4. MISLE Documentation

In order to better allot our resources, this random process will enable us to analyze and improve the effectiveness of our targeting matrices. To that end, it is imperative that units document these random examinations accurately in MISLE. When conducting a random examination for ISPS/MTSA/PSC, the inspection type will be ‘Vessel Inspection/PSC Exam’ and the sub category will include the following in the pull down menu: Random ISPS/MTSA/PSC. This will help the program fine tune the process and improve the matrices. The end goal will be better resource allocation and a better system of targeting poor performers.

F. TARGETING DECISION AND LOCATION (STEP III)

The ISPS/MTSA Security Compliance Targeting Matrix and PSC Safety and Environmental Protection Compliance Targeting Matrix evaluate a vessel’s relative risk of noncompliance with maritime security and safety standards and results in the assignment of points. Each matrix will provide a total that corresponds to the designations of ISPS I/ISPS II/ISPS III and PI/PII/NPV. Once this evaluation is complete, the COTP or OCMI must decide on the location and timing of the boarding/examination as well as appropriate risk mitigation measures.
A. INTRODUCTION

On October 19, 1996, the President signed into law the U.S. Coast Guard Authorization Act (CGAA) of 1996 (Public Law 104-324). Section 600 of this CGAA added Chapter 32 to Title 46 of the U.S. Code, entitled “Management of Vessels.”

The Secretary of Homeland Security delegated to the Commandant of the Coast Guard authority to carry out the functions and responsibilities and exercise the authorities in the CGAA of 1996. See Section II.1. of DHS Delegation 0170.1 dated June 20, 2003.

Pursuant to this delegation of authority, the Coast Guard developed regulations in 33 C.F.R. Part 96 to implement the provisions contained in 46 U.S.C. Chapter 32.

Pursuant to 33 C.F.R. § 96.210, the requirements for Safety Management Systems (SMS) are mandatory for all vessels engaged on a foreign voyage that call in U.S. ports or for all U.S. vessels engaged on a foreign voyage, and which--

a. Carry more than 12 passengers; or

b. Are 500 GT ITC (GRT if GT ITC not assigned) or more; and are:

   (1) Oil tankers;

   (2) Chemical tankers;

   (3) Gas carriers;

   (4) Bulk freight vessels;

   (5) Other freight vessels (including Offshore Supply Vessels, Towing Vessels, Oceanographic Research Vessels);

   (6) High speed craft; or

   (7) Self-propelled mobile offshore drilling units (MODUs).

All U.S. requirements are consistent with the International Safety Management (ISM) Code and Chapter IX (Management for the Safe Operation of Ships) of the International Convention for the Safety of Life at Sea, 1974, (SOLAS). Vessels that are on U.S. domestic routes or are engaged on foreign voyages but do not meet the above
applicability may elect to receive voluntary ISM Code certification under this program (see Paragraph C.4 of this Chapter).

1. References


   b. International Maritime Organization (IMO) Resolution A.741(18), as amended by MSC.104(73), MSC.179(79), MSC.195(80), MSC.273(85), and MSC.353(92) - The International Safety Management Code.


   d. NVIC 04-05, Port State Control Guidelines for the Enforcement of Management for the Safe Operation of Ships (ISM Code).

   e. 46 U.S.C. Chapter 32.


   g. 46 C.F.R. Parts 2, 8, 31, 71, 91, 107, 115, 126, 175,176, and 189.

   h. U.S. Coast Guard Safety Management System(SMS) Student Guide.

   i. U.S. Coast Guard International Safety Management Code Job Aid for Small Passengers Vessels.

   j. International Association of Classification Societies (IACS), Procedural Requirements for ISM Code Certification (PR9).

   k. International Association of Classification Societies (IACS), Procedure for the Selection, Training, Qualification and Authorization of Marine Management System Auditors (PR10)
1. **International Association of Classification Societies (IACS), Reporting by Surveyors of Deficiencies relating to Possible Safety Management System Failures (PR17).**

m. **International Maritime Organization (IMO) MSC/Circ. 1059 – MEPC/Circ.401, Procedures Concerning Observed ISM Code Major Non-Conformities.**

n. **Marine Safety Information Bulletin 003-14.**

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2. **What is the International Safety Management (ISM) Code?**


To make compliance with the ISM Code mandatory, the IMO amended the Convention for the Safety of Life at Sea (SOLAS), 1974, by adopting Chapter IX, Management for the safe operation of ships.

The IMO provided guidance on implementation of the requirements of SOLAS Chapter IX in Resolution A.1071(28), Revised Guidelines on the Implementation of the International Safety Management (ISM) Code by Administrations.

46 U.S.C. **Chapter 32** required the development of U.S. regulations for U.S. vessel compliance consistent with the ISM Code.

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3. **Applicability**

a. Compliance with the ISM Code, **Chapter IX of SOLAS**, and 33 C.F.R. Part 96 is mandatory for the following U.S. and foreign vessels engaged on foreign voyages:

   (1) Vessels carrying more than 12 passengers, including passenger high speed craft.

   (2) Oil tankers, chemical tankers, gas carriers, bulk carriers, and freight high speed craft of 500 GT ITC (GRT if GT ITC not assigned) or more.
(3) Freight vessels and self-propelled MODUs of 500 GT ITC (GRT if GT ITC not assigned) or more (including Offshore Supply Vessels, Towing Vessels, and Oceanographic Research Vessels);

b. The requirements of the ISM Code are not mandatory for--
   (1) Public vessels used for non-commercial purposes;
   (2) Barges;
   (3) Recreational vessels not engaged in commercial service;
   (4) Fishing vessels; or
   (5) Vessels operating on the Great Lakes or its tributaries and connecting waters.

   NOTE: For U.S. vessels, the public vessel exemption is defined in 46 U.S.C. § 2101 and § 2109, and in 33 C.F.R. § 96.210(b)(5).

c. Any U.S. vessel not required to meet 33 C.F.R. Part 96 may voluntarily have its SMS certificated and have a Safety Management Certificate (SMC) and Document of Compliance (DOC) issued if it meets the ISM Code.


The terms used to describe ship types in Title 46 U.S. Code and Title 33 of the CFR differ from the terms used in SOLAS Chapter IX and the ISM Code. The difference is relevant only in terms of terminology use; it does not affect the types of ships that must comply.

Table 1 provides a cross reference between ship types described in U.S. law and those described in SOLAS Chapter IX.

<table>
<thead>
<tr>
<th>Term used in U.S. law/regulations</th>
<th>Term used in SOLAS Chapter IX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vessel transporting more than 12 passengers</td>
<td>Passenger ship</td>
</tr>
<tr>
<td>Tanker</td>
<td>Oil tanker, chemical tanker and gas</td>
</tr>
</tbody>
</table>
E3 - 5

a. Bulk carrier definition. At the November 1997, SOLAS Conference on the Safety of Bulk Carriers a clarification of the SOLAS Chapter IX, Regulation 1.6 definition of "bulk carriers" was established as follows:

“Only those ships which meet any of the following three definitions will be considered a "bulk carrier" for purposes of compliance with the ISM Code. Other vessels, which carry bulk cargos, but do not meet one of the three definitions, are not considered bulk carriers for the purpose of ISM.”

b. Typical cross sections of the types of ships listed below are provided in Figure 1.

(1) A general bulk carrier is a ship that is--

   (a) Constructed with a single deck;

   (b) Constructed with top-side tanks and hopper side tanks in cargo spaces; and,

   (c) Intended primarily to carry dry cargo in bulk.

(2) An ore carrier is a ship that is--

   (a) A single deck ship;

   (b) Constructed with two longitudinal bulkheads;

   (c) Constructed with a double bottom throughout the cargo region; and

   (d) Intended for the carriage of ore cargoes.

(3) A combination carrier is a ship that is a tanker designed to carry oil or alternatively solid cargoes in bulk (SOLAS 74, Chapter II-2, Regulation 3.14).
FIGURE 1: TYPICAL CROSS SECTIONS FOR THE THREE TYPES OF BULK CARRIERS UNDER THE ISM CODE

B. DISCUSSION
1. Objectives

The objectives of the ISM Code, contained in SOLAS Chapter IX, and 33 C.F.R. Part 96 are to ensure safety at sea, prevent the occurrence of human injury or loss of life, and avoid environmental and property damage. The ISM Code requirements outline processes of communication, training, and actions to continuously maintain the ship in a state of compliance with safety and environmental protection regulations. Specifically, the ISM Code seeks to support and encourage a “safety culture” intended to address issues of human error and human omissions while continually improving compliance with the applicable regulations. To accomplish its objectives, the ISM Code requires owners of ships, or other organizations such as the managers, or bareboat charterers, who have assumed responsibility for ship operations, to implement and maintain Safety Management Systems (SMS) for their companies and ships.

2. Key Elements

The implementation of a SMS requires a company to document its management procedures and policies. This ensures that conditions, activities, and tasks affecting safety and environmental protection, both ashore and on board vessels, are planned, organized, executed, and checked in accordance with regulatory and company requirements. For many companies, this means formalizing long-established processes and placing the associated documents under a greater degree of control. For others, establishing an effective SMS is a more comprehensive process.

The SMS should be used as a tool to ensure that applicable federal law and regulatory requirements are incorporated and understood by personnel responsible for complying with them. For instance, if Federal pollution prevention or vessel safety requirements change, the SMS can be used to provide management direction to the vessel officers and crew to ensure timely implementation of the new requirements across a company’s fleet of vessels. Similarly, to compel systemic accountability and to reap the benefits of lessons learned from externally documented deficiencies (such as those identified by Vessel/Facility Inspection Requirements, Form CG-835s, conditions of class, or port state control deficiencies), a vessel’s SMS should include a provision for documenting noted deficiencies and the corresponding corrective action.

Consistent with 33 C.F.R. § 96.240 and ISM Code Part A/1.4, key elements of the SMS include documented company procedures establishing the following:
a. A company safety and environmental protection policy.

b. Instructions and procedures to ensure that vessels are operated in accordance with relevant flag State and international regulations.

c. Defined levels of authority and lines of communication between and among shore and vessel personnel.

d. Procedures for reporting accidents and non-conformities with the provisions of the ISM Code.

e. Procedures for preparing for and responding to emergencies.

f. Procedures for internal audits and management reviews.

g. Procedures and processes for management review of company internal audit reports and correction of non-conformities that are reported by these or other reports (Required under 33 CFR 96.240(g)).

3. SMS Documents

The documents used to describe and implement the SMS may be referred to as the safety management manual. Companies are not required to keep the documentation in a manual form but may choose to maintain the documentation in the form they consider most effective (e.g., electronically). Whatever form they choose to keep their SMS, the information in it must be readily available to all the persons who are required to understand and apply that system in the course of their normal duties both ashore and afloat in accordance with 33 C.F.R. § 96.250. Under ISM Code Part A/11, companies are to establish and maintain procedures for the control of their SMS documentation. These controls must ensure that--

a. Valid documents are available at all relevant locations (including all vessels);

b. Changes to documents are reviewed and approved by authorized personnel; and

c. Obsolete documents are promptly removed.

4. SMS Certification Process
Certification of a SMS for a vessel requires the vessel’s flag administration to make two determinations: first, that the company responsible for the vessel has implemented a SMS that complies with the requirements of the ISM Code (33 C.F.R. Part 96 for U.S. vessels) and, second, that the vessel is being operated in accordance with the approved SMS.

Simply put, an effective SMS can be reduced to this simple philosophy: “say what you do, do what you have said and be able to prove it!” A goal of the ISM Code is to define a process of continuous communication, training, and actions that constantly maintain the vessel in a state of full compliance with safety and environmental protection regulations.

The ISM Code does not prescribe the manner in which this must be done, rather it allows companies to define their own way of reaching that goal taking into account the prescribed functional requirements for a SMS. There is no one right way to do this because each successful SMS must be built to fit the individual company culture, organization, service and work environment. What may work for one company may not work for another.

Inspectors and auditors must, therefore, be vigilant to ensure that companies have an SMS that meets the objectives of the ISM Code and is one that the company and its employees can effectively use. A SMS that only exists to satisfy what the company sees as just another regulation, for yet another manual that will sit on the shelf, does not meet the spirit or intent of the ISM Code.

To this end, a company’s success at fulfilling its SMS is proportional to the organization’s commitment to achieving those goals amidst all the other priorities competing for its attention, and hence the importance of clear commitment to those safety objectives starting at senior management level. Regular review of safety performance and performance against the safety objectives at management level reinforces the importance of safety to the organization’s success. While management is required to demonstrate commitment through their actions and involvement, all employees and crewmembers need to be involved for the system to be fully functional, integrated, and operationalized. Accordingly, all employees and crewmembers should be aware of the influence that their action or inaction may have on the effectiveness of the SMS with a view of continuous improvement.\(^1\)

5. SMS Audit Process

Every initial ISM Code certification audit will be in two parts.

\(^1\) Adapted and modified from Safe Work Australia – Guide for Major Hazard Facilities: Safety Management Systems
First, an auditor from a recognized organization authorized by the flag administration will perform an initial verification (i.e., external audit) of the company’s SMS and onshore operations. The company management audit comes first because the overall use of the system defines the SMS for the company’s personnel, whether they are shoreside or vessel employees.

Once the company has successfully completed the initial verification, the company, or any person that has assumed or agreed to assume responsibility for operation of the vessel from the company, will be issued a Document of Compliance (DOC) certificate. The company must receive a DOC before auditors can proceed to the second part of the audit.

For the second part of an initial ISM Code certification audit, the company’s vessel(s) will be audited on their use of the SMS. Each individual vessel that comes under the company DOC and is found to be operating in accordance with a shipboard SMS that meets the required elements of the ISM Code, will be issued a Safety Management Certificate (SMC). A vessel’s compliance with the ISM Code, is always dependent on it being operated by a company holding a valid DOC. For this reason, a copy of the company’s DOC and the original of the vessel’s SMC must be maintained onboard the vessel for viewing by flag-state inspectors or port state control officers. IMO Resolution A.1071(28) provides guidance on the requirements for the issuance of these certificates, including specific guidelines for the issuance of interim certificates.

6. Document of Compliance (DOC) Certificates and Safety Management Certificates (SMCs)

a. Document of Compliance (DOC) certificates. A company is issued a DOC following a satisfactory initial verification (i.e., external audit) of a company’s SMS. The SMS must be in effect for a minimum of 3 months prior to the issuance of the initial (full-term) DOC (see paragraph B.7.a. of this Chapter for discussion on the Interim DOC Certificate).

(1) The external audit determines whether the SMS complies with the requirements of the ISM Code and/or 33 CFR Part 96, and is effectively implemented and used by the company’s personnel.

(2) The DOC is valid for the types of vessels on which the company’s initial verification audit is based. Consistent with ISM Code Part B/13.2, the DOC should be issued for no more than 5 years (60 months). The DOC is subject to annual verification audits within 3 months before or after the
certificate’s anniversary date. (See ISM Code Part A/1.1.11 for the definition of “anniversary date.”)

(3) Many U.S. vessels are owned by non-maritime interests such as a bank or a large parent corporation. Typically, these institutions do not take a direct hand in the operation of the vessel; their interest is confined to finance. Because of this limited involvement with the vessel’s day-to-day operation, these companies may not want to be part of the SMS. Section 3.1 of the ISM Code requires a company to designate, in writing, the person or company that will act for the company for the purpose of the SMS (this is typically the vessel’s operating company).

(4) Delegation is allowed by the ISM Code and 33 C.F.R. Part 96, provided a letter of designation has been issued by the company of record to the flag administration designating the company for the SMS. For U.S. vessel(s), this company designation letter is maintained by the National Vessel Documentation Center (NVDC) CSR-Desk in accordance with MSIB 003-14, with a copy to the designated company.

(5) Inspectors should note that the company listed on the Certificate of Inspection (COI) might not always be the company listed on the DOC or SMC.

(6) For companies that do take a direct and continuing hand in the day-to-day operation of a vessel, delegation of SMS responsibility to another party would not be appropriate.

(7) Occasionally, the Coast Guard receives requests from U.S. ship owners to designate ship management companies that are based outside of the U.S. as the "company" for the purpose of the ISM Code. Generally, there is no objection to a U.S. company having a satellite or subordinate office that is physically located outside of the United States, provided that the satellite office and its personnel are still essentially part of the operations of the US based company. However, it is not permitted for U.S. owners to delegate the DOC to unassociated foreign ship management companies that are located outside of the U.S., and that effectively result in foreign entities becoming the operators of a U.S. ship. Additionally, when the U.S. owner is a subsidiary of a global company the headquarters of which is located outside of the U.S. it is not allowable for the U.S. owner/operator to then revert the DOC to the parent foreign company or its foreign components for operation. This sometimes occurs when foreign companies create a U.S. component simply to gain eligibility for contractual work that requires the vessel to be U.S. flagged.
Responsibility for the operation of a U.S. ship must always be principally associated with a U.S. entity that is subject to U.S. law, even if the U.S. company’s physical location is outside of the United States. The above withstanding, contact CG-CVC-1 for case-by-case determinations.

(8) Multiple DOCs issued to a single company, by various recognized organizations, for the same type of vessel are not permitted. The reason that a company should only have one DOC for the same type of vessel, is to avoid situations where, in the event a DOC has been revoked for cause, the company cannot then rely on another DOC issued for essentially the same SMS but by a different recognized organization. Possessing a “back-up” or auxiliary DOC does not meet the spirit or intent of the ISM Code. Multiple DOCs issued to a single company, by various recognized organizations, for different types of vessels are discouraged as systematic non-conformities can be indicative of a flawed or ineffective SMS regardless of vessel type or DOC registrar.

(9) Regardless of MSC/Circ.762 - MEPC/Circ.312, a DOC issued under the authority of the United States of America only covers vessel types that are flying the U.S. flag. Initial audits are required for the addition of other vessel types under U.S. flag. There are unique U.S. requirements (under 33 C.F.R. Part 96) that need to be addressed in the SMS and therefore an initial audit is required to verify that these elements have been included in the Company SMS.

b. Safety Management Certificates (SMCs). A vessel is issued an SMC following an initial audit that verified its SMS is in compliance with the requirements of the ISM Code and/or 33 C.F.R. Part 96.

(1) The SMC cannot be issued unless the DOC for the company responsible for the operation of the vessel is valid, the SMS is applicable to a vessel type listed on the DOC, and if the DOC has been issued by a different recognized organization than the organization that issues the SMC, then the recognized organization that issues the SMC must be authorized by the vessel’s flag administration. If the DOC was issued by a different recognized organization, the Continuous Synopsis Record (CSR) should be updated accordingly (if applicable).

(2) Consistent with ISM Code Part B/14.4.3 and 33 C.F.R. § 96.360(b)(6), the external audit must also show that the SMS has been effectively implemented by the vessel’s personnel for a minimum of 3 months prior to the initial audit.
(3) Consistent with ISM Code Part B/13.8 and 33 C.F.R. § 96.340(e)(2), the SMC is valid for 5 years and requires an intermediate external audit and endorsement on the back of the certificate between the second and third anniversary date of the issuance of the SMC.

7. Interim Certificates

a. Interim DOC Certificate. Consistent with ISM Code Part B/14.1 and 33 C.F.R. § 96.350, an interim DOC is valid for a period of no more than 12 months. The period of validity cannot be extended. An interim DOC cannot be reissued after a 12 month period.

(1) During the 12 month period of the validity of the interim certificate, the responsible person should ensure that the necessary audits are completed so that the company can be issued a final DOC.

(2) An interim DOC may only be issued to facilitate implementation of the ISM Code when a company is newly established or when vessel types are added to an existing SMS and DOC. The purpose of an interim DOC is to allow the company time to completely integrate its operations as a new company or to incorporate a new vessel or vessel type into its SMS capabilities.

(3) The interim DOC certificate should be issued only after the company has demonstrated that it has an SMS that meets the objectives of Section 1.2.3 of the ISM Code. The company’s SMS is expected to meet the full requirements of the ISM Code within the period of validity of the interim DOC certificate.

b. Interim Safety Management Certificate (SMC). Consistent with ISM Code Part B/14.2 and 33 C.F.R. § 96.360, an interim SMC is valid for a period of no more than 6 months and may only be issued to new vessels on delivery or when a company takes responsibility for an existing vessel that is new to the company. Consistent with ISM Code Part B/14.4 and 33 C.F.R. § 96.360(b), an interim SMC should only be issued when the vessel’s flag administration, or a recognized organization authorized by acting on the flag administration’s behalf, has verified the following:

(1) The responsible company’s DOC or interim DOC is relevant to that type of vessel;
(2) The SMS includes key elements of the ISM Code and has either been assessed during the responsible company’s external DOC audit or demonstrated during the company’s evaluation for an interim DOC;

(3) The Master and relevant senior officers are familiar with the SMS and the plans for its implementation;

(4) Essential instructions or procedures on the SMS are provided to the vessel crew prior to sailing;

(5) The responsible company has confirmed an audit date for the vessel within 3 months; and,

(6) The information contained in the SMS is in a working language or languages understood by the vessel’s crew.

c. An interim SMC can be extended up to an additional 6 months from the date of expiration in exceptional circumstances (ISM Code Part B/14.3). Extension of the interim SMC is contingent upon specific flag administration approval. For U.S. vessels, this must be approved by Commandant (CG-CVC).

8. Extension of Certificates and Audits

Extension of any ISM certificate should not be encouraged as owners/operators have sufficient and timely notice in which to complete the functional requirements of their SMS. The ISM code allows for the extension of the validity of an Interim SMC for a period of 6 months. This should only be done in exceptional circumstances as discussed in paragraph B.7.c of this Chapter.

No extensions are permitted to full term certificates. In extenuating circumstances Commandant (CG-CVC-1) may consider approving a short-term certificate.

9. Short-term Certificates

a. Non-Conformities. If during an audit (DOC or SMC) it is found that the company/ship does not merit the issuance of a full term certificate due to the number of non-conformities, a short term certificate valid for 3 months is to be issued so that another audit can be carried out prior to the issuance of a
full term certificate. This is to be done in consultation with Commandant (CG-CVC).

b. Major Non-Conformities. If during an audit (DOC or SMC) it is found that the company/ship does not merit the issuance of a full term certificate due major non-conformity(ies), a short term certificate valid for 3 months is to be issued so that another audit can be carried out prior to the issuance of a full term certificate. This is to be done in consultation with Commandant (CG-CVC), following the procedures in MSC/Circ.1059 and MEPC/Circ.401 on the Procedures Concerning Observed ISM Code Major Non-Conformities as amended below;

(1) A major non-conformity may be downgraded to a non-conformity if the Administration or authorized organization is satisfied that effective corrective action is being taken. A major non-conformity found on a ship should be downgraded before the ship sails. Where a major non-conformity against the DOC is downgraded to a non-conformity, the impact of the safety management system failure should be taken into due consideration for any associated ships (see NOTE). A time period, not exceeding three months, should be allowed for the completion of the necessary corrective actions. Where the Administration allows a major non-conformity to be downgraded, at least one additional external audit should be carried out within the time frame indicated in the agreed-upon corrective action plan to verify that effective actions are taken.

NOTE: Following the downgrading of a major non-conformity, the associated SMCs continue to remain in place without any additional verification provided that no other major non-conformity remains unresolved. However, additional shipboard audits may also be carried out if deemed necessary by Commandant (CG-CVC).

(a) In the event that a major non-conformity is downgraded to a non-conformity, a Short-Term SMC or DOC, as appropriate, should be issued to coincide with the additional audit as mentioned in paragraph (1), not to exceed three months.

(b) In special circumstances, Commandant (CG-CVC) may, after verifying substantial progress toward full implementation of the corrective action through fulfillment of milestones established in the corrective action plan pertaining to the specified requirement, allow issuance of a subsequent Short-Term SMC or DOC, as appropriate, not to exceed three months. At least one additional audit should be
carried out within the time frame indicated to verify that effective actions are taken.

(c) A third, consecutive, Short-Term SMC may not be issued, unless;

i. the Safety Management Certificate is subject to an additional verification, to the extent and scope of an initial verification; and,

ii. the Document of Compliance is subject to an additional verification, to the extent and scope of an initial verification.

(d) A third, consecutive, Short-Term Document of Compliance may not be issued, unless;

i. the Document of Compliance is subject to an additional verification, to the extent and scope of an initial verification;

ii. a verification to the scope of an initial verification has been carried out on board a representative sample of ships. At least one ship of each type operated by the company should be verified; and,

iii. effective fulfillment of the milestones established in the corrective action plan and substantial progress toward full implementation of corrective action has been verified through means of objective evidence.

C. COAST GUARD ENFORCEMENT

The Coast Guard’s ISM Code enforcement policy is divided into two major areas of responsibility. The first area is ensuring compliance of U.S. flag vessels with the ISM Code. The Coast Guard is the flag administration’s agency for U.S. vessels’ compliance with the ISM Code. The Coast Guard administers this responsibility through a delegation to recognized and authorized organizations. The second area of responsibility is verification of ISM Code compliance on foreign vessels entering U.S. ports. For detailed guidelines for the enforcement of the ISM Code on foreign vessels subject to the U.S. Port State Control program, see NVIC 04-05. A thorough review of this Chapter, NVIC 04-05, and 33 C.F.R. Part 96 is recommended for all enforcement personnel. The remainder of this Chapter will address the U.S. vessel program only.
1. **Jurisdiction - Flag State**

Applicability of the ISM Code to U.S. vessels by service and route is specified in the applicable subchapter of Title 46 CFR. If a vessel is required to have ISM certification, specific certification must be in accordance with the provisions of 33 C.F.R. Part 96 and Chapter IX of SOLAS. On U.S. vessels, ISM Code audits and issuance of ISM Code certificates are performed exclusively by organizations recognized and authorized by Commandant, in writing, to act on behalf of the United States. These organizations must meet specific requirements as specified in 46 C.F.R. Part 8 and 33 C.F.R. Part 96, Subpart D. Officers in Charge, Marine Inspection (OCMIs) do not perform ISM Code audits or issue ISM Code certificates.

2. **General Guidelines for Enforcement on U.S. Vessels**

a. To obtain ISM certification, as defined in 33 C.F.R. Part 96, a company must select one of the organizations authorized by the Commandant to issue certificates. The company may obtain a list of such organizations from the OCMI. Commandant (CG-ENG) maintains an up to date list and can answer questions that arise regarding the authorization of an organization by the Coast Guard.

b. To apply for an SMS certification waiver or extension or to request approval for an equivalency to satisfy compliance with 33 C.F.R. Part 96 (the ISM Code), a company should route their request through the authorized ISM Code-certification organization that they have contracted. The organization will provide its recommendation for approval or denial and forward the recommendation to Commandant (CG-CVC) for final approval or denial.

c. Commandant (CG-CVC) and Commandant (CG-5P-TI) oversee authorized organizations. They work with OCMIs to ensure that ISM Code audits and certifications are carried out in accordance with the provisions of law, regulation, international convention, and written agreement between the Coast Guard and the authorized organization.

d. Several recognized organizations may be authorized to act on behalf of the Coast Guard for issuance of ISM Code certificates.

e. Although designed for Port State Control, NVIC 04-05 includes checklists and guidelines (“ISM Compliance Assessment Tool”) that can be a useful tool for marine inspectors checking for ISM Code safety management system compliance.
f. The Coast Guard has developed a Safety Management System (SMS) Student Guide that provides Coast Guard personnel with general knowledge of the ISM Code requirements. This Student Guide is maintained by the Marine Inspection and Investigation School (T-MII) at Training Center Yorktown and is available to Coast Guard personnel as part of the Marine Inspector Student Notes.

g. Vessels that do not have a Master. On a U.S.-certificated vessel manned by a Person-in-Charge (PIC) in the place of a Master (most likely a barge), the PIC is responsible for all of the duties and functions that the ISM Code and the vessel’s SMS require of a Master.

3. Legal and Regulatory Authority for U.S. Vessels

Legal authority for enforcing the ISM Code on U.S. vessels is contained in 46 U.S.C. § 3203. Regulations for the applicability and implementation of the ISM Code are contained in 33 C.F.R. Part 96, Subparts A, B and C. Vessel-specific Subchapters in Title 46 C.F.R. include SMS requirements for specific vessel types.

4. Voluntary Compliance by the U.S. Domestic Fleet

U.S. vessels engaged on foreign voyages and subject to SOLAS Chapter IX must comply with the ISM Code. There is a group of U.S. vessels that are not subject to SOLAS Chapter IX and, therefore, are not required to comply with the ISM Code. This group of vessels includes those engaged only on domestic voyages and government–owned, non-commercial vessels operated by the U.S. Navy’s Military Sealift Command (MSC) or the U.S. Maritime Administration’s (MARAD) Ready Reserve Force (RRF). However, it should be noted that compliance with the ISM Code is a requirement for participation in the Alternate Compliance Program (ACP) and that RRF vessels must comply with applicable requirements of the international conventions that have been adopted into U.S. laws and regulations (e.g., ISM Code is contained in 33 C.F.R. Part 96). Consult the USCG-MSC MOA as well as the USCG-MARAD MOU for additional information.

The Coast Guard seeks to encourage these vessels to voluntarily comply, to the maximum extent possible, with the SMS requirements of the ISM Code. These vessels’ companies are encouraged to seek voluntary ISM Code certification and follow the guidelines for mandatory compliance.
The Coast Guard recommends that companies that voluntarily comply with the ISM Code use the services of the organizations recognized and authorized by the Coast Guard for mandatory certification. This will allow the Coast Guard to provide a focused oversight program that will benefit all customers of these authorized organizations.

ISM Code certificates on these vessels are called a Statement of Voluntary Compliance (SOVC). This term describes both the DOC issued to the parent organization and the SMC issued to the vessel(s). Issuance and revocation of the SOVC is administered in a manner identical to required ISM Code certificates, however, revocation of a SOVC will not restrict the operations of any voluntarily-certificated vessel.

It is not necessary for Military Sealift Command vessels that are in reduced operating status, or engaged in unique missions, to voluntarily comply with the ISM Code.

5. ISM Code Equivalence for Certain Small Passenger Vessels

Under 46 C.F.R. § 175.540, the Coast Guard has established an equivalence to ISM Code compliance for small passenger vessels (T-boats) certificated under 46 CFR Subchapter T, that would otherwise be subject to the ISM Code. These small passenger vessels, which carry more than 12 passengers on foreign voyages, must meet certain limited operation requirements to be eligible for this program. This applies only to U.S. flag vessels. The requirements are as follows:

a. For a T-boat’s company to apply for equivalency under 46 C.F.R. § 175.540, the small passenger vessel’s operation must be Coast Guard-certificated to carry--

(1) No more than 150 total persons; or

(2) No more than 49 overnight passengers.

b. The Coast Guard feels that full ISM Code certification, in accordance with 33 C.F.R. Part 96, is too extensive for these vessels due to limited company personnel, routes, and operations—therefore, an equivalent certification system was created for these vessels and companies.

c. 46 C.F.R. § 175.540 provides for an equivalent SMS onboard these small passenger vessels in lieu of the normal ISM Code certification.

d. The Coast Guard administers this equivalent program as part of the normal scheduled inspection for certification. These small passenger vessels and companies will not receive either a DOC or an SMC. Instead, the vessel’s COI will
be endorsed with a statement of equivalence to the ISM Code for the specified route.

e. A “job aid” has been produced by Commandant (CG-CVC) to guide small passenger vessel companies through the process of developing their SMS to ensure that the SMS will provide a level of safety equivalent to the ISM Code. These job aids are only a guideline and can be found online at http://www.uscg.mil/pvs/SPV.asp.

f. Prior to completing an inspection that examines a T-boat’s SMS equivalency, the OCMI should ensure that the equivalent SMS has been customized to the vessel and company’s operations and procedures.

g. To apply for an equivalency under 46 C.F.R. § 175.540, a small passenger vessel company must submit a written request to the cognizant OCMI. The written request should communicate how the vessel’s operation meets the requirements for the equivalency and include a copy of their SMS documentation (manual).

h. If the cognizant OCMI allows a small passenger vessel to participate in the SMS equivalency program and its SMS has been inspected and approved by the Coast Guard, the vessel’s COI will be endorsed in the vessel operating details with the following statement: “The company’s and vessel’s safety management system meets the requirements of Chapter IX of SOLAS through an equivalency program approved by the U.S. Coast Guard.”

i. If a small passenger vessel’s company does not apply for equivalency under 46 C.F.R. Part 175, then the vessel’s company is expected to contract with an authorized organization acting on behalf of the United States to complete audits and certification of the company and vessel’s SMS. In these cases, Coast Guard inspectors must verify the issuance of the company’s DOC and SMC by the authorized organization during normal COI inspections. If a small passenger vessel does not have either of these international convention certificates or an endorsement of equivalency to Chapter IX of SOLAS, the vessel’s COI may only be endorsed for a route involving domestic operations.

j. While Commandant (CG-CVC) monitors this equivalency program, implementation of the equivalency program lies with the local OCMI. Small passenger vessel operations that are eligible to apply for this program are limited to the following five OCMI zones: Portland, ME, San Juan, PR, Miami, FL, San Diego, CA, and Seattle, WA.
k. If an OCMI office, other than the ones named above, receives an application from a new vessel company or a vessel that is moving its operation into an OCMI zone that is not part of the equivalency program, the OCMI should contact Commandant (CG-CVC) for direction.

D. DELEGATION OF ISM CODE CERTIFICATION BY THE COAST GUARD TO RECOGNIZED ORGANIZATIONS

1. Authority for Delegation

46 U.S.C. § 3103 provides the Coast Guard’s authority to rely on reports, documents, and records of reliable persons as evidence of compliance with Subtitle II of 46 U.S.C., the subtitle which contains the ISM Code for SMS standards.

The December 24, 1997, ISM Code final rule delegated the function of ISM Code external audits and certifications for U.S. vessels to recognized/authorized organizations (hereafter “authorized organizations.”).

2. Application Process

Recognizing and authorizing organizations to carry out ISM Code certification on behalf of the Coast Guard is the responsibility of Commandant (CG-ENG), Office of Design and Engineering Standards. An organization can achieve recognition by applying in writing to Commandant (CG-ENG) according to the requirements for application provided in 46 C.F.R. 8. After being recognized by the Coast Guard, an organization may apply for authorization to complete ISM Code external audits and certification for U.S. vessels as outlined in 33 C.F.R. Part 96, Subpart D.

Once an organization is authorized to act on behalf of the Coast Guard it will be added to a list of authorized organizations. The list of authorized organizations, authorized to carry out specified functions on behalf of the Coast Guard is available to owners and operators of U.S. vessels at http://www.uscg.mil/hq/cg5/acp/. Commandant (CG-ENG) maintains the list of authorized organizations.

E. RECOGNITION, AUTHORIZATION, AND OVERSIGHT OF AUTHORIZED ORGANIZATIONS ACTING ON BEHALF OF THE U.S.
1. Responsibilities of the Deputy Commandant Staffs

This section describes the functions of the Deputy Commandant staffs regarding the application and enforcement of the ISM Code to U.S. and foreign vessels.

a. Commandant (CG-ENG), Office of Design and Engineering Standards, will:

(1) Specify and interpret the 46 C.F.R. Part 8 and 33 C.F.R. Part 96 requirements for organizations applying to the Coast Guard for recognition and authorization to complete ISM Code external auditing (including initial and follow-on verifications) and issuing of international certificates;

(2) When necessary, revoke recognition or authorization of an organization acting upon the behalf of the Coast Guard;

(3) When such an organization’s recognition or authorization is revoked, provide guidance for the orderly transfer of company and vessel ISM Code certificates to another recognized and authorized organization;

(4) Maintain and publish a list of recognized organizations that are authorized to conduct ISM Code auditing and certification on behalf of the Coast Guard. (This is available at http://www.uscg.mil/hq/cg5/acp/); and,

(5) Draft and execute an agreement with each recognized and authorized organization. This agreement must specify the duties and responsibilities of the work an organization will perform when acting pursuant to the authority delegated from the U.S. Coast Guard. The agreement must specify the duties and responsibilities of both the Coast Guard and the recognized organization. The agreement must include specific reports that the recognized organization must provide to the Coast Guard, as well as the recognized organization’s written assurance that the Coast Guard will have access to records and information that are pertinent to the duties performed by the recognized organization on behalf of the Coast Guard and that Coast guard personnel may observe any aspect of the ISM Code audit or certification process.

(a) Information access is critical to the Coast Guard’s oversight of recognized and authorized organizations. In the performance of its delegated responsibilities, recognized organizations should anticipate providing the U.S. Coast Guard the following information:
i. ISM Code certificates issued, with the date of issuance and recipient’s name;

ii. Names and training/qualifications records of persons performing audits;

iii. Names of companies and vessels undergoing ISM certification;

iv. External audit reports and results.

(b) As the flag administration for all U.S. vessels, the Coast Guard must have on-site and electronic access to all records and certifications pertaining to a U.S. flag vessel’s mandatory or voluntary ISM certification.

b. Commandant (CG-CVC), Office of Commercial Vessel Compliance, will:

(1) Establish enforcement policies and procedures for implementation of the ISM Code;

(2) Establish and maintain policies and procedures for the effective oversight of organizations authorized to perform ISM Code audits and certifications under a delegation of authority from the U.S. Coast Guard. (see paragraph F of this Chapter). This oversight includes monitoring all notifications for all major non-conformities as well as the status of notifications filed under IACS PR9 and PR17 and coordinating additional USCG oversight as necessary;

(3) Work with Commandant (CG-5P-TI) and FORCECOM to define qualifications and implement performance support interventions for Coast Guard personnel with regard to ISM Code compliance and enforcement for U.S. and Port State Control programs. Ensure that records are entered into appropriate Coast Guard systems;

(4) Conduct oversight reviews of recognized organization’s headquarters, regional, and port offices to verify compliance with the requirements of the written authorization agreement between the organization and the Coast Guard;

(5) Coordinate with Commandant (CG-5P-TI), District (p) officers, and OCMIs to ensure implementation of oversight, and provide feedback and corrective action to authorized organizations;
(6) Maintain a record of letters that show when an owner/operator of a U.S. vessel has designated another party as the company or person that will act for the owner for the purposes of ISM Code certification, SMS, and vessel management. See paragraph B.6.a.(3) of this Chapter. These records are maintained by the National Vessel Documentation Center (NVDC) CSR-Desk in accordance with MSIB 003-14;

(7) Coordinate with Commandant (CG-ENG) on the review of organizations’ applications to the Coast Guard for a delegation of authority to perform ISM Code certifications;

(8) Advise Commandant (CG-ENG) when evidence exists that an authorized organization’s delegation of authority should be revoked. Upon receiving and verifying credible information of major non-conformities or other failures to comply with Chapter IX of SOLAS or 33 C.F.R. Part 96, coordinate with the cognizant OCMI, the suspension or revocation of the vessel’s SMC or its company’s DOC; and,

(9) Act as final agency authority regarding the granting of equivalencies, appeals or other decisions regarding the certification of a U.S. vessel’s or U.S. company’s safety management system.

c. Commandant (CG-5P-TI), Traveling Inspectors, will:

(1) Oversee by observation mandatory ISM Code audits of the DOC and SMC performed on U.S. vessels by authorized organizations and companies;

(2) Perform ISM Code compliance oversight when conducting visits onboard U.S. vessels enrolled in the Alternate Compliance Program;

(3) Establish and maintain a system of evaluation for the performance of organizations authorized to conduct ISM Code certifications; and,

(4) Supervise and coordinate assignment of OCMI personnel to observe ISM Code audits.

2. Responsibilities of Authorized Organizations

Organizations authorized to act on behalf of the United States regarding the external ISM Code auditing and certification of U.S. vessels and their companies will:
a. Conduct ISM Code certifications in accordance with the relevant provisions of U.S. regulation, international convention, the authorized organization’s written agreement with the Coast Guard, and IMO Resolution A.1071(28), Revised Guidelines on the Implementation of the International Safety Management (ISM) Code by Administrations. In preparation for an external audit, vessel and company class/statutory records should be appropriately reviewed in advance. If the auditor does not have ready access to these records, then the company should make them available in advance of the audit. Authorized organizations should be duly guided by IACS procedural requirements (PR) 9 (ISM Code Certification), 10 (Procedure for the Selection, Training, Qualification and Authorization of Marine Management Systems Auditors), 17 (Reporting by Surveyors of Deficiencies relating to Possible Safety Management System Failures), and 18 (Transfer of Safety and Security Management Systems Certification) when performing functions related thereto;

b. Notify Commandant (CG-5P-TI) prior to the performance of any ISM Code-related external audit for the issuance or verification of a company’s DOC or vessel’s SMC. This includes audits for an initial, renewal, intermediate, annual, or additional DOC or SMC. Notice of DOC audits should be made at least 14 days in advance. Notice of SMC audits should be made at least 7 days in advance. Notification can be made to USCGTravelers@uscg.mil;

c. Allow qualified Coast Guard personnel to observe and accompany an authorized organization’s personnel during any part of the ISM Code certification and audit process. (Training, qualification and rules of conduct are addressed later in this Chapter);

d. Notify the cognizant OCMI and Commandant (CG-CVC) of any major non-conformities as well as any recommendations to suspend or revoke any DOC or SMC issued pursuant to a delegation of authority from the Coast Guard. Notification to Commandant (CG-CVC) can be made to loracs@uscg.mil;

e. Report any major non-conformity as well as any recommendation to suspend or revoke an SMC or DOC to:

   (1) All authorized organizations that issue any statutory certificates to the vessel; and

   (2) The Coast Guard, in accordance with the authorized organization’s written Agreement (see paragraph E.2.d of this Chapter); and,
f. Notify Commandant (CG-CVC) of any reports filed in accordance with IACS Procedural Requirements (PR) 9 and 17. Notification to Commandant (CG-CVC) can be made to loracs@uscg.mil.

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F. COAST GUARD’S ISM CODE OVERSIGHT ON U.S. VESSELS

ISM Code compliance is intertwined with nearly every other aspect of overall regulatory compliance. A basic tenet of any SMS is that the system must adhere to the safety and environmental protection requirements. Vessel inspections will provide a means of evaluating ISM Code compliance. Verification of compliance can be achieved in several ways, the most basic of which is verification that the vessel has a valid ISM Code SMC and that the company has a valid DOC.

The next level of ISM Code compliance verification is to identify links between any deficiencies or casualties noted during the course of routine inspections/investigations and the vessel’s SMS. This requires marine inspectors to have a working knowledge of the ISM Code’s key elements and of the duties and training of shipboard personnel (see paragraphs F.1-3 of this Chapter).

The Marine Inspection and Investigation School at Training Center Yorktown has established a Safety Management System (SMS) Student Guide to help prepare marine inspectors to verify whether a vessel is in compliance with the ISM Code and/or 33 C.F.R. Part 96. The Student Guide is not a substitute for the policy described in this Chapter, 33 C.F.R. Part 96 or the ISM Code. It is intended to provide a shorthand guide to familiarize Coast Guard personnel with the ISM Code. The Student Guide also provides a breakdown of the ISM Code’s key elements and the requirements for each element.

In addition to being familiar with the ISM policy provided in this Chapter, all Coast Guard marine inspectors and Port State Control Officers should read and become familiar with 33 C.F.R. Part 96, the ISM Code and NVIC 04-05.

1. When to Conduct ISM Code Oversight

The Coast Guard’s ISM Code oversight occurs constantly, as a part of many routine activities. Examination of a vessel for any purpose is an opportunity to judge the effectiveness of its SMS. Although ISM oversight may not be the primary purpose of an examination, inspectors should remain cognizant of the important role than an SMS
has in preventing or mitigating deficiencies or casualties. To this end, when conducting an inspection for purposes other than verifying compliance with the ISM Code, any deficiencies that may be noted during the inspection should be scrutinized in the context of whether the deficiencies should have been discovered and managed through use of the SMS. Oversight may also arise from investigations into vessel casualties and reports by vessel crewmembers. Coast Guard investigators should actively check for causal factors stemming from SMS non-conformities while conducting marine casualty investigations. Any potential SMS deficiencies identified during a post-casualty investigation shall be immediately reported to the unit’s Inspections Division for potential ISM follow-up actions. The Coast Guard will coordinate its oversight of ISM Code audits and ISM Code certification processes through the cognizant authorized organization.

A good measure of an SMS is for the inspector, at the outset of an inspection, to inquire about any open non-conformities in order to gain insight regarding the status of corrective action.

Multiple equipment or system failures could indicate safety management system (SMS) non-conformities. If the OCMI identifies major non-conformities with the vessel’s SMS, such as a deviation from SMS requirements that poses a serious and direct threat to personnel or ship safety, or evidence that the ship is not taking corrective action for long-standing deficiencies per preventive maintenance processes contained in the SMS, or evidence the company has failed to address outstanding non-conformities reported by ship personnel, then an additional external audit of the vessel’s SMS may be required by the OCMI. A detailed discussion on expanded examinations, as well as the grounds for expanded examinations, is provided in paragraph F.3 of this Chapter. Alternatively, the OCMI may consider an internal investigation coordinated through the authorized organization (i.e., IACS PR17). In either case, the OCMI must be able to articulate the objective evidence and the specific deficiencies of the failed SMS. If the OCMI suspects that problems exist at the company level, then the OCMI should recommend an external audit of the company to Commandant (CG-CVC). See paragraph F.4 of this Chapter for additional information.

a. Procedure.

(1) As part of all inspection activities inspectors should check to verify compliance with SOLAS Chapter IX and the ISM Code. Inspectors should be alert for any indications that major non-conformities exist with the ship’s SMS (i.e., the SMS is not implemented or not used by the ship’s crew). The identification of a major non-conformity by the inspector is
sufficient grounds for the OCMI to take appropriate enforcement actions. See paragraph F.4 below.

**NOTE:** A major non-conformity can be a key indicator of an invalid SMS.

(a) Substantial non compliance of a ship’s SMS to the requirements of the ISM Code is indicative of a major non-conformity (ISM Code 1.1.10). By definition, a major non-conformity is a deviation from SMS requirements that poses a serious threat to personnel and ship safety, or a serious risk to the environment and requires immediate corrective action (ISM Code 1.1.10).

(b) Also considered a major non-conformity is the lack of an effective and systematic implementation of a requirement in the ISM Code. It may take several interactions with the vessel over several months to identify a poor SMS. Accordingly, inspectors should review the ship’s history in order to track repeated deficiencies aboard the vessel (i.e., deficiencies that remain uncorrected over a period of time). For example, an inoperable fire pump repaired prior to departure is not usually grounds to question effective implementation of the ship’s SMS. However, the deficiency taken with other materiel deficiencies noted from this and previous inspections (incl. Coast Guard, Class, Port State Control), coupled with evidence that the ship and/or company is not meeting SMS requirements for reporting and correcting deficiencies may lead to a determination that a major non-conformity exists. The inspector should be able to distinguish between deficiencies that result from normal vessel operations (e.g., wear-and-tear, weather, operational environment) and those deficiencies that exist due to a systematic failure to implement the SMS (e.g., failure to implement a planned maintenance system). It is possible for wear-and-tear in the extreme that results in long-standing deficient conditions, or deficiencies in multiple systems, to be indicators of a failure of the SMS. Examples of such indicators are:

i. Evidence that the ship was not taking corrective action for long-standing deficiencies in accordance with the company’s established preventive maintenance system, and

ii. Evidence that the company failed to address outstanding deficiencies reported by shipboard personnel to the company in accordance with the ship’s SMS.
2. **ISM Oversight of U.S. Vessels Enrolled in Alternate Compliance Program (ACP) and Maritime Security Program (MSP)-Select.**

During routine ACP and MSP-Select oversight examinations and inspections associated with the issuance or endorsement of the COI, in addition to inspecting the overall physical condition of the vessel, marine inspectors should verify the vessel has a valid SMC and DOC, and that the crew is familiar with the vessel’s SMS. If personnel from an authorized organization (e.g., ACP Surveyor) or marine inspector finds any significant materiel deficiency that might affect the validity of the vessel’s SMC, they must notify the cognizant OCMI and the authorized organization that issued the vessel’s SMC. **Commandant (CG-CVC-1) should be notified in the case of either a major non-conformity of the SMS and/or evidence supporting an additional audit.**

3. **Clear Grounds and the Expanded Examination.**

   a. **Clear Grounds.** Significant materiel deficiencies, serious lack of vessel or equipment maintenance, or crew failure to follow safety procedures are key indicators the SMS may not be effectively implemented. Information to determine the effectiveness of an SMS may be collected through the following methods:

      (1) Observing or interviewing the crew members responsible for the area in which the deficiency was noted. Crew members should be knowledgeable about the responsibilities that the SMS requires of them.

      (2) Verifying that SMS procedures related to the area of deficiency are being carried out.

      (3) Verifying, with the Master or responsible crewmember, what corrective action has been initiated under the SMS.

         (a) Failures to submit corrective action reports should be reported to the cognizant OCMI.

         (b) Depending upon the severity and frequency of such failures, a report should also be made with the vessel’s SMC issuing organization.

         (c) These reports should be made as soon as possible and no later than within 48 hours. They may be oral or written reports (which can include emails).
b. **Expanded Examination.** Inspectors should conduct an expanded examination when clear grounds indicate that the ship has not effectively implemented its SMS. Examples of conditions that result in clear grounds for an expanded exam include, but are not limited to:

1. Improperly endorsed or expired ISM certificates;
2. Lack of SMS documentation;
3. Crewmembers having insufficient knowledge of their required duties under the SMS; and/or
4. Serious, longstanding materiel deficiencies or systematic lack of maintenance of critical equipment/systems as identified by the SMS.

c. **Conducting an Expanded Examination of the SMS.** During the expanded SMS examination, the inspector verifies the basic components of the SMS related to the observed deficiencies. The inspector also confirms that the Master and crew have a basic understanding of the SMS and their responsibilities. The inspector should verify the following relevant items:

1. SMS documentation (may be in the form of a “Safety Management Manual”) is aboard the ship, is written in the working language of the ship and includes or identifies:
   
   a. Controlled documents with revision number and/or issue dates or other means of control (ISM Code 11.1);
   
   b. The safety and environmental protection policy (ISM Code 2);
   
   c. The responsibilities and authority of the Master (ISM Code 5);
   
   d. Essential or critical equipment (ISM Code 10.3);
   
   e. The name(s) or title(s) of the company’s designated person(s) (ISM Code 4); and
   
   f. Procedures for reporting and analyzing materiel deficiencies/non-conformities, accidents, and hazardous occurrences (ISM Code 9).

2. The Master is familiar with the SMS (ISM Code 6.1.2)
Shipboard personnel involved with the SMS have an adequate understanding of the process (ISM Code 6.4). The ship’s officers should:

(a) Have knowledge of documented procedures to be followed;

(b) Be familiar with documented preventive procedures for essential equipment; and

(c) Have knowledge of reporting requirements for a non-conformity.

(3) The company’s training program is in place for all personnel, including newly assigned or transferred persons, to enable all personnel to be familiar with their duties (ISM Code 6.3; 6.5).

(4) The Master and Chief Engineer are familiar with the company’s internal audit procedures;

(5) In consideration of ISM Code Part A/10, The ship has an established maintenance system in which:

i. Procedures are documented in writing;

ii. Procedures are readily available, in a working language(s) understood by those that must use them; and

iii. Procedures are followed and records of maintenance are maintained.

(6) The ship follows established procedures for shipboard operations covering the following areas as appropriate:

iv. Preventive maintenance;

v. Navigation procedures;

vi. Bunkering operations;

vii. Emergency preparedness;

viii. Pollution prevention procedures;
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ix. Technical systems operations; and

x. Communications procedures

(7) Audits are conducted as required by the ISM Code.

xi. **Internal Audit.** ISM Code Part A/12

xii. **Verification (External Audit).** ISM Code Part B/13

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4. Coast Guard Actions for Non-Compliance with Safety Management System

a. If it is established that any portion of a vessel’s SMS is not being followed, Coast Guard personnel may issue a Vessel/Facility Inspection Requirements, Form CG-835 to the vessel’s Master requiring the following:

(1) Verification of compliance from the authorized organization that issued the vessel’s SMC; and

(2) If the non-conformity is linked to shoreside operations, verification of compliance from the authorized organization that issued the company’s DOC. **Additional verification of the DOC will be coordinated through Commandant (CG-CVC).**

(3) For uninspected vessels with ISM Certification, the OCMI should issue formal correspondence (i.e., letter) requiring the same.

b. In such a situation, it is the Master’s responsibility to notify the organization that issued the SMC or the DOC. **In either case, the findings or requirements should be appropriately documented in MISLE.**

c. Depending on the severity of the deficiency, the OCMI may allow a reasonable period of time **in which** to satisfy the Vessel/Facility Inspection Requirements, **Form CG-835.** In cases where the deficient item would restrict the vessel from sailing, the **amount of time** the OCMI allows to satisfy the Vessel/Facility Inspection Requirements, Form CG-835 should be proportionally short. **Each deficiency should be documented in accordance with the Mission Management System (MMS) Work Instruction on Documenting Deficiencies in MISLE for U.S. Vessels.** Each deficiency should clearly indicate which
system/subsystem an SMS failure is related to. This will ensure better tracking and trend analysis in the future.

d. In addition, Commandant (CG-CVC) may direct a verification of compliance based upon a port state control detention, IACS PR17, marine casualty, etc. In any such case, Commandant (CG-CVC) will coordinate USCG oversight with Commandant (CG-5P-TI) and the cognizant OCMI.

5. Observation of ISM Code Audits by Coast Guard Personnel

a. For the purpose of oversight, and pursuant to the written agreement between authorized organizations and the Coast Guard (paragraph E.1.a.(5) of this Chapter), authorized organizations will allow Coast Guard personnel to observe any aspect of the ISM Code audit or certification process. During such observations, the assigned Coast Guard personnel must respect the authority of the lead auditor and not hamper the progress of the audit. Coast Guard personnel must respect the proprietary nature of any personal or business information encountered during observation of ISM Code certification audits and abide by the provisions of the Privacy Act with respect to that information. Coast Guard personnel assigned to observe ISM audits should have completed either an ISO 9001 or ISM Code lead auditor training course and be an appropriately qualified inspector for the associated vessel type. For company audits, where the DOC specifies more than one vessel type, the Coast Guard observer should be an appropriately qualified inspector for at least one of the associated vessel types.

b. If any materiel deficiencies that affect a vessel’s safety or operational capabilities are noted during the oversight observation, the authorized organization’s lead auditor must provide a written or oral report to the Coast Guard. This report must be submitted no later than 48 hours after the audit is complete. Coast Guard personnel assigned to observer ISM Code review processes and external audits of SMS shall oversee and review the auditors’ actions and ensure the proper completion of processes. The lead auditor is responsible for all actions taken pursuant to the authorized organization’s delegation of authority from the U.S. Coast Guard. In advance of the audit, Coast Guard personnel should review the relevant records (e.g., attendances, deficiencies, non-conformities, casualties, etc.) in the MISLE and classification society databases.

c. Coast Guard personnel assigned to observe an audit, should document each audit attended in MISLE. For both SMC and DOC audits, the attendance should be documented under the associated vessel profile using the “ISM
Oversight” activity sub type. At a minimum, the MISLE activity should include a description of the audit scope and results, including any recorded observations and findings of non-conformities or major non-conformities. The Coast Guard personnel who attended the audit are responsible for tracking corrective actions with the authorized organization.

G. REVOCATION OF ISM CERTIFICATES FOR U.S. VESSELS

Authorized organizations acting on behalf of the United States may provide the Coast Guard with information, reports, or recommendations regarding revocation of ISM certificates, however the Coast Guard holds exclusive authority to revoke them. This includes Interim certificates as well.

1. Authority and Grounds for Revocation of DOC

   a. Commandant (CG-CVC) has exclusive authority to revoke DOC certificates for U.S. vessels.

   b. Revocation of a DOC certificate must be based on the following:

      (1) The finding that a company or responsible person has failed to continuously review and address corrective action reports from the company’s or vessel’s safety management system operation.

      (2) The finding that a company or responsible person has failed to correct or address major non-conformity(ies); or

      (3) A recommendation from the authorized organization acting on behalf of the United States that the DOC be revoked due to the company’s or responsible person’s failure to correct or address a major non-conformity(ies) or due to documented, consistent failures of the safety management system.

   c. It is not possible to list each individual case which will require revocation of a DOC. Each situation will be different as responsible persons or company’s SMSs are customized to the needs of the specific operation of that company.
d. The revocation of a DOC certificate invalidates the SMCs for all vessels owned by the responsible person or operating under the company’s SMS.

e. All DOC revocation actions, and the basis for revocation, will be documented, in writing, by Commandant (CG-CVC) to the responsible person or company. Copies will be sent to the authorized organization that issued the DOC, all authorized organizations that issued SMCs under that DOC, and to the cognizant OCMI in which the U.S. vessel is located or operated.

f. The cognizant OCMI(s) for these affected vessels will be required to amend the vessel’s COI(s) for domestic routes only, and accept the return of any international convention certificates invalidated by restriction of the vessel’s route to domestic voyages.

2. Authority and Grounds for Revocation of SMC

A U.S. vessel’s SMC may be revoked on the authority of the cognizant OCMI or District Commander. Commandant (CG-CVC) should be informed of the impending revocation before any action is taken. This is to ensure that other OCMIs who are involved with U.S. vessels owned by the same responsible person are notified of such actions. These OCMIs may wish to review the SMSs of other vessels that are owned or operated by the same company to ensure that similar problems do not exist with these other vessels.

The revocation of an SMC does not prohibit a U.S. vessel from operating in domestic trade. When an SMC is revoked, the cognizant OCMI will ensure that the vessel’s COI is amended for domestic routes only and that other international convention certificates are invalidated or returned.

3. Revocation for Failure to Allow Access to Personnel or Records

Commandant (CG-CVC) must be notified immediately of any instance when a company or its vessel personnel restrict, deny or otherwise impede access by either Coast Guard or an authorized organization’s personnel during a scheduled audit or SMS verification of a U.S. vessel. When the obstruction by the company or its vessel personnel was deliberate, the company’s DOC may be revoked immediately by Commandant (CG-CVC). If revoked, the company or vessel in question must reapply and undergo a complete recertification audit to regain its ISM Code certificates.

Certification

33 C.F.R. § 96.495 describes the process to appeal any decision made by an authorized organization regarding the auditing and certification of a company’s or vessel’s SMS. The requirements of 46 C.F.R. § 1.03 may also be used to process administrative appeals to the Coast Guard.
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A. INTRODUCTION

This chapter consists of policies that implement the regulation of offshore activities on the U.S. Outer Continental Shelf (OCS) and the inspection of U.S. and foreign flagged units operating in the mineral and oil industry both in U.S. and foreign waters, to include vessels, MODUs, floating and fixed offshore facilities/platforms falling under Coast Guard jurisdiction.

In accordance with the Outer Continental Shelf Lands Act (OCSLA), 43 U.S.C. § 1331 et. seq., and numerous Memorandum of Understanding and Agreement with the Bureau of Safety and Environmental Enforcement (BSEE) and the Occupational Safety and Health Administration (OSHA), the Coast Guard promulgates and enforces safety and security regulations governing units, including vessels, facilities, fixed and floating production platforms, and Mobile Offshore Drilling Units (MODUs) when operating on the U.S. OCS.

With regard to MODUs specifically, the Coast Guard is responsible for the inspection of the MODUs hull structure, electrical system safety, lifesaving and fire fighting systems and equipment, and for verifying the unit’s crew is capable of conducting satisfactory abandon ship (unit) and fire drills. BSEE is responsible for the inspection and testing of the production and drilling systems and production operations of the MODU from the unit’s drill floor to the subsea well.

Foreign floating production units and MODUs may not conduct OCS activities on the U.S. OCS without a valid Coast Guard Certificate of Compliance (COC). In order to maintain a valid COC these units must undergo a Coast Guard examination annually. Additionally, each foreign vessel involved in OCS activities would also be subject to Port State Control authorities if the vessel enters within 12 nautical miles of the U.S. coast line.

B. SCOPE OF EXAMS

There are three basic regulatory authorities the Coast Guard uses to regulate MODUs and other units operating on the OCS: flag state, port state, and coastal state authority.

1. Flag State

   a. The Coast Guard serves as the flag state for U.S. flagged units. Marine Inspectors (MIs) conduct inspections verifying the units meet domestic requirements and issue certificates attesting to the unit’s compliance with these standards. Additionally, for U.S. MODUs operating internationally and meeting the standards of the International Maritime Organization Code for the Construction and Equipment of MODUs (IMO MODU Code), an authorized classification society acting on behalf of the U.S. Coast Guard issues the IMO MODU Code Safety Certificate.
b. A flag state inspection is an in depth inspection based on U.S. rules and regulations. These inspections include extensive testing of systems and issuance of certificates.

2. Port State

a. The Port State Control (PSC) program was initiated to remove substandard ships from U.S. waters which extend to 12 nautical miles (NM) offshore. More detailed information on Coast Guard examinations conducted under the port state control authority can be found in MSM Vol II, Section D: Port State Control. Because MODUs seldom operate within the 12 NM range; however, they typically fall under “coastal state” authority.

b. The scope of an exam performed under port state control authority on a foreign entity is more limited than one performed on a U.S. or undocumented entity. This limited scope is based on units having on board valid international documents issued by or on behalf of its flag state.

3. Coastal State

a. In accordance with the 2009 IMO MODU Code, the coastal state is defined as the government of the state exercising administrative control over the drilling operations of the unit. OCSLA gives the Coast Guard the jurisdiction as the coastal state over the “subsoil and seabed of the OCS appertain to the United States.” This is the authority most often exercised by the Coast Guard over foreign flagged MODUs.

b. In accordance with 33 CFR 140.101(e) the Coast Guard will recognize and accept valid international certificates issued by signatories to international instruments and will verify compliance by spot checking compliance of any accepted certificate. Depending on the conditions found on an OCS unit, these coastal state examinations may be more in depth than a traditional PSC examination, but will not be as stringent as flag state inspections.

c. The U.S. as a coastal state allows for three inspection options for foreign flagged MODUs entering the OCS to conduct OCS activities. These options, a, b, and c are further discussed in Section G, Chapter 2 of this Manual.

C. EXAMINATION/INSPECTION TEAMS

1. Coastal State Exams/Inspections
CHAPTER 1: Regulations, Policy and Guidance for a Unit Conducting OCS Activity

Offshore teams should, at a minimum, contain two members for routine examinations/inspections. One member must be a MODU Inspector certified with the appropriate competency (qualification). The second member should be certified as a Port State Control Examiner (PSCE). When deciding the size of the team necessary (including trainees) to perform an examination/inspection, the Marine Inspector should consider the type of exam and unit particulars (type, size, location offshore, transportation acquired, etc). Deviations may be authorized at the discretion of the OCMI when determining the number and qualification level of the marine inspectors conducting the examination/inspection.

In some instances, a National Center of Expertise member, Coast Guard travelling inspector, auditor, or other technical expert may be participating in an exam/inspection. These additional participants do not count towards the size of the team.

2. Overseas Exams/Inspections for Issuance of a COC/COI for MODUs & Floating OCS Facilities

a. Definitions: For the purposes of this section of the Marine Safety Manual Volume II, COMDTINST 16000.7 (series) the following definitions applies:
   i. Receiving OCMI/Marine Inspector (MI) – Officer in Charge, Marine Inspections (OCMI) zone in the contiguous United States where an OCS unit will be receiving its COC or COI.
   ii. Originating OCMI /Marine Inspector (MI) – OCMI zone in which initial inspections/exams will be conducted (generally overseas).

b. Travel to a Foreign Port. In preparation for the arrival of a new MODU or Floating OCS Facility onto the U.S. OCS, it may be necessary for Marine Inspectors (MIs) from a receiving Officer in Charge, Marine Inspections (OCMI) office, to visit the vessel in the overseas shipyard while it is being constructed. Such visits may occur as a result of a request from the owner/operator or have been initiated by the receiving OCMI/marine inspector on an as needed basis. These visits can minimize delays for vessels that operate for the first time on the U.S. OCS, expediting the inspection process; they also open up lines of communication between industry and the Coast Guard, ensuring optimum safety compliance while construction occurs and promoting consistent enforcement of existing standards.

The receiving OCMI must coordinate travel and inspection activities with the originating OCMI. It is critical that the receiving OCMI and the originating OCMI coordinate inspection activities. Receiving MIs may attend the vessel to address and verify District and receiving OCMI policies, procedures and concerns. Also, if the OCS vessel is applying for the In Service Inspection Plan (ISIP) or Underwater Exam In Lieu of Drydock (UWILD) process, the approval process can begin in the shipyard where internal inspections and photos of critical inspection points (that may be exposed during construction versus when
onsite and in water) can be completed most efficiently. The Coast Guard will not normally perform examinations with the vessel underway.

c. **Travel Costs.** Inspector travel and subsistence costs must be reimbursed by the company. Inspectors traveling overseas for inspections must obtain TONOs from DCO-832(UF) and must provide billing information upon completion of travel. Inspectors shall contact the overseas marine inspection office or DCO-832(UF) for more information. For further information on the foreign travel request process see Foreign Travel, Passports and Visas, COMDTINST 5000.5 (series).

d. **User Fees and Reimbursable Expenses.**

(1) **46 CFR 2.10-120; Overseas Inspection Fee.** Overseas fee (46 U.S.C. 2110, 46 CFR 2.10-120): The overseas fee is applicable for these inspections/examinations. The fee should be charged for each group of inspectors traveling from the states to the overseas location. The local OCMI should ensure the fee is paid prior to travel. There is no billing for this fee; a proof of payment receipt is provided by the company to the OCMI, (usually the lead inspector).

(2) **46 CFR 2.10; COI or COC Fee.**

   i. **COI fee (46 U.S.C. 2110, 46 CFR 2.10):** The COI fee is billed by FINCEN based on the unit having a valid COI. The COI fee isn’t charged for an initial COI.

   ii. **COC fee (46 U.S.C. 2110, 46 CFR 2.10):** The COC fee should be paid when the local OCMI office begins their examinations. The fee is paid without billing from FINCEN. In order to prevent inadvertent interest and penalties for non-payment, a COC examination should NOT be entered in MISLE until the fee is paid.

(3) **46 U.S.C. 3317, Reimbursable travel expenses.** Reimbursable Travel (46 U.S.C. 3317): Travel for inspections/examinations conducted overseas must be reimbursed by the requesting company. DCO-832(UF) manages the TONOs for this travel and publishes guidance annually for obtaining tonos and providing billing information for Coast Guard reimbursement.
e. Application for Exam.

(1) Foreign units. The owner or builder of a foreign flagged vessel being built overseas and applying for an examination to obtain a COC should do so at least 6 months prior to engaging in U.S. OCS activities by submitting:

i. A written or e-mailed request for COC examination to the receiving OCMI, of the marine inspection zone in which the unit intends to operate in the U.S.;

ii. and to the originating OCMI zone in which the inspections/exams will be coordinated; and

iii. provide evidence that all applicable user fees have been paid in full.

(2) U.S. Flagged and Undocumented Units. The owner or builder of a vessel being built overseas and applying for an inspection to obtain a COI should do so to prior to commencing any construction or fabrication of vessels that intend to engage in U.S. OCS activities by submitting:

i. a completed Application for Inspection of U.S. Vessel, Form CG-3752 to the OCMI of the marine inspection zone in which the unit intends to operate in the U.S.;

ii. and to the originating OCMI zone in which the inspections/exams will be coordinated; and

iii. submit all plans and information listed in subpart C of 46 CFR part 107 which relate to the facility.

f. Full COC/COI exams for OCS vessels are not conducted overseas; however, certain portions of new vessel trials may be witnessed by overseas Coast Guard inspectors as resources allow. These pre-inspection opportunities and subsequent results shall be coordinated and communicated with the receiving OCMI. All activities shall be documented in MISLE.

g. Inspection Teams. The members of the teams conducting initial or pre-COC/COI examinations at overseas locations should be coordinated through the overseas originating USCG offices (FEACT/ACTEUR). Close coordination between both the receiving and originating OCMI is necessary to maximize resource use and minimize operational delays. Receiving OCMI should not authorize travel without coordination with overseas originating offices. Visits by receiving Marine Inspectors could last 1 to 2 weeks depending on the testing
being conducted and how many inspectors participate. The number of receiving
marine inspectors travelling to the overseas location should be based on the
technical difficulty and type of equipment exams/inspections the team is
expected to complete during their visit. The inspection team should be
comprised of 4 to 6 Coast Guard MIs. The inspection team should consist of at
least one MI from the receiving OCMI office and any other personnel deemed
necessary by the receiving OCMI to complete the necessary inspections, which
may include members from the Marine Safety Center (MSC), CG Headquarters
(HQ), the OCS National Center of Expertise (NCOE) and the overseas MI
offices. Coordination with the originating OCMI managing project officer
should be a priority.

h. Scope of the exams/inspections. The first of these pre-exams/inspections during
the construction phase has been known to commence as far in advance as 6
months prior to arrival on the OCS, with the last two months prior to arrival
being the most critical in that MIs can witness testing of critical systems (such as
life saving and firefighting). At the final exam/visit, by receiving MIs, a handoff
from the originating OCMI to the receiving OCMI should occur. Any MISLE
activities generated by the originating offices should be marked closed and
transferred to the receiving OCMI.

i. Request for Examination/Inspection. The vessel owner/operator considering an
overseas examination should submit a request in writing to the originating
OCMI and the receiving OCMI in the zone the unit will eventually be located.
Vessel operators requesting a COI should utilize the Application for Inspection
of U.S. Vessel, Form CG-3752. Requests for a COC exam should include the
following information:

(1) Status of plan review by MSC, including any unresolved plan review
comments;

(2) Stage of vessel construction and delivery date;

(3) Suggested location and dates for the inspection;

(4) One Company point of contact (to represent the company and all
subcontractors);

(5) Acknowledgment to reimburse the Coast Guard for all expenses incurred;
and

(6) The general information about the vessel:
(a) Name of vessel (including former name(s) for existing vessels);

(b) Vessel type (class notation being issued: FPSO, MODU, etc…)

(c) IMO Number;

(d) Building contract date, keel laying date, delivery date;

(e) Country of registry;

(f) Classification Society;

(g) Total numbers of passengers (if any) and crew;

(h) Gross tonnage, length, breadth, depth, and speed;

(i) Fire Protection Method and SOLAS Convention to which the vessel was built, including amendments; and

(j) Major modification information (if any) to include: dates, locations, and SOLAS Convention to which the vessel was modified;

When a new construction project is beginning, the originating overseas CG inspections offices (FEACT/ACTEUR) shall be the initial point of contact for inspections and questions. If the area on the U.S. OCS in which the vessel will be operating is known, the receiving OCMI office should also be contacted for any specific District or OCMI policy questions.

j. **Inspection Schedule Plan.** The receiving and originating MIs should coordinate a written plan for conducting the expected exams on the overseas visit to provide the sequence of examinations such that the inspectors, flag state, classification society, owner’s representatives and all other interested parties will be ready to perform their duties and responsibilities efficiently during the visit. It is understood that this schedule is subject to change due to weather and unpredictable phases of construction of the unit at the building site. Before the examinations/inspections take place aboard the vessel/unit, the inspectors, Administration representatives, designers, or owner’s representatives should meet to discuss the scope of the examination/inspection and preparation details. Receiving OCMI MIs should not limit their exam/inspection to a job aid; if there is reason to believe that the vessel’s safety equipment or material condition is substandard, a more in depth exam/inspection/drill should be conducted.

k. **Issuance of Certificates.** NO formal paperwork is issued to the owner or operator by the receiving or originating OCMI during these overseas pre-
inspection/exam visits. These visits are in preparation for issuance of the COC/COI once the vessel gets to the U.S. OCS.

1. **MISLE.** One MISLE activity shall be opened for the vessel by the originating OCMI. All Team members shall be included in the entry. Do NOT create a COC exam in MISLE until the unit/vessel is located within the receiving unit’s AOR and the COC fee has been paid. Starting this casework early causes the USCG Finance Center (FINCEN) to create a bill, which immediately accrues interest and penalties, which are not warranted if the unit is under construction. Initial MISLE Inspection Type entries shall be as follows:

   i. For a COI Inspection: New Construction  
   ii. For a COC-MODU: Admin  
   iii. For a COC FPSO: New Construction

There shall not be any pre-COC exams for foreign flagged MODUs. For all other inspection types listed above, as the originating MIs visit the vessel, a running log shall be maintained, with all documents and photographs scanned into MISLE, to document the progress and give the receiving unit’s MIs a current and coordinated inspection documentation package. Once the vessel departs the originating unit’s AOR then the activity shall be closed and the receiving unit can begin the normal COC/COI Inspection process. Casework shall follow as directed in the MISLE Data Entry Requirements for Foreign Vessel Arrivals, Examinations and Operational Controls and the MISLE Data Entry Requirements for Outer Continental Shelf (OCS) Inspections.

m. **Appeals.** If an owner or operator of a vessel does not agree with a Coast Guard decision resulting from plan review or from an examination, a formal appeal of that decision may be made in accordance with the procedures contained in 46 CFR 1.03. Commandant (CG-CVC-2) will serve as the point of contact for questions related to the procedures and guidance contained herein.

**D. REGULATORY AUTHORITIES**

1. **OCSLA: 43 U.S.C. § 1331**

   The Outer Continental Shelf Lands Act (OCSLA) (43 U.S.C. § 1333(d)(1) et seq.) gives the Coast Guard jurisdiction over the subsoil and seabed of the OCS appertain to the United
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States and waters adjacent to including vessels engaged in OCS activities.

More specifically, 43 U.S.C. § 1333(d) (1), authorizes the Coast Guard to create and enforce regulations to ensure safety of life and property on the OCS.

2. Vessels subject to inspection: 46 U.S.C. § 3301

This statute requires that seagoing motor vessels be inspected by the Coast Guard. These vessels must meet the requirements of 46 CFR Subchapter I-A and 33 CFR Subchapter N when working on the U.S. OCS.


The Coast Guard may accept certain flag State statutory certificates issued to U.S. flagged vessels by authorized classification societies or recognized organizations (ROs), such as the American Bureau of Shipping (ABS). The Coast Guard retains the responsibility for issuing the Certificate of Inspection (COI); however, a RO may participate in the plan review and inspections necessary for issuance of this certificate. Title 46 CFR Part 8 provides detailed regulations for the Alternate Compliance Program (ACP). See this Manual, Section G, Chapter 2, for additional information.

E. INTERAGENCY AGREEMENTS

1. OSHA and Coast Guard MOU History

   a. On 19 December 1979, the Coast Guard and Occupational Safety and Health Administration (OSHA) signed an MOU that gave the agencies joint responsibility for the occupational safety and health of personnel on OCS facilities. The purpose of this MOU was to establish procedures to increase consultation and coordination between the Coast Guard and OSHA with respect to matters affecting the occupational safety and health of personnel working on the OCS of the United States. The two agencies agreed to observe the following procedures in carrying out their responsibilities regarding development and promulgation of standards and enforcement of regulations and standards.

   b. In 1983, the two agencies entered into a second MOU that defined the responsibilities of each agency with respect to Coast Guard certificated vessels. The 1983 MOU outlined the statutory authorities of each agency to prescribe and enforce standards or regulations affecting the occupational safety and health of seamen aboard vessels, including MODUs that are inspected and certificated by the Coast Guard.
2. BSEE and Coast Guard MOU/MOA History

a. A Memorandum of Understanding (MOU) was signed November 27, 2012 between the Director of the BSEE and the Deputy Commandant for Operations (DCO) of the United States Coast Guard. The purpose of the MOU is to promote interagency consistency in the regulation of OCS activities, facilities and units under the respective jurisdiction of the BSEE and Coast Guard, minimize duplication of effort and aid participating agencies in the successful completion of their assigned missions and responsibilities. The goal is to promote safety of life and property and the protection of the environment. On 1 October 2011, the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE), formerly the Minerals Management Service (MMS), was replaced by the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE) as part of a major reorganization.

b. Key regulators from the Coast Guard and BSEE headquarters meet quarterly to discuss the following objectives as it relates to the MOU:

(1) Fostering communication and cooperation between the participating agencies.

(2) Promoting compliance with applicable regulations.

(3) Optimizing use of expertise and resources, as well as coordinating efforts with respect to offshore safety and environmental protection.

(4) Developing common, compatible regulations and policies.

(5) Encouraging adoption of similar codes and standards.
(6) Providing appropriate oversight and taking effective enforcement actions.

c. To help meet the above objectives and that of the MOU, and to address lessons learned from the collection of Deepwater Horizon investigations and after-action reports, the Coast Guard and BSEE formed both a Response workgroup (charter signed in 11 January 2011) and a Prevention workgroup (charter signed 11 August 2012).

(1) The Response Workgroup’s ultimate goal is to improve national oil discharge planning, preparedness, and response for facilities located seaward of the coastline through improved alignment of BSEE and Coast Guard regulatory authorities and preparedness oversight activities.

(2) The Prevention Workgroup’s goal is to optimize the safety of those engaged in oil and gas exploration, development, and production on the OCS through focused interagency communications and alignment of Coast Guard and BSEE operations and activities.

d. The MOU established the framework for six Memorandums of Agreement (MOAs).

(1) OCS-01 Agency Responsibilities (effective 30 September 2004)

(2) OCS-02 Civil Penalties (effective 12 September 2006)

(3) OCS-03 Oil Discharge Planning, Preparedness, and Response (effective 03 April 2012)

(4) OCS-04 Floating Offshore Facilities (effective 28 February 2008)

(5) OCS-05 Incident Investigations (effective 27 March 2009)

(6) OCS-06 Offshore Renewable Energy Installations on the OCS (effective 27 July 2011)

(7) OCS-07 Safety and Environmental Management Systems (SEMS) and Safety Management Systems (SMS) (effective 30 April 2013)

(8) OCS-08 Mobile Offshore Drilling Units (MODUs) (effective 04 June 13)

F. VESSEL CERTIFICATES OF FINANCIAL RESPONSIBILITY (COFRs) AND OIL SPILL FINANCIAL RESPONSIBILITY (OSFR)

The COFR program is managed by the Coast Guard and inspectors should be verifying that a vessel has on board the documentation required by 33 CFR 138, Subpart A. For more
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information on the COFR see the National Pollution Fund Center website at: http://www.uscg.mil/npfc/COFRs/. This part only applies to vessels, which includes MODU's when they meet the applicability found in 33 CFR 138.15(b).

Pollution liability for offshore facilities is covered under BOEM's regulations found in 30 CFR 553 - Oil Spill Financial Responsibility (OSFR) for Offshore Facilities. For more information on the OSFR see: www.boem.gov/Oil-Spill-Financial-Responsibility-OSFR/. A facility that meets the definition of a "covered offshore facility (COF)" as defined in 30 CFR 553.3 must meet the requirements of this part as applicable (30 CFR 553.10). It is important to note that MODU's may be required to meet the requirements in 33 CFR part 138 and 30 CFR part 553 depending on their operations.

BOEM does not issue any type of documentation nor do they require the owner/operator of COF's to maintain proof of financial responsibility on board. Their process involves an annual verification that financial responsibility remains intact. If an inspector questions whether or not a COF has OSFR coverage they may contact BOEM at 504-736-2600 for confirmation.

G. JONES ACT

The Jones Act applies only to the carriage of U.S. goods between U.S. ports. A foreign vessel can provide any service to one or more U.S. ports if that service does not include the transport, loading and offloading of U.S. merchandise. Current interpretation and application of the Jones Act by the Customs and Border Patrol (CBP), the agency responsible for determinations on Jones Act applicability, permits both foreign and domestic vessels to engage in activity on the OCS. Although the Jones Act prohibits the transportation of merchandise by foreign vessels between coastwise places (including between the U.S. and offshore drilling facilities), the standing CBP ruling determines that OCS supply vessels move “vessel equipment” rather than transport “merchandise”.

See this Manual, Section B, Chapters 1 and 4 for additional information on coastwise trade and Jones Act Status.

H. PERSONNEL

1. Determining Which Personnel May be Employed on a Unit Engaged in an OCS Activity
   
a. Applicability. OCSLA and its implementing regulations in 33 CFR 141 set forth the restrictions on employment of personnel on an OCS unit when that unit is engaged in an OCS Activity. The regulations apply to majority U.S.-owned units that are...
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foreign-flagged. They may also apply to a foreign-flagged vessel that is owned or controlled by a foreign company if the Commandant determines that there is a majority U.S. interest in any company in the chain-of-ownership or control of that vessel. The regulations do not apply to U.S. documented vessels subject to the citizenship requirements of 46 U.S.C. 8103; therefore, these requests will be denied.

b. Authorization to Employ Certain Persons. In general, the regulations authorize the Coast Guard to determine the use of a foreign national by an employer on a unit engaged in an OCS Activity. Specifically, where a determination is made, it will conclude whether or not a position to be filled by a foreign national is part of the regular complement of the OCS unit. If a position is part of the regular complement, then Commandant (CG-CVC) will process the employer’s request; if, however, the position is determined not to be regular complement, then the OCMI will be responsible for processing the request in accordance with H.2.d. of this chapter, below.

2. Guidance for Processing a Determination Request

In addition to the regulations, the following guidance has been published:

a. NVIC 7-84 addresses the applicability of the regulations to a) a vessel with a majority U.S. interest (either ownership or control) and b) to the employment of a foreign national in a position determined to be part of the regular complement of the unit. These requests will be processed by Commandant (CG-CVC).

b. Commandant (CG-CVC) is responsible for processing the four classes of exemptions listed in NVIC 7-84, as these exemptions require a Coast Guard legal determination or coordination with the Department of Labor. Commandant (CG-CVC) also receives exemption requests from industry to determine whether or not personnel are considered “specialists, professionals or technically trained personnel called in to handle emergencies or other temporary operations” as defined in 33 CFR 141.15(b). 33 CFR 141.15(c) authorizes the OCMI to determine whether a particular individual or position is part of the regular complement of a unit as defined in 33 CFR 141.15(b).

c. Commandant (CG-CVC) will forward all OCS “regular complement of crew” determination request to the local OCMI for determination per 33 CFR 141.15(c). If a unit receives an exemption request that falls into any of the other classes listed in NVIC 7-84, forward it to Commandant (CG-CVC).

d. Specialists, professionals and technically trained personnel called in to handle emergencies; temporary operations; or repairs are typically NOT considered to be part of the regular crew complement of a unit. However, each request shall be
handled on a case-by-case basis. Some of the factors that shall be considered when making these determinations are:

(1) job description relative to the unit;
(2) the period of time requested or anticipated;
(3) type of operations (i.e., emergency, specialized);
(4) degree of expertise or training needed; and
(5) safety considerations.

e. The following examples are provided for clarification:

(1) A commercial diver temporarily aboard a MODU or platform for emergency repairs or inspection services would NOT be considered a part of the regular crew complement of a unit. However, a commercial diver aboard a dive support vessel (DSV) would be considered a part of the regular crew complement since commercial divers are normally employed aboard DSV’s.

(2) A weld inspection technician periodically aboard a pipe-lay barge to ensure quality assurance or to operate equipment that requires specialized training would NOT be considered a part of the regular crew complement of a unit. However, a welder aboard a pipe-lay barge would be considered a part of the regular crew complement since welders (industrial personnel) are normally employed on this type of vessel.

(3) A petroleum engineer or consultant temporarily aboard a MODU during well logging or specialized drilling operations would NOT be considered a part of the regular crew complement of a unit. However, an assistant driller or rig electrician would be considered a part of the regular crew complement of a unit since these positions are normally employed aboard this type of vessel.

f. The OCMI letter of determination on a position(s) shall be sent to the requestor. The local OCMI will maintain a file of all letters issued for future accessibility, in accordance with the CG correspondence manual and unit needs.

I. POST HURRICANE AND NATURAL DISASTER INSPECTION REQUIREMENTS

In order to ensure offshore structures in hurricane-affected areas remain in good working order in the aftermath of a hurricane or natural disaster, BSEE and the Coast Guard have established
criteria that trigger a post hurricane inspection and the degree of exam to be required. This information is applicable to all MODUs and certificated floating production facilities operating on the U.S. OCS. This does not apply to Floating Production, Storage, and Offloading (FPSO) vessels or other ship-shaped OCS facilities, including drill ships.

1. Fixed OCS Facilities

   a. Per 33 CFR 140.101, the Department of Interior (Bureau of Safety and Environmental Management (BSEE)), may perform inspections on behalf of the Coast Guard on all fixed OCS platforms and structures engaged in OCS activities.

   b. BSEE will consult with Coast Guard District Offices or the cognizant OCMI with issues regarding interpretation or application of these regulations.

   c. Chapter 5 of this Section (G) provides guidance and clarifies the Coast Guard and BSEE responsibilities with respect to Fixed Platform Inspections.

2. Floating Facilities and MODU’s

   a. Floating facilities such as Semi-submersibles, Tension Leg Platforms (TLPs), Mini TLPs and SPARs, will initiate an out of cycle underwater and internal structural inspection to assess the post storm condition if that facility experienced a passing weather system that:

      (1) causes an evacuation of a facility and

      (2) had wave damage to topside structures.

   b. 25% of underwater critical areas and 25% of internal structures must be examined within 30 days of return of a facility to operation. The areas selected for examination should give consideration to the aspect of the storm relative to the facility or topside damage.

   c. At the discretion of the OCMI, there may be a credit for these post-storm inspections towards the next scheduled underwater hull and internal structural inspections.

   d. If a weather event causes the evacuation of a facility, the inspection can be waived at the discretion of the local OCMI if the company can provide evidence that the local wave heights were not extreme as compared to normal operations.

3. Bureau of Safety and Environmental Enforcement (BSEE)

b. Pursuant to 30 CFR 250.919(b), if any structure has been exposed to a natural occurrence such as a hurricane, tropical storm, or earthquake, the BSEE Regional Supervisor may require the facility to submit an initial report of all structural damage, followed by additional updates.

c. Following the passage of a hurricane, BSEE will define and issue, via NTL, the affected area. All inspected floating production facilities in the affected area are subject to the policy. Facilities outside the affected area are also required to report any damage sustained per 33 CFR Part 146.30.

J. CONFINED SPACE ENTRY

1. Regulations

a. Confined space entry is discussed in Marine Safety Manual, Volume 1, Administration and Management, COMDINST M16000.6 (series), Chapter 10.

b. Confined space entry by Marine Safety personnel is covered under OSHA’s regulations governing shipyard employment, specifically 29 CFR 1915, Subpart B; Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment. The applicability of this regulation includes all shipyard employment, including vessels, vessel sections and shore side operations, regardless of location.

c. The general Coast Guard policy for entry and work by personnel in confined spaces and atmospheric testing requirements are found in Chapter 6 of the Safety and Environmental Health Manual, COMDTINST M5100.47 (series). See also Appendix D of MSM Vol 1 Chapter 10 for the Commandant Office of Commercial Vessel Compliance (CG-CVC) confined space entry policy questions and answers.

d. Appendix A of MSM Vol I Chapter 10 contains standard Safe Work Practices (SWPs), however, experience has shown that due to area specific or local conditions these SWP’s do not necessarily cover all hazards that may be associated with specific activities. Commanding Officers have the authority to develop alternative SWP’s based on local conditions. All alternative SWP’s must be reviewed by a Coast Guard health and safety professional from the respective Health, Safety, Work-Life Commandant (CG-11) staff or the detached Safety and Environmental Health Officer (SEHO) located at the HSWL Service Center Field Office (HSWL SCFO) http://www.uscg.mil/hswlsc/ Any alternative
2. Marine Chemist Availability for Overseas Inspections

Overseas inspections present a unique problem, in that NFPA Marine Chemists are not always readily available to certify spaces overseas. When no Marine Chemist or other authorized person designated by the OCMI is available, the inspection should be made by the senior vessel officer present.

a. When none of the vessel's officers are present, as in the case of most vessels in foreign shipyards, the inspector must be extremely cautious. A confined space must not be entered unless it has been satisfactorily tested.

b. It is the responsibility of the owner to make his or her vessel available for inspection, and this includes ensuring safe atmospheres for internal inspections.

c. While almost all foreign yards employ persons to inspect and certify conditions in and adjacent to those spaces undergoing repair, their level of expertise varies widely. In this environment, marine inspectors must be provided the training and equipment that allow them to make independent decisions on confined space entry.

d. OCMIs should be keenly aware of the unique hazards which their inspectors face when working overseas and endeavor to ensure adequate training is afforded personnel working in this environment.

e. Local Policy. Per MSM Vol I, Chapter 10, Appendix D: When a Marine Chemist is not available, such as for overseas inspections, inspections in remote areas or inspections on small passenger vessels, fishing vessels, etc., Commanding Officers may develop local policy following the guidelines in Appendix B (of Vol I, Chapter 10) to train and designate unit personnel to perform as competent persons. The requirements of 29 CFR 1915 still apply and must be adhered to in developing local policy. The cognizant SEHO shall be consulted when developing this policy and is required to review and approve the policy before it is implemented.

K. PORTABLE ACCOMMODATION MODULES

With the increased activity in the exploration and exploitation of mineral and oil resources on the Outer Continental shelf regions of the U.S., there has been an increase in the use of portable accommodation modules on vessels operating in support of these activities such as MODUs and floating OCS facilities (SPAR, TLPs, etc.). Due to the hazards associated with the offshore industry, the safety of the host vessel and the personnel on board must not be compromised by the installation and occupation of portable accommodation modules. Personnel that occupy
portable accommodation modules should be afforded the same level of safety as personnel that occupy similar spaces located in permanent accommodations on board the host vessel.

A portable accommodation module is any non-integral enclosed space that is installed on a host vessel, which may be any Coast Guard inspected vessel or floating facility. They are often living quarters, medical treatment rooms, recreational spaces, toilets and washrooms, offices, or other similar spaces.

1. Plan Review

All plan review will be conducted and guidelines for the design and construction of portable accommodation modules can be obtained from the USCG Marine Safety Center. The Coast Guard does not conduct plan review of portable crew shelters for exclusive use on fixed platforms. The exception to this policy is any portable shelter installation aboard any fixed OCS facility maintaining a Coast Guard COI.

2. OCMI Inspection Standards

The OCMI should ensure portable accommodation modules are properly designed and constructed. The modules must satisfy the minimum structural, fire protection, habitability, egress, electrical, piping, fire detection, general alarm, and other safety design standards applicable to the host vessel. If a module is intended for use on board different types of host vessels, the owner of the module should design the module to meet the most stringent host vessel standards (e.g., If the host vessel is certificated under Subchapter I-A, then the portable accommodation modules onboard, must meet the standards of I-A as well. If the host vessel is certificated for standards under subchapter L and I, then the more stringent of the two standards will apply to the accommodation modules onboard.).

The OCMI should ensure portable accommodation modules are properly installed on board a host vessel before the vessel is permitted to operate and the modules are occupied. This includes the arrangement of the modules relative to other existing equipment (e.g., ventilation and hazardous areas), means of securing, suitability of the supporting deck structure, impact on the host vessel’s stability, and integration with the host vessel’s electrical, fire detection, general alarm system, water supply and other hotel services. In addition, OCMI and vessel operators should be aware that the installation or removal of a portable accommodation module may have tonnage implications and the host vessel may need to be re-measured.

3. MISLE Data Entry
Each portable accommodation module is assigned a Coast Guard Number, and is tracked in MISLE. All documentation for approval of the portable accommodation modules, including approval letters and any plans submitted for approval, shall be included in the documentation section in MISLE, by whoever approves and reviews such written material. Similarly, all documentation for the installation of the portable accommodation modules shall be included in the documentation section of the host vessel.

A notation in the narrative of the MISLE casework is sufficient documentation that the MI inspected the unit or the installation. An example narrative entry for an installation in the MISLE Activity for the COI or COC may be:

“The (insert CG number) portable accommodation modules on (insert vessel/unit name) were inspected on (insert date) and the installation met the host vessel inspection requirements for subchapter (insert inspection subchapter (I/I-A/N/L etc…)).

L. MISLE CASEWORK DOCUMENTATION

This section is not intended to provide a detailed instruction on how to use MISLE, as the MISLEnet (http://mislenet.osc.uscg.mil/) website provides various user guides and “how to” tutorials. See also the MISLE Data Entry Requirements for Foreign Vessel Arrivals, Examinations and Operational Controls and the MISLE Data Entry Requirements for Outer Continental Shelf (OCS) Inspections.

M. PROCESSING OF VIOLATION CASES

Violation cases must be processed in accordance with the procedures in Marine Safety Manual, Volume V, Investigations and Enforcement, COMDTINST M16000.10 (series). All suspected violations discovered during Coast Guard inspection activities or through other means must be thoroughly investigated by the Coast Guard following the guidance in 33 CFR Subpart 1.07, 33 CFR 140.40 and USCG Marine Safety Manual Volume V, Investigations and Enforcement, COMDTINST M16000.10 (series).

N. POLLUTION PREVENTION

1. MARPOL Requirements

To clarify the MARPOL requirements for MODUs on the OCS the diagram 1 on page G1-18. A larger printable version of the MARPOL Job Aid can be found on the Commandant
Definitions for diagram 1 below:

**Ship** means a vessel of any type whatsoever operating in the marine environment and includes hydrofoil boats, air-cushioned vehicles, submersibles, floating craft and fixed or floating platforms.

**Oil tanker** means a ship constructed or adapted primarily to carry oil in bulk in its cargo spaces and includes combination carriers, any "NLS tankers" as defined in Annex II and any gas carrier as defined in regulation 3.20 of chapter II-1 of SOLAS 74 (as amended), when carrying a cargo or part cargo of oil in bulk.

**Fixed or floating platforms** including drilling rigs, floating production, storage and offloading facilities (FPSOs) used for the offshore production and storage of oil, and floating storage units (FSUs) used for the offshore storage of produced oil.

2. Oil Record Books (ORB)/Oily Water Separators (OWS) and the International Oil Pollution Prevention Certificate (IOPP)

Most offshore units have OWS onboard which must comply with the IOPP certificate. These OWS's are onboard to process deck drains related to the industrial process. If onboard strictly to process deck drains or by-products of the industrial process, the OWS may not fall under the definition of ‘Machinery Space Operations’ or the provisions associated with the same. Marine Inspectors should ensure that, like ensured during a Port State Exam, the "on deck" machinery matches the documentation provided. Larger MODUs are known to have multiple OWSs and the IOPP should denote this. Note the current IOPP Certificate Supplement has no place for additional OWS units. The Marine Inspector should indicate on the Certificate Supplement any additional OWSs onboard and their rated throughputs.

*Examples: Some Semi-Sub MODUs have 4 OWS installations (one in each column) which are the same. Some other Semi-Subs have 2 OWS units (one in the center column of each side) and 1 or 2 units installed on the deck (one may process machinery space operations related fluids and the other may only process industrial process fluids). Drillships will typically have 2 OWS units (one aft and one forward, often different sized units). Jack-Ups may have OWS units installed strictly for the industrial side.*

Marine Inspectors should look at the ORB entries on offshore units carefully. 550-Gal ‘Tote Tanks’ are used to transport oils, fuels, chemicals and wastes to/from MODUs. These are often overlooked within ORB entries. The tote is technically cargo while stored onboard. Striking oil from the tote tank into the vessel should be logged as a bunkering operation, but
often it is not. Oil changes sometimes go directly to a waste oil tote tank; this should also be logged in the ORB, but often is not.

3. MARPOL Annex V

This Annex applies to all ships, which includes, but is not limited to MODUs, fixed and floating platforms. The discharge into the sea of any garbage is prohibited from fixed or floating platforms, and from all other ships when alongside or within 500 m of such platforms. Food waste may be discharged into the sea from fixed or floating platforms located more than 12 NM from the nearest land and from all other ships when alongside or within 500 m of such platforms, but only when the wastes have been passed through a comminuter or grinder. Such comminuted or ground food waste shall be capable of passing through a screen with openings no greater than 25mm. The record keeping (garbage record book) requirement may be waived by the Administration for fixed or floating platforms while they are engaged in exploration and exploitation of the sea-bed.

The requirements for garbage pollution found in 33 CFR 151.51-151.77 apply to all U.S. registered vessels and foreign vessels while in the navigable waters of the United States or the Exclusive Economic Zone. These regulations do NOT apply to any other ship specifically excluded by MARPOL 73/78. Where U.S. regulations differ from MARPOL is the requirement to maintain a garbage record book. Per 33 CFR 151.55, all manned ocean going vessels of 400 GT and above engaged in commerce and documented under the laws of the United States and every manned fixed or floating platform subject to the jurisdiction of the United States must maintain a garbage record book.

For additional information on Annex V requirements see this Manual, Section E, Chapter 1, diagram 2 below and the 2012 IMO Guidelines for the Implementation of MARPOL Annex, V.

4. Additional Restrictions

There are no additional equipment requirements for MODUs or fixed OCS facilities. However the following restrictions apply:

a. The EPA issues National Pollution Discharge Elimination (NPDES) permits to MODUs and Fixed Platforms in accordance with 40 CFR 122.2 and the EPA / Coast Guard MOU (dated February 11, 2011). MODUs and Fixed Platforms that operate in accordance with their NPDES permits are in full compliance with MARPOL 73/78.

(1) Marine Inspectors are encouraged to review a MODU’s or Fixed Platform’s NPDES permit. Extreme caution should be used in determining whether or not they are in compliance with their permit. The NPDES permit is very
specific as to the types of substances (both oils and Noxious Liquid Substances (NLS)) allowed to discharge and the amounts.

(2) If a MODU or Platform is not operating under its NPDES permit, all provisions of MARPOL 73/78 and the limitations found in 33 CFR 151.10 are applicable.

b. **Control of Oil Discharges.** All MODUs operating (not en route) within 12 nautical miles of nearest land or within a special area and all fixed platforms within 12 nautical miles of nearest land must:

(1) Have a means by which to retain all machinery oily mixtures from the platform machinery space and be equipped to discharge oily mixtures for transport to a reception facility; or,

(2) Be equipped to discharge in accordance with 33 CFR 151.10 paragraphs (b)(3), (b)(4) and (b)(5).
### Diagram 1: MARPOL Annex Applicability

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<th>MARPOL Annex</th>
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<th>EFFECTIVE DATE</th>
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<th>COMPLIANCE</th>
<th>OCS Applicable</th>
<th>Requirements for fixed or floating platforms.</th>
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<tr>
<td>I</td>
<td>Prevention of pollution by OIL</td>
<td>02-Oct-83</td>
<td>Applies to all ships</td>
<td>Mandatory</td>
<td>YES</td>
<td>MARPOL Annex I, Regulation 39 contains special requirements for fixed or floating platforms when engaged in the exploration, exploitation and associated offshore processing of sea-bed mineral resources. However, ships when operating on the United States Outer Continental Shelf (U.S. OCS) are subject to the jurisdiction of the United States and therefore the requirements within 33 CFR §151.25 to maintain an ORB apply, unless the fixed or floating drilling rig or other platform is operating in compliance with a valid National Pollutant Discharge Elimination System (NPDES) permit. (See 33 CFR §151.25) When a fixed or floating drilling rig or other platform departs the U.S. OCS and is not operating in the navigable waters of the United States; the ship is no longer subject to the specific requirements in 33 CFR Subchapter O, but must now comply with MARPOL Annex I.</td>
</tr>
<tr>
<td>II</td>
<td>Control of pollution by Noxious Liquid Substances (NLS) in bulk</td>
<td>06-Apr-87</td>
<td>Applies to all ships certificated to carry NLS in bulk, regardless of GT.</td>
<td>Mandatory</td>
<td>YES, if certificated to carry NLS</td>
<td>None.</td>
</tr>
<tr>
<td>III</td>
<td>Prevention of pollution by harmful substances carried by sea in PACKAGED form</td>
<td>01-Jul-92</td>
<td>Applies to all ships.</td>
<td>Optional</td>
<td>Optional</td>
<td>None.</td>
</tr>
<tr>
<td>IV</td>
<td>Prevention of pollution by SEWAGE from ships</td>
<td>Not Yet Signatory</td>
<td>Not Applicable</td>
<td>Optional</td>
<td>Optional</td>
<td>As of the creation of this job aid, the U.S. is NOT signatory to this requirement. Applicable U.S. regulations apply: 33 CFR 151, Subchapter &quot;O&quot;. See also NVIC 01-09 for further information.</td>
</tr>
<tr>
<td>V</td>
<td>Prevention of pollution by GARBAGE from ships</td>
<td>31-Dec-88</td>
<td>Applies to all ships, regardless of tonnage.</td>
<td>Mandatory</td>
<td>YES</td>
<td>Requirements for fixed or floating platforms.</td>
</tr>
<tr>
<td>VI</td>
<td>Prevention of AIR pollution from ships</td>
<td>01-Jan-10</td>
<td>Applies to all ships. 400 GT and above &amp; platform and drilling rigs engaged in voyages to waters under the sovereignty or jurisdiction of other Parties. (Except where expressly provided in regs 3, 5, 6, 13, 15, &amp; 18.)</td>
<td>Mandatory</td>
<td>YES, but see &quot;Special Requirements&quot;</td>
<td></td>
</tr>
</tbody>
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*Note: See also NVIC Policy Letter 01-09 for further information.*

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1. U.S. law accepts the International Maritime Dangerous Goods (IMDG) code as an alternative to 49 CFR, for packaging and stowage, regardless of GT.
### Diagram 2: MARPOL Annex V

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<th>Type of Garbage</th>
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<th>Ships within special areas</th>
<th>Offshore Platforms (more than 12 NM from land) and all ships within 500 M of such platforms</th>
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<td>Food waste comminuted or ground</td>
<td>Discharge permitted ≥ 3 NM from the nearest land, en route and as far as practicable</td>
<td>Discharge permitted ≥ 12 NM from the nearest land, en route and as far as practicable</td>
<td>Discharge Permitted</td>
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<tr>
<td>Food waste not comminuted or ground</td>
<td>Discharge permitted ≥ 12 NM from the nearest land, en route and as far as practicable</td>
<td>Discharge Prohibited</td>
<td>Discharge Prohibited</td>
</tr>
<tr>
<td>Cargo residues not contained in wash water</td>
<td>Discharge permitted ≥ 12 NM from the nearest land, en route and as far as practicable</td>
<td>Discharge Prohibited</td>
<td>Discharge Prohibited</td>
</tr>
<tr>
<td>Cargo residues contained in wash water</td>
<td>Discharge Permitted</td>
<td>Discharge Prohibited</td>
<td>Discharge Prohibited</td>
</tr>
<tr>
<td>Cleaning agents and additives contained in cargo hold wash water</td>
<td>Discharge Permitted</td>
<td>Discharge Prohibited</td>
<td>Discharge Prohibited</td>
</tr>
<tr>
<td>Cleaning agents and additives in deck and external surfaces wash water</td>
<td>Discharge Permitted</td>
<td>Discharge Prohibited</td>
<td>Discharge Prohibited</td>
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<tr>
<td>Carcasses of animals carried onboard as cargo and which died during the voyage</td>
<td>Discharge permitted as far from the nearest land as possible and en route</td>
<td>Discharge Prohibited</td>
<td>Discharge Prohibited</td>
</tr>
<tr>
<td>All other garbage including plastics, synthetic ropes, fishing gear, plastic garbage bags, incinerator ashes, clinkers, cooking oil, floating dunnage, lining and packing materials, paper, rags, glass,</td>
<td>Discharge Prohibited</td>
<td>Discharge Prohibited</td>
<td>Discharge Prohibited</td>
</tr>
<tr>
<td>Mixed garbage</td>
<td>When garbage is mixed with or contaminated by other substances prohibited from discharge or having different discharge requirements, the more stringent requirements shall apply.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
O. TRAINING WITH THE BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT

The Coast Guard and the BSEE have formed a partnership to enhance interagency cross-familiarization training.

The Coast Guard is responsible for inspections of the hull structure, electrical system safety, lifesaving and fire fighting systems and equipment, and for verifying the unit’s crew is capable of conducting satisfactory emergency drills on MODUs and floating OCS Facilities operating on the U.S. OCS.

BSEE regulates the sub platform drilling and production systems, exploration drilling, well work over, and well servicing operations for these OCS units, as well as for the OCS fixed platforms.

The critical interface between subsea and surface operations necessitates coordination and collaboration between the two agencies and is the thrust of this initiative.

Field commanders should prioritize engagements with their respective BSEE OCS inspection offices to increase opportunities to accompany each other on OCS inspections. Optimal interactions should consist of optimizing cross training at the BSEE training center and inspection ride alongs, as operations and funding permit. The goal is not to conduct joint inspections, but rather for each agency to have opportunities to observe another’s inspections. Participants should work to identify over-lapping inspection areas and gaps as well as build local partnerships. Over time, the coordination should evolve in ways to maximize the benefits of the partnership.

The goal of this effort is to institute an environment of increased interagency cooperation and knowledge with respect to offshore drilling and production safety as well as inspection processes.

Coast Guard-BSEE coordination at the headquarters level is ongoing and is centered on working groups focused on updating interagency agreements and cross training. Engagement and coordination at the field level will further strengthen our partnerships and increase the level of oversight on the OCS, resulting in a safer environment for maritime vessels and personnel.
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1. **Existing**

U.S. units built, under construction or contracted for before April 5, 1982, are considered *existing*, and are regulated to the design requirements applicable to the unit on April 4, 1982, until the unit is rebuilt.

2. **New**

A *new* U.S. flag MODU is one that was built, constructed, or contracted for, on or after April 5, 1982.

B. **EXISTING MODUS**

*Existing* U.S. flag MODUs are subject to the requirements of NVIC 4-78, SOLAS 74/78, if propelled by mechanical means, and 33 CFR Subchapter N, if operating on the U.S. OCS.

NVIC 4-78, Change 1, was developed to elaborate on the grandfather provisions of MODU regulations for the then estimated 150 existing, oceangoing U.S. flag MODUs. The standard that this NVIC applied to existing units was less stringent than that applied to new units.

The NVIC did include a stipulation that certain equipment must be replaced to the standards prescribed in 46 CFR Subchapter I-A once the existing equipment is considered no longer serviceable.

The grandfather provisions of NVIC 4-78 are no longer available to any MODU seeking its initial COI.

C. **NEW MODUS**

*New* U.S. flag MODUs are inspected and certificated under the provisions of 46 CFR Subchapter I-A, SOLAS 74/78 (if propelled by mechanical means and certificated for international service), and 33 CFR Subchapter N, if operating on the U.S. OCS.

f. When a MODU undergoes such a change, an inspection note entry must be made in MISLE identifying the date of change and whether or not the tank vessels rules apply.

3. **Option 3 - Status Unchanged**

Self-elevating units that are converted into production facilities but retain their drilling equipment on board and remain capable of engaging in drilling will remain certificated as MODUs.

a. These units are allowed to maintain their grandfather status as found in NVIC 4-78 Ch. 1.

b. Such units must continue to meet all requirements of 46 CFR Subchapter I-A.

c. Some production systems on these units will also be subject to review by the Coast Guard when they are common with a ship's service system. In these systems, an interface point must be established during review in order to delineate jurisdiction.

d. As in Option 2, any unit that is used for storing oil in bulk is considered a tank vessel and must comply with 46 CFR Subchapter D, Tank Vessels and 33 CFR Part 157, Rules for the Protection of the Marine Environment Relating to Tank Vessels Carrying Oil in Bulk.

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**L. CONVERSION OF A MODU TO FIXED ENTERTAINMENT FACILITY**

A submersible or self-elevating MODU that is converted to a fixed entertainment facility (as defined in 33 CFR 101.105: Public Access Facility) is subject to the following:

The unit will no longer be considered a vessel for the purposes of vessel inspection if it is converted in such a manner as to be incapable of being used as a means of water transportation in any manner and it is substantially permanently moored or fixed.

A converted MODU used for the purpose of entertainment will no longer be considered as engaging in the development, exploitation, exploration or production of oil or mineral resources on the U.S. OCS. Once the conversion is completed, such a unit will not be subject to the provisions of 33 CFR Subchapter N, but must continue to comply with 33 CFR Subchapter O (Pollution) and the provisions of 33 CFR Subchapter C (Aids to Navigation).

Any floating dock intended to be used as a boarding platform for the facility will be considered a
permanently moored vessel, not subject to vessel inspection laws, provided it is substantially moored such that it cannot be moved without special effort. Specifications and detailed drawings of the floating platform and its associated mooring systems must be submitted to the cognizant OCMI for review and final determination of its status for inspection purposes.

A MODU that is converted to a wind farm platform will no longer be under Coast Guard jurisdiction as an inspected vessel or facility. A MOU with Bureau of Ocean Energy Management (BOEM) is being promulgated to clarify jurisdictional boundaries pertaining to these non-OCS Activity structures.

**M. REVIEW OF MODU OPERATING MANUALS**

Review and approval of the new and existing MODU operating manuals should be accomplished through the following procedures.

1. **Marine Safety Center (MSC)**

   The Marine Safety Center (MSC) will review manuals of existing units for compliance with 46 CFR 109.121(b)(1), (3)-(7), (9)-(18) and, if acceptable, forward the manual, the results of the review, and an undated stability letter to the OCMI.

2. **OCMI**

   The OCMI will then review the remaining sections of the manual, accepting MSC's review for compliance with the aforementioned sections as appropriate, and if satisfied, approve the manual, as well as date and issue the stability letter.

3. **Stability Letter**

   After issuing the stability letter, the OCMI will forward a copy of both the stability letter and the letter approving the manual to the MSC. If, during the life of the unit, the OCMI becomes aware of changes to the manual or unit which would affect stability or conditions under which the stability letter was developed, MSC should be notified.

4. **Operations Manual**

   The MSC will review the entire operating manual in the case of new units.
3. Load Line Authorization

As noted in Marine Safety Manual Volume IV - Technical, COMDTINST M16000.9 (series), Chapter 6.F.3.a; assigning authority for load lines on U.S. Vessels has been granted to the American Bureau of Shipping (ABS), or other recognized classification society as approved by Commandant.


b. Extensions of Load Line certificates and all other requests for Load Line exemptions. Approval of an extension for a Load Line Certificates (not to exceed 150 days) originally issued by class (ABS), or requests for exemptions other than single voyage must be received in writing from the owner/operator to Commandant (CG-CVC-2). The request should include the name of the unit, official number, and duration of request and description of why the unit should receive the extension or exemption certificate versus a permanent certificate.

c. Load Line Certificate Forms. The forms of the various Load Line Certificates are specified in the regulation as follows:


(2) International Load Line Exemption Certificate: 46 CFR 42.07-45(e)(f) and (h)

(3) Load Line Certificate (Form B): 46 CFR 42.50-10(b)

(4) Coastwise Load Line Certificate (Form C1): 46 CFR 42.50-15

(5) Loadline Certificate for a Special Service Coastwise or Inter-Island Voyage: 46 CFR 44.05-35

(6) Subdivision Load Lines: 46 CFR 46.10-30, Subdivision load lines are indicated by making specific entries on the appropriate load line certificate. There is no special form for subdivision load lines.
(7) Short Term Conditional Load Line: Marine Safety Manual Volume II, COMDINST 16000.7 (series), Section E, Chapter 4.D, allows ABS to use certain non-exclusive surveyors to sign the annual endorsement or provide a provisional or short term conditional load line certificate on behalf of the Coast Guard. Requests to use a non-exclusive surveyor should be forwarded to COMDT (CG-CVC-2) for approval. NOTE: Under this policy, it is ABS’s responsibility to establish and validate a potential non-exclusive surveyor.
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A. **Certificate of Compliance (COC)**

The regulations prescribed in 33 CFR, Subchapter N, establish minimum standards for all MODUs operating on the U.S. OCS, including undocumented MODUs and those documented under the laws of a foreign nation. The purpose of these regulations is to ensure that all MODUs operating on the U.S. OCS are designed, equipped, and operated at a level of safety generally equivalent to or greater than that of U.S. MODUs certified in accordance with Title 46 CFR, Parts 107, 108 and 109. Prior to engaging and when engaged in OCS activities, each foreign MODU must have onboard a valid Coast Guard issued Certificate of Compliance (COC), Form CG-3585.

**Note:** Some current U.S. vessel inspection laws and regulations include several references to the Certificate of Compliance (COC), Form CG-3585. Unfortunately, other outdated regulations specify the use of a Letter of Compliance (LOC). Coast Guard policy in the CFR, NVICs and elsewhere, has not been changed completely to account for this newer terminology. For the purposes of the OCS, LOC shall be taken to mean COC and shall be valid for a period of two years.

1. **Application**

   It is highly recommended the owner or builder of a foreign MODU apply for an examination for obtaining a COC at least 6 months prior to engaging in U.S. OCS activities by submitting:

   a. A written or e-mailed request for COC examination to the Officer in Charge, Marine Inspection (OCMI), of the marine inspection zone in which the unit intends to operate; and

   b. evidence that all applicable user fees have been paid in full.

   Full COC exams are not normally conducted overseas, however, certain portions of new vessel trials (DP) may be witnessed by overseas Coast Guard inspectors as resources allow. All efforts should be made to coordinate these pre-inspection opportunities with an overseas inspection office and communicate the results with the local OCMI where the unit will eventually receive its COC. All activities should be documented in MISLE. **See Chapter 1.C. Examination/Inspection Teams, for more information on conducting overseas exams/inspections.**
2. Administration

a. All documents submitted to the Coast Guard must be accompanied by an English translation if the originals are in a foreign language. An example of a COC pre-inspection information sheet is located at the end of this section and may be used to request vessel data when scheduling a COC exam. The OCMI shall NOT schedule or conduct a COC exam until the appropriate user fees have been paid.

b. COC’s are valid for 2 years, or until the unit departs the U.S. OCS, provided the MODU undergoes an annual examination within 3 months before or after the COC anniversary date and continues to meet the requirements of 33 Subchapter N. The COC is to be maintained onboard the vessel and be readily available to Coast Guard personnel upon request.

c. To avoid delays, the OCMI is encouraged to complete COCs when requested within three months of their expiration date. At the discretion of, and with the prior approval from, the local OCMI, MODUs with expired COCs (renewal or annual) that are not more than three months past due, and with no indications that the vessel is not in compliance with applicable laws and regulations, should not be restricted from commencing operations prior to an examination. Vessel owners, operators and agents are required by 46 CFR 146.202 to provide notice to the District Commander of the area in which it intends to operate at least 14 days in advance of arrival on the OCS.

d. Current U.S. vessel inspection laws, regulations and documents include references to both “Certificate of Compliance (COC)” and “Letters of Compliance (LOC)”. The Certificate of Compliance (COC) may be used in lieu of Letters of Compliance (LOC). While the terminology has changed, the scope of the exam remains the same.

e. The COC may be issued with certain outstanding discrepancies permitted at the discretion of the cognizant OCMI. The discrepancies will be noted in the examination record section of the COC and documented in MISLE. The COC will NOT be issued with uncorrected discrepancies if during the course of the inspection the ship or the crew is unable to navigate safely (if applicable), maintain the fire fighting and lifesaving equipment, prevent pollution of the environment, maintain adequate stability, watertight integrity, and safely engage in OCS activities. Discrepancies left uncorrected from an initial COC exam will be cause for denial of subsequent COCs.

3. Options A, B, or C.

Foreign Flagged MODUs engaged in OCS activities must comply with one of the following
(1) Safety Construction
(2) Safety Equipment
(3) Radiotelephony or Radiotelegraphy (if applicable)
(4) International Safety Management (ISM) Certificate/Document of Compliance (DOC) (*not applicable to MODUs that are not propelled by mechanical means)
(5) International Ship Security Certificate (ISSC) (*Note per SOLAS Chapter XI-2 reg 1.5, it does not apply to a MODU "on location" but they need it to move from location to location, so a MODU should have all of the required equipment and certificates). Inspectors should carefully consider the applicability of 33 CFR 104 and 106 depending on the MODUs location and operations.
(6) International Oil Pollution Prevention Certificate (IOPP)
(7) Shipboard Oil Pollution Emergency Plan (SOPEP)
(8) International Air Pollution Prevention Certificate (IAPP)
(9) National Pollution Discharge Elimination System (NPDES) Permit (as applicable)

b. A valid, IMO MODU Code Certificate may be accepted in lieu of the required SOLAS certificates for those matters covered by the MODU Code. In NO case will a MODU Code Certificate containing exemptions or exceptions be accepted as an adequate substitute for the required SOLAS certificates.

c. *Individuals required to hold Standards of Training, Certification and Watchkeeping (STCW) certificates (applicable to MODUs propelled by mechanical means) must make them available for examination.*
Pre-Inspection Information Sheet for a Certificate of Compliance (COC)

Cognizant OCMI: __________________ Requested exam date: __________________

Name of Vessel: ___________________ IMO Number: _______________________

Type (semi-submersible, jack-up, drillship, etc…): ____________________________

Call Sign: _______________________ Nation of Registry: _______________________

Is the unit Classed?: Yes ______ or No ______

Classification Society: _____________________________________________________

IMO MODU Code Certificate?: Yes ____ No___ SOLAS Certificates?: Yes ____ No _____

Issuing Authority: ___________________________________________________________

Owner/ Operator: ___________________________________________________________

_________________________________________________________________________

Total Persons to be Accommodated: _____

Equipped with Dynamic Positioning: Yes ____ No ____ DP Class notation: ___________

(If yes, include Safe Manning Certificate information (or include copy of document))

Intended Area of Operation: _________________________________________________

Location of exam: __________________________________________________________

Inspection Option Desired: Check one: Check one:

33 CFR 143.207 (a) _______ Initial _______

33 CFR 143.207 (b) _______ Renewal _______

33 CFR 143.207 (c) _______ Annual _______

User Fees Paid?: Yes _____ No _____

Owner/Operator representative: ______________________________ Contact Number: ___________

Signature: ______________________ Date: ___________

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general guidelines on required documentation of foreign flagged MODU examinations and how to enter activities in MISLE refer to MSM Vol II, Section G, Chapter 1.

Every foreign flagged MODU must meet the requirements of 33 CFR Subchapter N, Parts 143 and 146, and undergo a Coast Guard examination, to be issued a COC in accordance with 33 CFR 143.210 prior to engaging in OCS activities.

2. The Matrix

The Mobile Offshore Drilling Unit (MODU) Safety and Environmental Protection Compliance Targeting Matrix (located at the end of this Chapter) has been developed based on the Port State Control Safety and Environmental Protection Compliance Targeting Matrix; which has been successful in targeting substandard vessels for over 10 years. The matrix will enable the Coast Guard to rationally and systematically determine the probable risk posed by foreign flagged MODUs operating on the U.S. OCS.

(1) The first three columns/entities of the matrix remain the same with minor changes made to terminology specific to MODUs.

(2) These entities are: I) MODU Management (to include lease holder), II) Flag State and III) Recognized Organizations/ Classification Societies.

(3) If any of these entities fail to fully undertake their responsibilities for the safe operation of an associated foreign flagged MODU, then that MODU, based on its final targeting matrix score, may be identified as requiring more stringent Coast Guard oversight.

(4) Column IV takes into account the Coast Guard’s 12 month-cumulative experience with a particular MODU.

(5) Finally, Column V applies points based on a MODUs propulsion type, design particulars, and or age. Targeting points will be assigned in each of the five columns, and then totaled for the final point score.

(6) A MODUs matrix point score will determine if it warrants additional oversight through more frequent Coast Guard examinations.

3. Procedures

a. MODUs will be scored manually by each OCMI each time an Advanced Notice of Arrival (ANOA) is submitted on their behalf, which includes arrival on the U.S. OCS and movement between OCS blocks in accordance 33 CFR 146.215. The National
Vessel Movement Center (NVMC) will initially collect, review, and verify specific MODU information including MODU type and size, cargo, crew list, MODU management information, and security and safety compliance documentation, etc. The NVMC then makes the ANOA available to the National Maritime Intelligence - Integration Office (NMIO) and to the OCMI's through the Ship Arrival Notification System (SANS). The NVMC also makes the ANOA accessible through MISLE. The NMIO analyzes MODU owner, operator, charterer, crew composition, history, etc. to determine whether there is pertinent intelligence regarding the MODU. The NMIO will then issue a daily message for Vessels of Intelligence Interest (VOII).

b. The OCMI will prioritize and coordinate the examination of MODUs entering their AOR. The OCMI will review each MODU arrival in MISLE paying close attention to the MODU matrix score. The calculated score may be raised or lowered based on amplifying information available and at the discretion of the OCMI. The MISLE vessel arrivals screen must also be updated to record a MODUs arrival and departure from the AOR. After completing the above steps, the OCMI will create an inspection activity in MISLE for each MODU that requires an examination. A full tutorial on processing arrivals and scheduling exams for foreign vessel (same process for MODUs) arrivals can be accessed at http://mislenet.osc.uscg.mil/User_Guides/Tutorials/SchedForeignVsl_Arrvl.htm.

4. MODU Safety and Environmental Protection Compliance Targeting Matrix Scoring

a. Column I: Management. This column is based on Port State Control (PSC) or Comandant (CG-CVC) targeting. A targeted vessel management company includes any owner, operator, lessee, charterer, or managing operator whose vessels have been “detained” (since MODUs outside 12 NM cannot be “detained” this data will come from PSC detention information) or sustained major Coastal State control actions in the U.S. more than once within the previous 12 months under the provisions of an international Convention. (A major Coastal State control action would include non-issuance, revocation or suspension of a COC, SMS audit or based on a decision by Commandant (CG-CVC). Commandant (CG-CVC-2) will maintain a current listing of targeted ship management companies based on detention reports received from Coast Guard field units; this list is updated monthly. Commandant (CG-CVC-2) will remove a targeted management company once their vessels are associated with less than two detentions within a 12 month period.

(1) If the owner, lessee, managing operator, or charterer of a MODU is included on the current Targeted Vessel Management Company List provided by Commandant (CG-CVC-2), assign 5 points. Although listed in the same column the owner, lessee, managing operator, and charterer should be scored separately.
10. MODU Matrix

**Priority MODU**
- 12 or more points on the Matrix; MODUs involved in a marine casualty that may have affected seaworthiness; Coast Guard Officer in Charge, Marine Inspection (OCMI) determines a MODU to be a potential hazard to the OCS, port or the environment; MODUs whose Recognized Organization (classification society) has a detention ratio equal to or greater than 2%. Port or OCS entry may be restricted until the Coast Guard examines the MODU.

**Non-Priority MODU**
- 11 or fewer points on the Matrix. MODU poses a low safety and environmental risk. The Coast Guard may select and examine MODU using a random selection process.

**Downgrade Clause.** If a MODU has undergone a Coast Guard Certificate of Compliance (COC) or a required COC annual exam within the past 6 months with no serious deficiencies, the OCMI may downgrade the MODU to non-priority. If the OCMI downgrades a MODU exam priority, it will be added to the pool of random examinations.
O. CROSS REFERENCE OF REGULATIONS PERTAINING TO U.S. AND FOREIGN FLAG MODUS

The following is a cross reference guide of regulations pertaining to U.S. and foreign documented units. Unless otherwise indicated, all U.S. cites reference Title 46 of the Code of Federal Regulations (CFR), and all International cites reference applicable sections of the IMO MODU Code.

The * indicates no equivalent standard.

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A. INTRODUCTION

The term floating OCS facility means a buoyant OCS facility securely and substantially moored so that it cannot be moved without special effort. This term includes, but is not limited to tension leg platforms (TLP’s), SPARs, and permanently moored semisubmersibles or shipshaped hulls such as floating production systems (FPS), floating production storage and offloading systems (FPSO), floating storage and offloading systems (FSO), and tanker conversions. The term floating OCS facility does not include mobile offshore drilling units (MODUs) and other vessels.

The authority to inspect all facilities on the OCS comes from the Outer Continental Lands Act (OCSLA), 43 U.S.C. 1333 (d) (1), 1348 (e) and 1356. The inspection and examination of these facilities is covered in the Memorandum of Agreement (MOA) OCS-04 between the Minerals Management Service (MMS), now referred to as the Bureau of Safety and Environmental Enforcement (BSEE), and the Coast Guard, dated 28 February 2008, (still current, but under revision) to determine system jurisdiction and the application of appropriate inspection regulations, both during construction and following installation. On October 1, 2011, the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE), formerly the Minerals Management Service (MMS), was replaced by the Bureau of Ocean Energy Management (BOEM) and BSEE as part of a major reorganization.

Before construction is started on a proposed OCS facility of novel design or contains unusual equipment, the owner or operator must submit to Commandant (CG-ENG) for review plans and information for approval and issuance of design basis agreement. See Chapter 1.C. Examination/Inspection Teams, for more information on conducting overseas exams/inspections.

B. PLANS

The owner/operator of each floating facility must submit plans to the Coast Guard for approval in accordance with 46 CFR 107, Subpart C, as related to the facility. If construction of the facility is initiated prior to Coast Guard plan review and approval, discrepancies may require correction prior to placing the facility in operation.

C. STANDARDS

Each OCS floating facility must comply with following requirements:

1. 46 CFR Subchapter F, Marine Engineering.

2. 46 CFR Subchapter J, Electrical Engineering.
6. 33 CFR Subchapter O, Pollution.
7. 33 CFR Subchapter N, Outer Continental Shelf Activities.

Once a facility meets the requirements found in this section, the cognizant OCMI will issue a Certificate of Inspection (COI) or a Certificate of Compliance (COC) to the facility depending on the documenting nation.

As an alternative, units may meet the alternative design and equipment standards for FOI and FPSO units on the U.S. OCS outlined in CG-ENG Policy Letter No. 01-13 dated 26 June 2013. The Coast Guard has determined that the standards in this letter provide a level of safety comparable to or greater than required by 33 CFR 140.120(b).

D. DRYDOCK EXAM REQUIREMENTS

Each floating OCS facility must undergo a satisfactory drydock examination in the presence of a Coast Guard marine inspector prior to initial certification. Thereafter, the facility must be examined to the satisfaction of the cognizant OCMI, in accordance with its drydocking plan.

1. Except as provided in paragraphs below, each floating facility must undergo an examination, at least twice within any 5-year period. No more than 3 years may elapse between any two examinations.
2. The owner or operator of a floating facility may request to the cognizant OCMI, to have an In Service Inspection Plan (ISIP) or an underwater survey in lieu of drydock (UWILD) instead of alternative drydock examinations.
3. The OCMI is responsible for administering and enforcing the drydock requirements applicable to the facility within his or her jurisdiction. In carrying out these responsibilities, the OCMI may delegate this authority to a classification society which is authorized to conduct inspections for a floating facility on behalf the Coast Guard per 46 CFR Part 8. The Coast Guard must be present for a minimum of 10% of these examinations.
E. Exemptions Under 33 CFR Subchapter N

1. Personnel – Quarters Habitable

   a. Purpose
   As a Floating OCS Facility transits to be placed “on location”, but before it can produce or bring buy back gas on board, there may be a need for employees to live and work on the unit for a period of time. In accordance with 33 CFR 140.5, the OCMI is authorized to exempt a unit under construction from any requirement of Subchapter N that would be impracticable or unreasonable to apply during construction or erection. The OCMI shall issue a “Quarters Habitable” letter to the Floating OCS Facility prior to the issuance of a Certificate of Inspection (COI), in the interim. This letter allows a limited number of personnel onboard and stipulates lifesaving and manning requirements applicable only until the unit receives the permanent COI.

   A Temporary Certificate of Inspection, Form CG-854, should NOT be issued (see Marine Safety Manual Volume II, COMDTINST 16000.7 (series), Section A: Marine Inspection Administration, Chapter 3.I.) because the unit has not satisfactorily completed a full inspection for certification. Additionally, a temporary COI carries all the force and effect of a full term COI which permits all operations, for which this unit is not ready for.

   b. Example of Quarters Habitable Letter

   QUARTERS HABITABLE APPROVAL, INSERT NAME OF UNIT HERE, INSERT BLOCK LOCATION HERE

   Mr. / Mrs. Smith,

   A Quarters Habitable inspection was completed on (Insert Date Here), at the request of (Insert Company Here). The inspection concluded that all of the requirements for Quarters Habitable based on current practices and guidance have been satisfactorily completed. Quarters Habitability for (Insert Unit Name Here), (Insert CG Number Here), is hereby “Granted”. This approval is subject to the following comments:

   QUARTERS HABITABLE MANNING/LIFESAVING REQUIREMENTS:

   This unit is a (insert type here: Floating Production System, Floating Production Storage Offloading unit, etc.) of the (SPAR, SEMISUBMERSIBLE, TLP design), and is considered a Floating Offshore Installation with a (active/passive ballast system), inspected and constructed to the requirements of 46 CFR Parts 107 and 108, as directed by 33 CFR 143.120.
The maximum persons onboard shall not exceed the limitations approved in the (insert Unit Name Here) Emergency Evacuation Plan, (Insert sections applicable in plan here: ex. Supplement D, Quarters Habitable to Flotel demobilization).

Maximum persons allowed onboard for more than 12 hours in any twenty four (24) hours period and to be berthed onboard is not to exceed (ex. sixty eight (68)). This is based upon the total number of berths consisting of (ex. forty four (44)) available in the permanent quarters and (ex. twenty four (24)) available in the portable quarters.

The following manning shall be maintained onboard:
One (1) – OIM (Offshore Installation Manager)
One (1) – BS (Barge Supervisor)
Two (2) – BCO (Ballast Control Operator) (if applicable)
Two (2) – AB (Able Seaman)
One (1) - OS (Ordinary Seaman)
XXX (X) – LB (Lifeboatman) As per 46 CFR 109.323

A trained “firefighting specialist” holding a course completion certificate from an approved firefighting and first aid course meeting the requirements of 46 CFR 10.205(g) and 46 CFR 10.205(h) respectively, may be substituted for the required Able or Ordinary Seaman.

The required number of persons in charge of survival craft may be filled by deck officers (Offshore Installation Managers, Barge Supervisors and Ballast Control Operators), Able Seaman or Certificated Persons.

There must be enough lifejackets for each person on board. In addition, a sufficient number of lifejackets must be carried for persons at each workstation or industrial work site. This exemption permits this OCS facility to continue construction, but not engage in any activity associated with the exploration for, or development or production of the minerals of the Outer Continental Shelf.

Should you have any questions or concerns, please contact (insert POC here).

Upon receipt of the Certificate of Inspection (COI), this letter will no longer remain valid and all requirements will be based on the COI.

c. Standards

The maximum number of persons allowed on board for more than 12 hours in any 24 hour period, should not exceed the completed berthing onboard and available lifesaving (should the floatel (if utilized as part of the lifesaving) move away due to weather).

Manning requirements are derived from D8 Policy Letter 03-00.

d. Distribution

The original copy of the Quarters Habitable letter should be issued directly to the operator of the unit; one copy should be electronically scanned and
added to “documents” in MISLE. Additional copies may be obtained by the master, operator, owner, or agent of the unit upon written request to the OCMI.

2. Control of Hydrocarbon Flow – “Buy Back Gas”

a. Purpose

During the construction phase of a Floating OCS Facility, but prior to full production capability, a company may request to the local OCMI, to be issued an approval letter to be allowed to flow buy-back gas onboard. Buy-Back Gas is hydrocarbon gas used as fuel that has been produced by separate facilities and is available through the facility’s export gas riser to the gas pipeline. Hydrocarbon gas can be used to run different types of machinery onboard the unit, and can be more economical and easier to obtain than having diesel fuel transported out to the unit via barge or OSV. In accordance with 33 CFR 140.5, the OCMI is authorized to exempt a unit under construction from any requirement of Subchapter N that would be impracticable or unreasonable to apply during construction or erection.

This second letter, issued after the Quarters Habitable letter, acknowledges that the unit now has the capacity to handle gas introduction to specified areas and additional systems such as firefighting (in addition to that required for Quarters Habitable) and gas detection will now need to be inspected for the safety of the unit and crew.

b. Example of Buy Back Gas Letter

Dear Mr. / Mrs. (insert name here):

Your original request, dated (insert date here), to bring Buy-Back Gas onboard has been reviewed. The arrangements have also been subsequently discussed between your regulatory personnel and members of my staff. These discussions and a walk-down of the systems occurred with inspections onboard (insert name of unit here) during the weeks of (insert dates here). An in depth discussion was also conducted during a meeting on (insert date here) at our Outer Continental Shelf Inspection Office in (insert location here). Your request to bring Buy-Back Gas onboard to (insert purpose here: ex. to serve as Fuel Gas for the Gas Turbine Generators) while maintaining increased manning levels for ongoing construction and commissioning work is hereby “Approved”. Additional stipulations are further discussed in the following paragraphs.

Persons on Board (POB) can continue at the increased levels after Buy-Back Gas is introduced to the facility. Maximum POB at any time is restricted to a total of (insert number here) persons.
The installed gas detection system shall be fully operable, tested and accepted by both the (insert who approved the system here) and my OCS Inspections staff prior to the introduction of Buy-Back Gas.

Buy-Back Gas is restricted to (insert where and which locations here: ex. those portions of the Compression, Generation and Production Modules) as previously presented. Introduction into additional portions of the systems for testing will require notification to this office and possible reduced POB.

The (insert floatel or unit here) shall be stationed (insert location here) as an additional precaution to reduce the number of "day workers" present in areas charged with Fuel Gas. This office shall be notified of work that may require the (insert vessel or unit name here) to relocate to the (insert alternate landing location here). (This paragraph may be omitted if no floatel is utilized)

This exemption permits this OCS facility to continue construction, but not engage in any activity associated with the exploration for, or development or production of the minerals of the Outer Continental Shelf.

Should you have any questions or concerns, please contact (insert POC here).

c. Standards

All requests are to be evaluated based on gas detection being operational, fire-fighting capabilities and escape routes being available away from the buyback gas piping and machinery utilizing the buy-back gas.

d. Distribution

The original copy of the Buy-Back Gas letter should be issued directly to the operator of the unit; one copy should be electronically scanned and added to “documents” in MISLE. Additional copies may be obtained by the master, operator, owner, or agent of the unit upon written request to the OCMI.

F. ADDITIONAL REQUIREMENTS FOR STOWAGE OF OIL IN BULK

A floating production facility that is also used for storage of oil in bulk will be considered a tank vessel and should comply with the regulations below.

1. 46 CFR Subchapter D, Tank Vessels.
2. 33 CFR Part 157, Rules for the Protection of the Marine Environment Relating to Tank Vessels Carrying Oil in Bulk.

G. CONVERSIONS

When an existing ship, tankship, or tank barge is converted to a FPSO unit, the Marine Safety Center must determine on a case by case basis if the conversion is considered major and if OPA 90 requirements are applicable (e.g., tank access requirements).

H. GUARDRAILS

1. 33 CFR Subchapter 143.110 requires a 42 inch top rail height for guardrails protecting the perimeter and all openings on the decks of OCS facilities except MODUs. This type of rail is typical of a vessel rail with a greater top rail height to prevent a person from falling over. This requirement further directs designers and operators of floating facilities to design criteria found in 46 CFR 108. 46 CFR 108.217 requires a 39.37 inch (or 1 meter) top rail height for guardrails protecting the perimeter and all openings on the deck. This type of rail is more typical of a “vessel” rail with multiple courses to inhibit a person from washing through in a greenwater event.

2. Given the height of the decks on a floating facility (other than ship shape) and the motion dampening abilities of floating facilities to date, the possibility of a greenwater event occurring while personnel are onboard is remote and the rail height found in 33 CFR 143.110 (42”), provides a higher level of safety for the most likely event that could occur, falling over versus washing through.

3. Floating facilities are permitted to install either of the guardrail designs described above, provided that all rails throughout the entire facility on all deck perimeters and openings are identical. Exception is made for the landing areas associate with stacked modular portable quarters. Here they must meet 46 CFR 108.217 (39”), because they are so frequently interchanged and deployed onboard conventional MODUs.

4. Removable guardrails may be installed where operating conditions warrant their use. Due to the absence of adverse movements in floating facilities (other than ship shape) hull designs, designers and operators need not comply with the internal storm rail requirements of 46 CFR 108.221 (b) and (c). Operators are still required to comply with the external storm rail requirements of 46 CFR 108.221 (a).

5. This direction on guardrail heights does NOT apply to floating facilities with conventional ship-shaped hulls.
I. HELICOPTER FACILITIES

The Coast Guard considers the helicopter lighting scheme of the 2009 MODU Code, Chapter 13 "perimeter lights" to be at least as effective as the requirements of 46 CFR 108.241. CG-ENG has documented the acceptance of the international "green light" scheme on floating OCS facilities (see CG-ENG Policy Letter 01-13). An OCMI may use this CG-ENG policy letter as evidence of compliance for the purpose of issuing a COC to a foreign flag floating OCS facility; an individual waiver should not be required.

J. HOSE REELS WITH NON-COLLAPSIBLE HARD-RUBBER FIRE HOSES

Commandant (CG-ENG-4) has approved certain hose reels for use on floating facilities (other than ship shape and MODUs). These hose reels are required to be outfitted with non-collapsible hard-rubber hoses that meet Standard 92 of the Underwriters Laboratories, Inc. or Military Specification H24580. These hoses may be used on floating facilities as a substitute to the required collapsible fire hose, subject to the following conditions:

1. They may be installed only on open decks; or inside columns, pontoons, and machinery spaces as long as there is adequate room to unreel the hose to its full length.

2. Hydrants with collapsible “UL-19” hoses should be installed inside the accommodation spaces for immediate access by the crew. However, if there are no fire hydrants installed inside the accommodation spaces, all of the following conditions must be met:
   
   (a) The accommodation module cannot be longer than 70 feet in length and 40 feet in width. These dimensions may be further limited based on the “coverage” requirements of paragraph 3 (below) if there are obstructions (hallways and secondary rooms) inside the accommodation module.

   (b) Coast Guard marine inspectors, during annual inspection, shall randomly select permanently-assigned floating facility personnel not normally part of a fire fighting team, and verify that they are familiar with the location of all firefighting equipment; specifically, the location of the external hose stations that are to be used for internal spaces.

3. All fire hydrants (with collapsible or non-collapsible hoses) must meet the following “coverage” requirements per 46 CFR 108.423.

   (a) Fire hydrants with collapsible or non-collapsible hoses must be able to spray each
accessible space with at least two effective spray patterns of water from separate hydrants.

(b) In all internal and external spaces, other than the main machinery space, at least one spray pattern of water must be from a single length (50 feet) hose. If the hose is over 50 feet in length, then only the first 50 feet of one hose at the hydrant may be used for determining coverage. The length of the second hose is unrestricted, as long as minimum nozzle pressure of 50 psi can be provided with both hoses flowing.

(c) In the machinery space both spray patterns of water must be from a single length (50 feet) hose. If the hose is over 50 feet in length, then only the first 50 feet of one hose at the hydrant may be used for determining coverage.

(d) NVIC 6-72 allows for an effective spray pattern of about 20-25 feet in still air.

4. Hose reels with non-collapsible hard rubber hoses that do not meet Standard 92 of the Underwriters Laboratories, Inc. or Military Specification H24580 currently installed onboard existing floating facilities (other than ship shape), must obtain specific approval from Commandant (CG-ENG-4).

5. Replacement of only the non-approved fire hoses is acceptable. Replacement of the whole firefighting system with appurtenances is not required. However, the nozzles must be Coast Guard approved and compatible with the system. The type of nozzle to be installed can normally be found on the Coast Guard type-approval certificate for the hose.

K. IN SERVICE INSPECTION PLANS (ISIP)

1. Introduction
   a. There are, and continue to be, unique and unconventional floating facilities being constructed to work in the OCS that are not fully addressed by the MODU drydocking regulations referenced by 33 CFR 143.120. Facilities, such as semi-submersibles, TLP’s, mini-TLP’s and various SPAR and FPSO designs, are characterized by their large size, ability to exceed the capacities of most drydocks, and a tendency to remain permanently located on a fixed mooring for the life of the facility. Drydocking cycles are complex, if not impossible, and the ISIP program was introduced with these types of facilities in mind.

   b. Companies operating one of these facilities must ensure that a customized and approved ISIP Plan is developed. The ISIP must address the hull (internal and external) inspection intervals, taking into account the unique structures of these units. 33 CFR 143.120, Floating OCS Facilities, refers to 46 CFR 107.261 and .265 for
drydock inspection requirements. 33 CFR 143.120 also provides for equivalences when appropriate and is the basis for authorizing floating facilities to participate in the ISIP to meet drydocking requirements.

c. The following guidelines provide consistency for the drydocking requirements of floating facilities while maintaining the authority of the OCMIs to modify inspection intervals as necessary to address the uniqueness of each facility.

2. Approval

a. Companies requesting to use this program should develop their ISIP Plans, for submittal to the OCMI of the zone that a facility will initially be operating, per 33 CFR 143.120, requiring floating OCS facilities to submit plans per 46 CFR 107 subpart C: The requirements of the ISIP Plan draw heavily from NVIC 1-89 Underwater Survey Guidance, as modified by the comments in Section 4 (the Inspection Process) of this subpart.

b. Companies requesting to use the ISIP should submit their plans a minimum of 90 days prior to entry of the facility into service, to the Officer in Charge, Marine Inspections (OCMI) of the zone that the facility will initially be operating.

c. OCMI’s may seek additional guidance from the appropriate district office or Commandant (CG-CVC-2), as necessary.

3. The Plan

a. The ISIP Plan is a two-part document that addresses prescriptive and operational considerations, as well as provides plans that identify the crucial/high stress inspection points.

(1) The Operational Procedures and Requirements section of the ISIP Plan will be reviewed by the cognizant OCMI.

(2) The Structural Critical Inspection Points (SCIP) section of the ISIP Plan must include an explanation as to why a section/area is designated as a SCIP and must be reviewed by the facilities classification society.

(a) In the event the structure is not under classification, the Coast Guard Marine Safety Center (MSC) will conduct the review of the SCIP section of the ISIP and MSC must include an explanation as to why the area is being designated as such.
(b) Submissions for review by the MSC should be submitted a minimum of 90 days prior to entry of the facility into service, which is the date the Certificate of Inspection, is issued and usually the date of “first oil”.

(c) Upon completion of their review, the Classification Society (or Recognized Organization (RO)) or MSC shall provide a statement saying: “This plan has been reviewed and appropriately identifies all crucial and high stress areas to be inspected.”

b. The ISIP plan should be approved prior to the initiation of operations by the floating facility. Plans that were approved prior to 11 February 2003, (the original date of the Commandant (CG-MOC-2) Policy Letter 03-01, which initiated the implementation date), may continue to be used unless a situation occurs (such as excessive wastage, cracking, etc.) that results in the OCMI determining that the plan should be reviewed and modifications required. Subsequent changes and modification to plans with approval dates prior to Feb 11, 2003, are required to meet the provision of this section.

4. The Inspection Process

The following areas are specific to the ISIP program and represent a deviation from the UWILD program

a. Prior to entry into the ISIP Program:

   (1) Since TLPs and SPARs are typically too large to examine in drydock, a full assessment of the hull structure shall be made prior to initial placement of it, or its section, into the water.

   (2) As listed in NVIC 1-89, a full video survey of the condition of the hull or its parts shall be made for future reference purposes.

   (3) Notifications of the major events surrounding the construction and launching of the facilities hull shall be made to the OCMI of the zone in which the facility will initially be operating; providing ample opportunity for Marine Inspectors to examine and document the initial condition of the hull.

b. Inspection Cycles.

   (1) If the facility class is of a novel to unconventional design, a 40% annual inspection cycle (equivalent to twice in 5 years) must be used for the first five years of the OCS facilities service life.
(2) After five years, if there have been no major issues; the OCMI may consider allowing a Modified Inspection schedule, “once in five year” (20% annually) cycle.

(3) A facility class is considered novel or unconventional if:

(a) There is no known facility of similar design on the U.S. OCS; and

(b) There is no design standard (i.e., Coast Guard regulations, classification society rules accepted by the Coast Guard, or industry standards accepted by the Coast Guard) on the facility.

(4) The decision to allow a facility to be placed in an alternative inspection program should be based on the results of previous exams of similar facilities, the quality of the operating company’s previous inspections for other facilities and any unique operating conditions of the facility. The company should have a satisfactory history of operating floating OCS facilities for at least 5 years. They should be proactive in their preventative maintenance program and are encouraged to meet some type of quality certification program. Additionally, if the facility experiences a significant fractures or hull degradation during the initial cycle, the OCMI may require a more stringent inspection schedule or return to the equipment schedule in 4.b (1) above.

(5) Under the 40% annual inspection cycle it is acceptable for a company to inspect 100% of the hull every 2-1/2 years vs. 40% every year.

(6) For Facilities on the Modified Inspection Program (20% annual inspection cycle which is equivalent to once- in-5 years), companies may elect to inspect 50% of the hull every 2-1/2 years vs. 20% every year.

(7) ISIP Inspection Intervals:

<table>
<thead>
<tr>
<th></th>
<th>Interval or...</th>
<th>Alternative Option</th>
<th>Inspection Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internals (Internal; Structural Exam)</td>
<td>40% Annually</td>
<td>100% @ 2-1/2 yrs</td>
<td>Twice-in-5 yrs</td>
</tr>
<tr>
<td>Externals: (Underwater Survey)</td>
<td>40% Annually</td>
<td>100% @ 2-1/2 yrs</td>
<td>Twice-in-5 yrs</td>
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</table>
As an option for floating OCS facilities built and inspected in quadrants, the following options may apply:

<table>
<thead>
<tr>
<th>Internals (Internal; Structural Exam)</th>
<th>Interval or…</th>
<th>Alternative Option</th>
<th>Inspection Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 quadrants every 15 months (40% annually)</td>
<td>4 quadrants @ 2-1/2 yrs</td>
<td>Twice-in-5 yrs</td>
<td></td>
</tr>
<tr>
<td>Externals: (Underwater Surveys)</td>
<td>40% annually</td>
<td>100% @ 2-1/2 yrs</td>
<td>Twice-in-5 yrs</td>
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(8) For qualifying floating OCS facilities, the OCMI may approve an ISIP with this “modified inspection program”.

<table>
<thead>
<tr>
<th>Internals (Internal; Structural Exam)</th>
<th>Interval or…</th>
<th>Alternative Option</th>
<th>Inspection Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>20% annually</td>
<td>50% @ 2-1/2 yrs</td>
<td>Once-in-5 yrs</td>
<td></td>
</tr>
<tr>
<td>Externals: (Underwater Surveys)</td>
<td>20% annually</td>
<td>50% @ 2-1/2 yrs</td>
<td>Once-in-5 yrs</td>
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As an option for floating OCS facilities built and inspected in quadrants, the following options may apply:

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<tbody>
<tr>
<td>1 quadrant every 15 months (20% annually)</td>
<td>2 quadrants @ 2-1/2 yrs</td>
<td>Once-in-5 yrs</td>
<td></td>
</tr>
<tr>
<td>Externals: (Underwater Surveys)</td>
<td>20% annually</td>
<td>50% @ 2-1/2 yrs</td>
<td>Once-in-5 yrs</td>
</tr>
</tbody>
</table>

c. Inspection Procedures.

(1) In any of the cases above, the examination must be conducted within 2-3 years of the last exam and no more than 5 years may elapse from the previous.

(2) For those facilities placed on the Modified Inspection Program, the internal structural examination shall be conducted on a different portion of the internal areas of the facilities external hull.

(3) The remaining portions of the internal structure and outer hull must then be completed over the next 2.5 years resulting in a complete internal and external exam by the end of a 5 year period.
(4) The underwater examination of the external hull shall include all applicable sea valves, sea chests, cathodic protection, and special examinations of critical structures which have been designated in the approved ISIP plan.

(5) During each hull examination under both the “twice in five year” and the “once in 5 year” cycles, the internal hull exams shall be conducted at different areas from the external hull exam. For example, if an internal exam is conducted in one quadrant, the external exam should be conducted in a different quadrant. However, if fractures, flaws, or corrosion is noted on one side (on the interior or exterior) of the hull plating, the other side of the plating should be examined.

5. Facilities 15 Years of Age and Older

a. After 15 years of age, the hull inspection intervals will return to the full requirement of both internal and external examinations required twice in 5 years, unless the companies requests and is granted an extension from the cognizant OCMI.

b. In considering an extension of the modified inspection program, the OCMI shall consider:

   (1) the change in condition of the hull from the initial underwater surveys to the most recent survey (gauging report as detailed in Section 3 of NVIC 1-89 may be accepted to assess condition);

   (2) the repair frequency of critical areas; and

   (3) coating and condition of internal tanks and voids.

c. Based on this and any additional information, the OCMI may extend the ISIP for this floating facility 5 or 10 additional years.

d. The owner must request a new extension at the conclusion of each OCMI approved extension to continue the intervals listed in 4.b (1) or (2) of Section 4 (The Inspection Process) of this Subpart.

6. Survey Procedures

a. The majority of facilities will not be capable of increasing freeboard for visual inspection of the hull, through reduction of ballast. Where a facility cannot practically
“light ballast” such as a TLP or SPAR, it may remain at operating drafts for the survey.

b. Though these floating facilities are designed to survive extreme weather situations, such as hurricanes, they do not have the ability to relocate or change their heading as a vessel would to confront adverse weather conditions. For information on Post Hurricane Inspection procedures see Chapter 1 Part I, of this Section G.

c. Inspection of the internal and external parts of the hull shall be conducted as per the ISIP Plan to the satisfaction of the attending marine inspector in order for the company to receive credit for the examination. Third party inspectors are not to be used as a replacement for the CG Inspector; however they may be utilized to augment the marine inspector and perform specialized inspection tasks such as nondestructive testing (NDT).

d. The scheduling of the hull examination and other required inspections (i.e., Inspections for Certification and Annual Inspections) must be coordinated so that marine inspector attendance is required no more than once per year, unless specifically approved by the OCMI.

7. In Service Inspection program (ISIP) Plan – Organization

a. Below is an outline of the ISIP plan and how it should be organized when it is submitted for approval/review.

b. This ISIP organization shall be followed in development if new ISIP’s. Companies may add additional sections or make minor deviations from the outline structure below, as long as the minimum contents have been included and basic outline adhered to. Companies may also include large tables and procedural lists as appendixes that are referenced from within the main document.

c. ISIP’s that have been approved prior to Feb 11, 2003, may retain their original formatting. However, format revision must follow the new guidance below.

Table of Contents

I. Introduction

   A. General Description

   B. Regulatory compliance, standards and interface with regulators

   C. Nomenclature
D. References

II. Operational Procedures and Requirements

A. Inspection Procedures

1. Description of underwater body inspections and internal structural inspection. NVIC 1-89 (as modified by this Section G) should be consulted in development of this section.

2. Detailed scope of individual inspection types that may potentially be employed such as hull gauging, ROV operations, tank entry, NDT, and visual inspections.

3. Special inspection techniques, interval and procedures for those crucial/high stress locations.

4. Discussion of general dive operations, safety standards and interaction with diving contractors.

5. Procedural checklists for each operation.

6. The inspection technique for inspecting the shell plating from the inside.

7. The inspection technique for inspecting the underwater portion of the hull.

B. Inspection Schedule and Frequency

1. Outline of general inspection schedule and frequency as required. This should discuss high level scheduling and complement the detailed inspection cycle as for completion listed in Part C (below).

2. The extent of each annual inspection and the areas to be inspected for the lifetime of the facility at the intended site.

C. Facility Component Identification

1. General description of facility including listing of measurements and particulars.
2. Hull description. Description of hull and special features including general discussion of scantlings and areas of high stress concerns (inspection cycles and general inspection procedures).

3. Structural Critical Inspection Points. General discussion of types of areas that are considered critical and types of inspections. Reference details in Section III of this document (page 4-15) for all specifics.

4. Sea chest and sea valves. (Listing, details, inspection cycles, general inspection procedure.) The method to blank/plug and remove each sea valve during each 5-year period. The method to ensure operability of each sea valve and to externally examine all sea chests/valves for deterioration and marine growth during each 2-1/2 year period.

5. Cathodic protection systems and anodes. This section should include listing, details, inspection cycles & general inspection procedure for cathodic protection systems and anodes.

6. Accessible compartments and voids. These sections should include listing, details, inspection cycles, general inspection procedures for accessible compartments and voids.

7. In accessible compartments and voids. This section should include listing, precise location, details, inspection cycles, general inspection procedures and provisions taken to ensure continued integrity of the in accessible compartments and voids.)

D. Reporting and Documentation

1. General record keeping procedures for reports and surveys (company policy).

2. Notification and report delivery procedures involving the classification society and the Coast Guard.

3. Specific record keeping procedures and report contents for each component category in Section C.

4. Record keeping for dives conducted during inspections of the underwater hull.

5. The manner in which deficiencies and the procedures for their repair will be handled.
E. Damage Assessment & Repair Procedures

1. Discussion of categories of damage and company procedures to mitigate.

2. Casualty notification procedures with regard to 33 CFR 149.30 and 46 CFR 109 following damage to facility relating to underwater body and hull structure.

3. Specific procedures and methods to investigate damage or potential damage to hull or internal structures.

4. Procedures to submit proposed methods for repair of both underwater defects and damage to the RO and the Coast Guard.

III. Structural Critical Inspection Points

A. Details of structurally critical locations on the hull of the facility (listing, details, inspection cycles & general inspection procedure).

B. Drawings detailing the crucial/high stress inspection points as determined by a recognized RO or by the MSC.

L. Manning of Non-self Propelled Floating Outer Continental Shelf (OCS) Facilities

1. Purpose

This section does not apply to ship-shape floating production systems (FPSs) or floating production, storage, and off loading systems (FPSOs). Floating OCS Facilities as defined in 33 CFR 140.10 includes but are not limited to tension leg platforms (TLPs), SPARS, and non-self propelled FPSs. Regulation in 33 CFR, Subchapter N specifically exclude mobile offshore drilling units (MODUs) from the definition of floating OCS facilities. 33 CFR 143.120(c) authorizes the cognizant Officer in charge of Marine Inspection (OCMI) to issue a Certificate of Inspection (COI) after determining that the floating OCS facility meets all applicable requirements. For each COI issued, the OCMI designates an appropriate manning level to ensure the floating OCS facility can be operated safely during both routine and emergency conditions.

2. Manning
a. The following baseline manning scales are established for floating OCS facilities:

**Floating OCS Facilities:**
- One (1) - CG Licensed Offshore Installation Manager (OIM)
- One (1) - CG Licensed Barge Supervisor (BS)
- Two (2) - CG Licensed Ballast Control Operators (BCOs)
- Two (2) - Able Seaman
- One (1) – Ordinary Seaman
- Persons in charge of Survival Craft determined per 46 CFR 109.323.

b. One of the two BCOs may be eliminated provided the OCMI is satisfied that the safety of the unit will not be compromised by maintaining a periodically unattended ballast control room. The owner/operator of the facility would need to prove that the damage stability criterion is so robust that the facility wouldn’t need to ballast in a worst case environmental condition for that location. Existing units (units with manning scales already accepted by the local OCMI as of the issuance of this version of the MSM) would be grandfathered in and their current manning scales would remain.

c. A trained “firefighting specialist” holding course completion certificates from approved firefighting and first aid courses meeting the requirements of 46 CFR 10.205(g) and 46 CFR 10.205(h)(1) respectively may be substituted for the required Able or Ordinary Seaman. The “firefighting specialist” need not hold either a Coast Guard license or MMD. A licensed officer serving in a position required on the floating OCS facility’s COI may not be “double counted” as a firefighting specialist. Licensed officers in excess of those required on the unit’s COI may be counted as a “firefighting specialist.”

d. The required number of person’s in charge of survival craft shall be listed on the COI as “Certified Lifeboatman,” but may be filled by deck officers (offshore installation managers, barge supervisors, and ballast control operators), able seaman, or certified persons. It is not mandatory for deck officers to possess an MMD with a Lifeboatman endorsement to serve in this capacity.

e. The sample manning scales above represent baselines for the OCMI to use in evaluating required manning for each floating OCS facility. The actual manning required by the OCMI could be more or less depending on the specifics of the particular floating OCS facility.

f. When establishing manning requirements for floating OCS facilities, OCMI’s shall consider the units stability characteristics, mooring arrangement and the frequency of required ballasting operations (or tendon/mooring system tensioning), including the degree of ballast system automation. Other factors to consider in establishing appropriate manning include whether produced oil is
stored aboard the facility, including the mooring and unmooring requirements of any associated lightering operations.

g. For non-self propelled floating OCS facilities, the deck officers, who include offshore installation managers, barge supervisors, and ballast control operators, may serve as persons in charge of survival craft even if they do not possess a Merchant Mariner’s Document (MMD) with a lifeboatman endorsement. All OCMIs shall include the following endorsement on the COI for these facilities to clarify this matter:

“THE REQUIRED NUMBER OF PERSONS IN CHARGE OF SURVIVAL CRAFT LISTED ON THIS DOCUMENT AS ‘CERTIFIED LIFEBOATMAN’ MAY BE FILLED BY DECK OFFICERS (OFFSHORE INSTALLATION MANAGERS, BARGE SUPERVISORS, AND BALLAST CONTROL OPERATORS), ABLE SEAMAN, OR CERTIFICATED PERSONS.”
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A. Applicability of Regulations

A fixed Outer Continental Shelf (OCS) facility means a bottom-founded OCS facility permanently attached to the seabed or subsoil of the OCS, including platforms, guyed towers, articulated gravity platforms, and other structures as noted in 33 CFR 140.10.

The regulations found in 33 CFR Subchapter N are applicable to all fixed OCS facilities operating outside of state waters. All fixed facilities must be marked in accordance with the regulations found in 33 CFR 67.

The Outer Continental Shelf Lands Act (OCSLA), as amended, directs the Coast Guard and Bureau of Safety and Environmental Enforcement (BSEE) to conduct initial and annual inspections of OCS facilities. The annual inspection may be in the form of scheduled or unannounced inspections.

This inspection requirement is further modified by 33 CFR 140, subpart B, which requires the Coast Guard to conduct initial inspections and allows the owner/operator of the facility to conduct annual self-inspections. The Coast Guard (NCOE) will conduct recurring training with and for BSEE to be able to conduct these inspections on the CGs behalf.

B. Developing Partnerships with BSEE

OCMIs are encouraged to develop partnerships with regional BSEE personnel to achieve the following:

a. Develop lines of communication for information exchange.

b. Accompany BSEE inspectors on a space available basis.

c. Develop a targeting strategy for OCS facilities.

C. Lifesaving Equipment on Unmanned Fixed Platforms

33 CFR 144.10-1 does not specifically require that lifesaving equipment be available on an unmanned platform at all times; it is only required when personnel are on the platform.
3. Investigations

As specified in Title 33 CFR Subchapter N, and within the 2009 MOA between BSEE and the Coast Guard, the Coast Guard retains investigation responsibilities for all incidents related to OCS activities.

a. Where the Coast Guard and BSEE have overlapping responsibilities, the agencies should work together to minimize or eliminate the duplication of effort.

b. The Coast Guard will normally be the lead investigative agency for incidents listed in 33 CFR 140.201.

c. All incidents subject to investigation under 33 CFR 140.201 shall be conducted in accordance with 46 CFR 4 and documented in MISLE

4. Fixed OCS Facility Inspection Report, Form CG-5432

a. Facility owners and operators do not need to submit Fixed OCS Facility Inspection Report, Form CG-5432, to the Coast Guard or BSEE. Instead the operator shall conduct the required self-inspection annually and retain a copy of the Fixed OCS Facility Inspection Report, Form CG-5432, on board the facility.

b. By regulation, the two (2) most recent Self – Inspection Reports (or two years worth of inspection reports) shall be retained on board.

c. BSEE inspectors verify that the Fixed OCS Facility Inspection Report, Form CG-5432, has been completed during their annual inspection of each facility.

d. In instances where the Fixed OCS Facility Inspection Report, Form CG-5432, cannot be retained on board (unmanned facilities with no living quarters); a copy may be retained at an alternate location convenient to the operator. Upon request, the facility operator must provide copies of any Fixed OCS Facility Inspection Report, Form CG-5432’s, to the Coast Guard or BSEE.

(e) The Fixed OCS Facility Inspection Report, Form CG-5432, shall be completed within, and not to exceed, 12 months from the last inspection date. (Ex. If an inspection was last completed on 02JUN2014, the next inspection must be completed on or before the end of the month of JUNE2015.)

5. Emergency Evacuation Plans (EEPs)

The Coast Guard will review and approve EEPs in accordance with 33 CFR 146.140.
6. Lifesaving/ Firefighting Equipment

   a. Variances. BSEE consults with the local OCMI to determine suitable options, temporary measures or restrictions during the repair or replacement of required firefighting equipment and lifesaving appliances. BSEE initiates this process with the local OCMI. In cases where the owner/operator contacts the Coast Guard directly, BSEE shall be notified immediately.

   b. Approval process. The Coast Guard shall continue to approve equipment for use on fixed offshore facilities and publish the list of approved equipment in the Federal Register and COMDTINST M16714.3 (Series) in accordance with 33 CFR 140.15(b). The Coast Guard shall also notify BSEE of any newly approved equipment and provide training as needed.

7. Catwalks – Manned Platforms

33 CFR 143.101 (c) requires all manned OCS facilities be provided with at least two primary means of escape extending to the water. 33 CFR 143.101 (a) defines primary means of escape as fixed stairways or ladders of metal construction. For OCS facilities that are connected to adjacent facilities by bridges, or catwalks which allow free access from one facility to another, the catwalk may serve as one of the primary means of escape provided:

   a. The catwalk leads to another location that provides a primary means of escape extending to the water, and

   b. There is a sufficient amount of primary lifesaving gear per 33 CFR 144.01-1 or 144.01-15 at this alternate location to accommodate 100% of the personnel onboard the manned facility if they cross the catwalk and egress to the water via this alternate escape route.

8. Single Well Caissons – Unmanned Platforms

33 CFR 143.101(d) requires unmanned OCS facilities be provided with one primary means of escape and, when personnel are onboard and one secondary means of escape for every 10 persons onboard. In the case of small single-well caisson type facilities, the primary means of escape is usually a fixed ladder from the topside structure (work deck) to the waterline. Since the work deck on these platforms is typically very small, a worker
cannot become trapped far from the primary escape route. Furthermore, the risk to workers attending these facilities is quite low because there is usually very little processing equipment onboard, plus the limited frequency and duration in which personnel visit these facilities further lessens the risk. Taking all this into consideration, a single-well caisson type facility must have one primary means of escape but will not be required to have a secondary means of escape, even when workers are on the platform, provided:

a. The work deck is no more than 20 ft x 20ft (or 400 square feet) in size, and

b. The work deck is no more than 20 ft above mean low water.

9. Swing Ropes and Knotted Man Ropes

A primary means of escape shall be installed to meet the requirements in 33 CFR 143.101. A secondary means of escape shall be constructed and installed to the satisfaction of the cognizant OCMI. Item (8) of Fixed Platform Inspection Program, CCGD8INST 16711.1 (series) is the recommended standard for construction and maintaining man ropes and swing ropes. Particular attention should be given to man ropes and swing ropes due to weathering of the ropes and the dangers that are encountered when using these devices.

Man ropes should be replaced immediately if there is any evidence or wear, dry rot, mildew or ultraviolet deterioration. Swing ropes are subject to all the same considerations as man ropes.
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A. **Offshore Supply Vessels (OSVs)**

1. **Definition/Applicability**

   For U. S. vessels, as long as the vessel in question fits the definition of an OSV, it is considered an OSV and may be inspected as such.

   a. **An OSV is defined in 46 U.S.C. 2101(19) as “a motor vessel that regularly carries goods, supplies, individuals in addition to the crew, or equipment in support of exploration, exploitation, or production of offshore mineral or energy resources” (See Note 1 below)**

   b. The application of this definition is not affected by the physical location of the vessel. The word "offshore," as it modifies "supply vessel" has no geographical significance.

   c. "Offshore" is not defined by statute or regulation. Past administrative policy has been to define "offshore" as that water seaward of the coastline (as measured from the mean high water mark).

   d. Additionally, 46 CFR Subchapter L allows for the granting of "grandfather" status to previously certified OSVs, provided they maintained a COI prior to the effective date of the regulations and they continue to receive inspections following the same guidance enforced prior to the effective date of the regulations. The "grandfather" status is forfeited should the vessel change its service from OSV to another service or undergo a major modifications.

   OSV’s less than 6,000 GT ITC (500 GRT if GT ITC not assigned) that were grandfathered had to complete construction and had to receive a COI prior to 16 March 1998. OSVs of at least 6,000 GT ITC (500 GRT if GT ITC not assigned) that were grandfathered had to complete construction and receive a COI prior to 18 August 2016.

   **NOTE 1:** Section 617 of the Coast Guard Authorization Act of 2010 (PL 111-281) amended 46 U.S.C. 2101(19) by removing the tonnage limitation in the definition of ‘offshore supply vessel.’ As a result, OSVs as defined under 46 U.S.C. 2101(19) are covered under this waiver, while operating from a foreign port, regardless of tonnage limitation (46 CFR 15.720(b)(1)). The 1,600 GRT (GT ITC if GRT is not assigned) limitation specified in 46 U.S.C. 8103(b)(3)(A) pertains to other similarly engaged vessels, which are not covered under 46 CFR 15.720(b). For other vessels in service similarly engaged, see Section H.5.b. of this Chapter.
2. Change of Service

If an inspected OSV surrenders its COI or otherwise changes service, certain privileges granted to that class of vessel no longer apply. Tonnage, manning, and subdivision are several areas affected.

a. Tankage previously exempted as ballast water spaces for offshore drilling, mining, and related purposes may be included in the new tonnage of the vessel unless otherwise exempted. A review of any ballast exemption in excess of 30 percent of the vessel’s gross tonnage, calculated without any allowance for water ballast, is required for the new service of the vessel.
Policy continues on G6-3.
10. Lifesaving Policy

a. Rescue Boat – Unlike conventional vessels, liftboats operate in both elevated and afloat modes of operation. Therefore, liftboats must be able to recover a helpless person from the water in both the elevated and afloat modes. Since a liftboat cannot serve as its own “rescue platform” while elevated, each liftboat must have at least one rescue boat. If no launching device is provided, on vessels with two cranes, the rescue boat must be capable of being launched with either crane. Approval of crane launching of the rescue boat on vessels with only one crane is at the discretion of the OCMI. A crane that is used to launch a rescue boat should be certified for personnel transfer. All pre-Subchapter L rescue boats should be equipped with safety equipment to the satisfaction of the cognizant OCMI. However, at a minimum, these pre-Subchapter L rescue boats should have the following safety equipment and quantities (#): paddles (2), heaving lines (2), sponges (2), boat hooks (1), and bailer (1). All Subchapter L rescue boats must be outfitted with the equipment described in 46 CFR 133.175.

(1) A motor-propelled workboat or launch may be used in place of the required rescue boat if the embarkation and recovery arrangements of 46 CFR 133.160 (a), (c), (d), (e) and (f) are met, if shown to be at least as effective.

(2) While liftboats may be allowed to use the installed cranes to launch rescue boats in lieu of an installed davit, stability concerns and the vessel’s operating manual normally prohibit the use of the cranes while the vessel is afloat.

(3) While in the afloat mode, cranes should only be used to launch and recover the rescue boat if the vessel’s operating manual permits use of the crane(s) in the afloat mode.

(4) Also, while in the afloat mode, and in accordance with 46 CFR 133.135, the OCMI may determine if the vessel is arranged to allow a helpless person to be recovered from the water, provided the recovery can be viewed from the navigation bridge and the vessel does not regularly engage in operations which restrict its maneuverability. However, if this requirement cannot be met, vessels with an efficient and reliable method for providing two way communications between a person at the side of the vessel and the person at the helm may be considered equivalent to 46 CFR 133.135, if shown to be at least as effective.

(5) Depending on the vessel’s hull design, this may be accomplished in several ways. Older vessels have leg pads that retract up to the hull and are exposed when underway. These leg pads can be used as a platform to rescue a helpless person if a suitable means is installed to access the pad and to transfer the helpless person...
SECTION G: OUTER CONTINENTAL SHELF ACTIVITIES

CHAPTER 6: Procedures Applicable to Other Vessels Engaged in OCS Activities

(6) On many newer vessels, the pad is submerged while underway, and a separate platform should be provided. These platforms may vary based upon hull design, and it is the OCMI’s discretion to judge the platform to be fit to recover a helpless person from the water.

(7) A rescue harness should also be provided, regardless of rescue platform type.

b. Lifesaving Systems - Previously approved lifesaving appliances or arrangements are acceptable. The regulations in 46 CFR 133.10 should be consulted when changes are made to lifesaving equipment or arrangements.

c. Embarkation Devices – It is a long standing industry practice to install knotted “manropes” on liftboats for emergency disembarkation as a partial means to meet the intent of an embarkation ladder (Jacob’s ladder). These knotted manropes are generally considered acceptable as an alternative to traditional embarkation ladders as required by 46 CFR 133.110, on liftboats only. If a knotted manrope is installed, it should be long enough to reach the water at the liftboat’s highest elevated position, and be examined at least annually by the vessel’s crew. Excessively soiled, worn or frayed ropes or ropes with cracked or corroded attachments should be replaced or repaired immediately.

11. Firefighting and Alarm Equipment

a. Firemain and Raw Water Suctions - Firemain, bilge, and ballast systems should be capable of operation at all times, including in elevated mode. When it is practical to do so, the fire main should be tested in the elevated mode.

b. Fire Pumps - All liftboats must have an installed fire pump, its output is regulated under the appropriate subchapter and capable of operation at all times, including the elevated mode. The typical fire pump installation is a submersible type, mounted on the main deck, and connected to the fire main system through a flexible hose. These hoses should be routinely inspected for condition and serviceability. The launch appliance for lowering the pump into the water should be inspected for proper operation and condition.

c. Smoke Alarms - Each separate living space and galley should have a smoke alarm. Smoke alarms may be battery powered, independent type units, and all should have a test button to indicate proper operation.

12. General Operations
information to consider when evaluating the potential impacts of an OREI which will assist in providing valuable input to the Bureau of Safety and Environmental Enforcement (BSEE) and Bureau of Ocean Management (BOEM) or another lead permitting agency for environmental review and decision making purposes.

1. Per 33 CFR 140.10; an OCS activity means any offshore activity associated with exploration for, or development or production of, the minerals of the Outer Continental Shelf.

2. Notwithstanding the above definition, certain offshore renewable energy installations are now covered by leasing arrangements approved by BSEE. The Coast Guard does not view OREIs as an OCS activity based on the definition of “minerals”. Presently this definition has not been expanded to include “alternative energy source” such as wind.

3. As such, the manning requirements found in 33 CFR 141 do not apply to OREIs.

F. ACCOMMODATION SERVICE VESSELS

Accommodation service vessels (ASV or “Flotels”) are subject to U.S. Coast Guard regulatory jurisdiction. Concurrent with the legal determination of the Outer Continental Shelf Land Act (OCSLA), “The Coast Guard has authority to regulate accommodation vessels if they are engaged in activities to support a unit attached to the OCS seabed for the purpose of exploration, development or production.”

Units that are considered to be performing accommodation services are subject to OCSLA and therefore 33 CFR Subchapter N, because such units are engaged in activities to support exploration, development or production.

U.S. flag vessels or units engaged in ASV activities are subject to CG inspection regime and other regulatory authority, as the Flag State.

For foreign flag vessels or units, under Subchapter “N” 33 CFR 140.101(a), units engaged in OCS activities are subject to inspection by the CG. Additionally, 33 CFR 140.101(e) allows for the inspection of foreign flag units to validate the international certificates they possess. At this time, unless the vessel is certificated additionally as a MODU or floating facility, lack of current published regulations do not allow for the vessel to get a Certificate of Compliance (COC).

Currently, U.S. units are subject to all the Flag State requirements when they are issued a Certificate of Inspection (COI), and foreign flag units solely performing accommodation operations are limited to validation of the existing international certificates onboard that
are accepted by the U.S. including SOLAS, Loadline, MARPOL, and IMO Code to include MODU and SPS if issued.

If an accommodation service vessel embarked passengers in a U.S. port or visited a U.S. port with U.S. citizens as passengers, then 46 U.S.C. 3505 would apply and the vessel would need to hold a Passenger Safety and Security Certificate (PSSC) and obtain a COC. That would include plan review and inspection. If such a vessel remained offshore and other boats or aircraft ferried passengers out to the ASV on location, 46 U.S.C. 3505 would not apply.

G OTHER FOREIGN FLAG VESSELS WORKING ON THE U.S. OCS

Foreign vessels become subject to a Coast Guard Port State Control Examination once they enter U.S. territorial waters. This is to ensure that foreign vessels operating in U.S. waters provide an acceptable level of safety.

Such vessels may be eligible for examination reciprocity in accordance with the provisions of 46 U.S.C. 3303. If, after reviewing certificates, it is determined that a vessel is not eligible for reciprocity, then an examination of the vessel should be conducted to determine compliance with the applicable regulations.

The U.S. Customs service, now Customs Border Patrol (CBP), has ruled that the carriage of merchandise or passengers between a point in the United States and a facility on the U.S. OCS is considered Coastwise Trade, and in accordance with the Jones Act, only vessels licensed, or vessels otherwise qualified, may engage in such activity. In practice, this means that foreign vessels on the OCS may perform service functions but not supply functions (carriage of merchandise and/or passengers as defined above).