

## Conversions

<b>Distance and Energy</b>				
Kilowatts (kW)	X	1.341	=	Horsepower (hp)
Feet (ft)	X	3.281	=	Meters (m)
Long Ton (LT)	X	.98421	=	Metric Ton (t)
<b>Liquid</b> (NOTE: Values are approximate.)				
Liquid	bb/LT	m <sup>3</sup> /t	bb/m <sup>3</sup>	bb/t
Freshwater	6.40	1.00	6.29	6.29
Saltwater	6.24	.975	6.13	5.98
Heavy Oil	6.77	1.06	6.66	7.06
DFM	6.60	1.19	7.48	8.91
Lube Oil	7.66	1.20	7.54	9.05
<b>Weight</b>				
1 Long Ton	=	2240 lbs	1 Metric Ton	= 2204 lbs
1 Short Ton	=	2000 lbs	1 Cubic Foot	= 7.48 gal
1 Barrel (oil)	=	5.61 ft = 42 gal = 6.29 m <sup>3</sup>	1 psi	= .06895 Bar = 2.3106 ft of water
<b>Temperature: Fahrenheit = Celsius</b> ( $^{\circ}\text{F} = 9/5\ ^{\circ}\text{C} + 32$ and $^{\circ}\text{C} = 5/9 (^{\circ}\text{F} - 32)$ )				
0	=	-17.8	80	= 26.7
32	=	0	90	= 32.2
40	=	4.4	100	= 37.8
50	=	10.0	110	= 43.3
60	=	15.6	120	= 48.9
70	=	21.1	150	= 65.6
200	=	93.3	250	= 121.1
300	=	148.9	300	= 204.4
400	=	260	500	= 537.8
1000	=	537.8		
<b>Pressure: Bars = Pounds per square inch</b>				
1 Bar	=	14.5 psi	5 Bars	= 72.5 psi
2 bars	=	29.0 psi	6 Bars	= 87.0 psi
3 Bars	=	43.5 psi	7 Bars	= 101.5 psi
4 Bars	=	58.0 psi	8 Bars	= 116.0 psi
9 Bars	=	130.5 psi	10 Bars	= 145.0 psi

## United States Coast Guard



## FOREIGN FREIGHT VESSEL EXAMINER Job Aid

<b>Name of Vessel</b>		<b>Flag</b> <input type="checkbox"/> No Change	
<b>IMO Number</b>		<b>Case Number</b>	
<b>Date Completed</b>	<b>Priority</b>	<b>Points</b>	
<b>Location</b>			
<b>Vessel Built in Compliance with SOLAS: 60 74 74/78 NA</b>			
<b>Port State Control Officer &amp; Examiners</b>			
1. _____	5. _____		
2. _____	6. _____		
3. _____	7. _____		
4. _____	8. _____		

Job Aid FFVE  
Rev. Dec 2015







- Verify the status of the ventilation system ducting at each level of the pump room. Terminate entry if the vent ducting is not intact.

**IMMEDIATELY LEAVE ANY CONFINED SPACE IF:**

- A personal monitor alarms;
- You feel dizzy or lightheaded;
- The forced air ventilation stops or is apparently ineffective; or
- If you sense any unexpected chemical through smell or dermal sensation that concerns you. This is a judgment call; however, you should depart any time there is a burning sensation in your lungs or you experience a shortness of breath. Any of these sensations may indicate a life threatening situation and you must react promptly to avoid injury.

Note: Climbing (other than on ladders) shall be limited to 5ft.

**Steps to Take After Entry for All Confined Spaces**

- Immediately contact your chain of command if you left a confined space for any of the reasons noted above. Do not reenter any confined space until notification of appropriate senior personnel and direction from your supervisor is obtained.
- Report any inconsistencies in the marine chemist certificate or competent person log to your supervisor and follow-up with a letter to Commandant CG-1134 via your District (industrial hygienist).
- In the event of overexposure, personnel should be evacuated to appropriate medical facilities by the most expeditious means. Medical personnel should be provided with all known information on the suspected exposure, including concentration and duration of exposure. This should include the most probable route of exposure. Also provide the medical authority with the phone number to American Toxic Substance and Disease Registry (ATSDR).

<p><b>74 SOLAS 2014</b> Consolidated contains all amendments entered into force up-to 01 Jul 14. The following Amendments (resolutions) have entered into force since it was published. <a href="http://www.imo.org">www.imo.org</a></p> <p>MSC 365(93)</p> <p>MSC 366(93)</p>	<p>01 JUL 15</p> <p>01 JUL 15</p>
<p><b>FSS CODE (2007 edition)</b> The following Amendments (resolutions) have entered into force since it was published. <a href="http://www.imo.org">www.imo.org</a></p> <p>MSC 206(81)</p> <p>MSC 217(82) Annex 1</p> <p>MSC 217(82) Annex 2</p> <p>MSC 292(87)</p> <p>MSC 311(88)</p> <p>MSC 327(90)</p> <p>MSC 339(91)</p> <p>MSC 367(93)</p>	<p>01 JUL 10</p> <p>01 JAN 08</p> <p>01 JAN 10</p> <p>01 JAN 12</p> <p>01 JUL 12</p> <p>01 JAN 14</p> <p>01 JUL 14</p> <p>01 JAN 16</p>
<p><b>LSA Code (2010 edition)</b> The following Amendments (resolutions) have entered into force since it was published. <a href="http://www.imo.org">www.imo.org</a></p> <p>MSC 293(87)</p> <p>MSC 320(89)</p> <p>MSC 368(93)</p>	<p>01 JAN 12</p> <p>01 JAN 13</p> <p>01 JAN 16</p>
<p><b>ITC 1969</b></p>	<p>18 JUL 82</p>
<p><b>Load Line 1966</b></p> <p><b>Load Line 88 Protocol</b></p>	<p>21 JUL 68</p> <p>03 FEB 00</p>

<p><b>Load Line (2005 edition)</b> contains all amendments entered into force up-to 2003 Amendments. The following Amendments (resolutions) have entered into force since it was published. <a href="http://www.imo.org">www.imo.org</a></p> <p>MSC 172(79) MSC 223(82) MSC 270(85) MSC 329(90) MSC 356(92) MSC 375(93)</p>	<p>01 JUL 06 01 JUL 08 01 JUL 10 01 JAN 14 01 JAN 15 01 JAN 16</p>
<p><b>MARPOL 2011 Consolidated</b> contains all amendments entered into force up-to 2011 Amendments. The following Amendments (resolutions) have entered into force since it was published. <a href="http://www.imo.org">www.imo.org</a></p> <p>MEPC 190(60) MEPC 193(61) MEPC 194(61) MEPC 200(62) MEPC 201(62) MEPC 202(62) MEPC 203(62) MEPC 216(63) MEPC 217(63) MEPC 235(65) MEPC 246(66) MEPC 247(66) MEPC 248(66) MEPC 251(66)</p>	<p>01 AUG 11 01 JAN 14 01 FEB 12 01 JAN 13 01 JAN 13 01 JAN 13 01 JAN 13 01 AUG 13 01 AUG 13 01 OCT 14 01 JUL 15 01 JUL 15 01 JUL 15 01 SEP 15</p>
<p><b>STCW (2011 edition)</b> contains all amendments entered into force up-to 2011 Amendments. The following Amendments (resolutions) have entered into force since it was published. <a href="http://www.imo.org">www.imo.org</a></p> <p>MSC 373(93) MSC 374(93)</p>	<p>28 APR 84  01 JAN 16 01 JAN 16</p>

- Calibrate and test the multi-gas detector required for entry. The meter should be able to detect oxygen and flammability. For sour crude cargos - for hydrogen sulfide as well.
  - Check operation of personal oxygen monitor if carried in addition to the multi-gas meter. (An O<sub>2</sub> meter is required for entry into all confined space types)
  - Check condition of the required EEBA. The carriage of an EEBA by all personal entering a pump room is required.
  - Verify operation of ventilation system & that space is properly ventilated. Ventilation must be in operation at least 15 min prior to entry, or at least 3 air changes. A good "rule of thumb" indication that the system is operating properly is a noticeable air movement entering through the door to the upper pump room. **IF VENTILATION SYSTEM IS INOPERABLE, CG PERSONNEL ARE NOT AUTHORIZED TO ENTER THE PUMP ROOM.**
  - Discuss the aspects of entering the pump room with the vessel's officer. Verify the presence of a litter and hoisting arrangement prior to entry.
  - Verify all cargo transfer equipment in the pump room is secured.
- Steps to Take During Pump Room Entry**
- USCG personnel should be accompanied by a ship's officer or vessel rep.
  - Carry the combination oxygen/flammability/toxic meter and EEBA.
  - Carry a whistle or other device to sound an alarm in event of emergency.
  - Check the air movement at the entry into the pump room. It should be very noticeable. **Note direction of flow!**
  - Check the hoisting arrangement in the pump room. Most vessels have a block and tackle arrangement secured to an overhead beam in the area with direct access to the lowest part of the pump room.

The following steps shall be completed prior to, during, and after entering a pump room.

**Steps to Take Prior To Pump Room Entry**

- Determine the current and last three cargos carried to assess exposure risk.
  
- Review the Marine Chemist Certificate to verify the space was properly tested for the following:
  - Oxygen content - 19.5% to 22% (ideal is 20.8%)
  - Flammable gases/ vapors - less than 10% of LEL
  - Carbon Monoxide - less than 25 ppm
  - Hydrogen Sulfide - less than 10 ppm
  - Any toxic gases/ vapors dependent upon the nature of the space and its contents or previous contents – concentrations must be below the PEL and TLV limits.
  - Verify the Marine Chemist designated the space “Safe for Workers”
  - Verify that Marine Chemist signed the certificate.
  - Verify the certificate was issued within the past 24 hrs and that conditions have NOT changed. – (i.e. vessel moved, cargo pumps turned on or off, extreme outside temp change, etc.)
  
- BENZENE:** When high & moderate benzene level cargos are carried on board the vessel, the marine chemist certificate must contain the level in ppm of benzene present, if any. (See MSM Vol. I, Chap. 10, appendix C for list of cargos containing benzene)
  - If concentration level is above 10 ppm – entry is NOT authorized.
  - If concentration level is greater than 5 ppm but less than 10 ppm, PSCOs MUST wear an appropriate respirator and not stay in space longer than 2 hours.
  - If concentration level is less than 5 ppm but = to or less than 1 ppm, NO respirator required, UNLESS PSCO is in the space longer than 1.5 hrs.
  - If vessel is carrying a low benzene level cargo and being transferred through the pump room - PSCOs must wear a respirator with organic vapor cartridge and cannot stay in space more than 2 hrs in the absence of a test for benzene.

**Involved Parties & General Information:**

Owner's Agent
Individual
Phone Number

Charterer's Agent
Individual
Phone Number <input type="checkbox"/> Same as Owner's Agent

Owner—Listed on DOC or COFR
<input type="checkbox"/> No Change

Operator
<input type="checkbox"/> No Change

**Vessel Information:**

Classification Society	
ISM Issuer: Same as above?  <input type="checkbox"/> Yes <input type="checkbox"/> No If not the same, which Recognized Organization? _____	
<i>NOTE: The period of validity for ISM documents should correspond to the following list. If they do NOT, ISM documents should be further investigated.</i>	
<input type="checkbox"/> 5 years = Full term (SMS and DOC) <input type="checkbox"/> 12 months = Interim (DOC) <input type="checkbox"/> 6 months = Interim (SMC) <input type="checkbox"/> 5 months = Short term (SMC)	
Last Drydocking Date	Next Drydocking Date
Location of Last Drydocking	
Date of Last Class Survey	
<input type="checkbox"/> Outstanding conditions of class or non-conformities	
Last Port of Call	Next Port of Call
Method of Construction <input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III	Conversions / Modifications
Call Sign	<input type="checkbox"/> No Change
Gross Tons	<input type="checkbox"/> No Change
Built Date (use delivery date)	<input type="checkbox"/> No Change
Overall Length (in feet)	<input type="checkbox"/> No Change

**Examples (not limited to) of non-confined spaces that may pose a hazard on foreign vessels:**

<b><u>Non-confined spaces that may pose a risk (All vessel types)</u></b>	<b><u>Possible Hazard(s)</u></b>	<b><u>Safe Work Practice</u></b>
CO <sub>2</sub> Storage Room	O <sub>2</sub> deprivation due to leaking CO <sub>2</sub>	Ensure proper ventilation, wear O <sub>2</sub> meter
Machinery Spaces	Noise, Flammability, Toxicity; MSDs – H <sub>2</sub> S	Hearing protection
Flammable Storage Lockers/Paint Rooms	Flammability, Toxicity	Ensure proper ventilation
Battery Room	Toxicity -	Ensure proper ventilation
Bosun Shop	O <sub>2</sub> deprivation	Ensure proper ventilation
Workshops	Toxicity from welding fumes, Flammability, Noise	Ensure proper ventilation
Provisions/Non-Flammable Storage	O <sub>2</sub> deprivation	Ensure proper ventilation
Open Cargo Deck	Flammability	Ensure use of intrinsically safe radios, flashlight, phone, etc.

**Examples (not limited to) of confined spaces on foreign vessels:**

<b>Confined Spaces</b>	<b>Hazard <sup>2)</sup></b>
Voids/Cofferdams <sup>1)</sup>	P- O; S- F,T
Sealed Compartments <sup>1)</sup>	P- O; S- F,T
Double Bottoms/Sides/Duct Keels <sup>1)</sup>	P- O; S- F,T
Spaces Coated with a Preservative <sup>1)</sup>	P- O; S- F,T
Engine Crankcases/Scavenging Spaces <sup>1)</sup>	P- O; S- F,T
Large Heat Exchangers <sup>1)</sup>	P- O; S- F,T
Fuel/Lube Oil/Sludge Tanks <sup>1)</sup>	P- F,T; S- O
Water tanks <sup>1)</sup>	P- O; S- F,T
Cargo/Slop Tanks <sup>1)</sup>	P- O; S- F,T
Pump Rooms (if provided) <sup>3)</sup>	P- O; S- F,T

1) Port State Control Officers should not attempt to enter any of the above spaces during a standard PSC examination, other than pump rooms. There may be reason to enter one or more of these spaces during the exam if there are clear grounds to do so, but only enter these spaces after ensuring they are safe for entry. Review the safe work practices contained in MSM Vol. 1, chapter 10, Appendix A for entry into confined spaces other than pump rooms.

2) Hazards – P (Primary);  
S (Secondary);  
O (Oxygen Deprivation);  
F (Flammability);  
T (Toxicity)

3) Follow steps on page 23 for entry into pump rooms

**Section 2: Certificates and Documents**

**International Certificates:**

<b>Name of Certificate</b>	<b>Issuing Agency</b>	<b>ID #</b>	<b>Port Issued/ Country</b>	<b>Issue Date</b>	<b>Exp. Date</b>	<b>Endors. Date</b>
<b>Certificate of Registry</b> <input type="checkbox"/> No Change						
<b>Classification Document</b> <input type="checkbox"/> No Change						
<b>Certificate of Financial Responsibility (COFR)</b> <input type="checkbox"/> No Change	USCG					
<b>Safety Construction</b> <input type="checkbox"/> No Change						
<b>Safety Equipment</b> <input type="checkbox"/> No Change						
<b>Safety Radio</b> <input type="checkbox"/> No Change						

Name of Certificate	Issuing Agency	ID #	Port Issued/ Country	Issue Date	Exp. Date	Endors. Date
<b>International Load Line (ILLC)</b> <input type="checkbox"/> No Change						
<b>International Tonnage (ITC)</b> <input type="checkbox"/> No Change						
<b>ISM Document of Compliance (DOC)</b> <input type="checkbox"/> No Change						
<b>ISM Safety Management (SMC)</b> <input type="checkbox"/> No Change						
<b>International Ship Security (ISSC)</b> <input type="checkbox"/> No Change						
<b>Continuous Synopsis Record (CSR)</b> <input type="checkbox"/> No Change						
<b>Minimum Safe Manning (MSM)</b> <input type="checkbox"/> No Change						

7

## Confined Space Entry Checklist

### Sources for Policy

- COMDTINST M5100.47, Chapter 6, change 11
- MSM Vol. 1, Chapter 10 & Appendix A, C, G to chap. 10
- 29 CFR 1915, Part B

### A Confined Space for the purpose of this checklist is:

A space that possess all of the following three distinct characteristics –

1. Is large enough and so configured that an employee can bodily enter & perform assigned work;
2. Has limited or restricted means for entry or exit; and
3. Is not designed for continuous employee occupancy

### Hazards associated with confined space entry

- Oxygen deficient or enriched atmosphere
- Flammable atmosphere
- Toxic atmosphere
- Extreme temperature (hot or cold)
- Engulfment hazard (such as grain, coal, sand, gypsum or similar material)
- Extreme noise
- Slick / wet surfaces & tripping hazards
- Falling objects
- Potential for rapidly changing atmosphere

### USCG Confined Space Entry Requirement

A certified Marine Chemist **shall** conduct the initial inspection & certify all confined spaces on merchant vessels “Safe for Workers” before entry by USCG personnel.

In rare circumstances, if a Marine Chemist is not available, the OCMI may designate a USCG Competent Person to certify a confined space “Safe for Workers”

**Detention Information**

*NOTE: Complete prior to recommendation.*

- Verify owner (from DOC or COFR), operator, and mailing address.
- Verify owner's agent.
- Verify last and future drydock dates and locations.
- If dual classed, who will respond? \_\_\_\_\_
- Which agency issued the documents that have major problems?
  
- What is the date of the last survey conducted for those items that have problems?
  
- What are the vessel's plans to deal with the problems?
  
- What is the crew's attitude toward the problems?
  
- Is the detention ISM related? If so, include ISM certification information in the Detention Report to CG-CVC-2

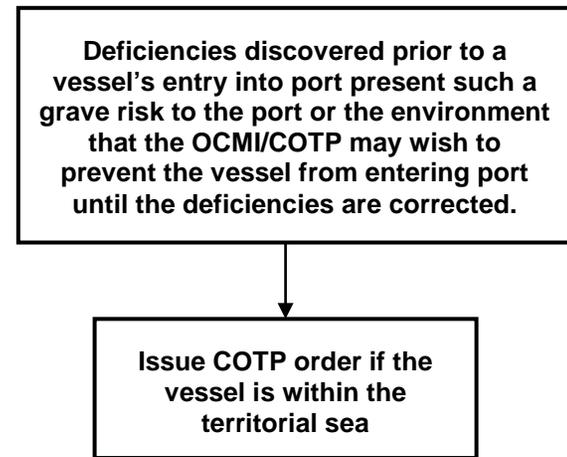
Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Name of Certificate	Issuing Agency	ID #	Port Issued/ Country	Issue Date	Exp. Date	Endors. Date
<b>International Oil Pollution Prevention (IOPP)</b> <input type="checkbox"/> No Change						
<b>International Sewage Pollution Prevention (ISPP)</b> <input type="checkbox"/> No Change						
<b>International Air Pollution Prevention (IAPP)</b> <input type="checkbox"/> No Change						

### Section 3: Examination Items

- |                          |   |   |
|--------------------------|---|---|
| <input type="checkbox"/> | 1. Schedule examination in Maritime Information for Safety and Law Enforcement (MISLE )                       | 33 CFR 2<br>33 CFR 6                          |
| <input type="checkbox"/> | 2. Coordinate examination with vessel's representative  | MPS-PR-SEC-02<br>MSM II/D.5.C.2               |
| <input type="checkbox"/> | 3. Mitigate potential hazards encountered during an exam  | NFPA 306                                      |
| <input type="checkbox"/> | 4. Verify participation in Enhanced Survey program  | SOLAS 14 XI-1/2<br>ESP Code 6.1.1             |
| <input type="checkbox"/> | 5. Examine anchor(s) and chain  | MSM II/E.2.6.b<br>ILO-147 p48/3(g)            |
| <input type="checkbox"/> | 6. Examine hull for required markings   | ICLL 5-9                                      |
| <input type="checkbox"/> | 7. Examine material condition of hull   | 33 USC 1321<br>MARPOL I/15                    |
| <input type="checkbox"/> | 8. Examine access ladders and sideshell openings  | 29 CFR 1915.74(a)<br>SOLAS 14 II-1/3-9        |
| <input type="checkbox"/> | 9. Examine hull, anchors and anchor chain for compliance with the Non-Indigenous Aquatic Nuisance Species Act | 33 CFR 151.2050(e)(f)<br>MSM II/D.1.G.1.t     |
| <input type="checkbox"/> | 10. Examine mooring system/equipment  | MSM II/E.2.6.b                                |
| <input type="checkbox"/> | 11. Examine security procedures at vessel access point(s)   | 33 CFR 104.265(a)<br>ISPS A/7.2.2             |
| <input type="checkbox"/> | 12. Verify security training & records  | 33 CFR 104.215 & 104.220<br>SOLAS 14 XI-2/4.2 |
| <input type="checkbox"/> | 13. Examine Certificate of Registry   | 46 USC 3303<br>SOLAS 14 I/13                  |
| <input type="checkbox"/> | 14. Examine Classification Society Certificate  | SOLAS 14 I/6(a)                               |
| <input type="checkbox"/> | 15. Examine International Tonnage Certificate (ITC)   | ICTM 69 Article 7                             |
| <input type="checkbox"/> | 16. Examine International Load Line Certificate (ILLC)  | ICLL Article 16                               |
| <input type="checkbox"/> | 17. Examine Cargo Ship Safety Construction Certificate (CSSCC)  | SOLAS 14 I/12(a)(ii)<br>SOLAS 14 I/16         |
| <input type="checkbox"/> | 18. Examine Cargo Ship Safety Equipment Certificate (CSSEC) and Record of Equipment (Form-E)                  | SOLAS 14 I/12(a)(iii)<br>SOLAS 14 I/16        |
| <input type="checkbox"/> | 19. Examine Cargo Ship Safety Radio Certificate (CSSRC) and Record of Equipment (Form-R)                      | SOLAS 14 I/12(a)(iv)<br>SOLAS 14 I/16         |
| <input type="checkbox"/> | 20. Examine Cargo Ship Safety Certificate (CSSC) and Record of Equipment (Form-C)                             | SOLAS 14 I/12(a)(v)<br>SOLAS 14 I/16          |
| <input type="checkbox"/> | 21. Examine copy of Document of Compliance (ISM-DOC)  | 33 CFR 96.330<br>SOLAS 14 IX/4.2              |
| <input type="checkbox"/> | 22. Examine Safety Management Certificate (ISM-SMC)   | SOLAS 14 IX/4.3<br>ISM Code 13.7              |

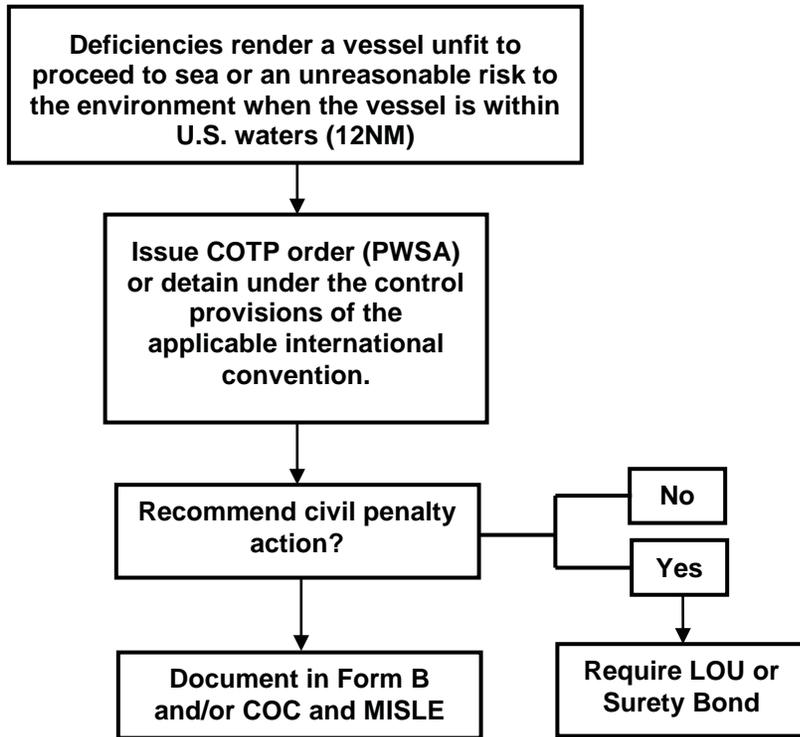
### Requiring Corrective Measures Prior to Entry



Examples include the following:

- Leaking tanks.
- Carrying dangerous cargoes with expired documents.
- Carrying incompatible cargoes.
- Invalid ISM certificates.
- No COFR.

**Requires Corrective Measures Prior to Departure  
(DETENTION)**



Examples include the following:

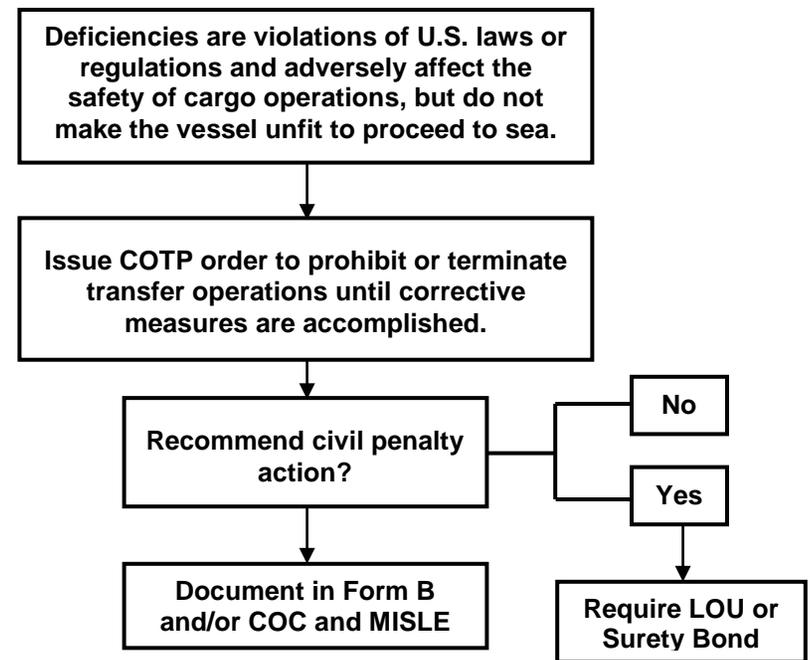
- Excessive wastage, corrosion, pitting, holes, or damage to the hull, cargo hatches, fire main, or other vital system.
- Inoperable emergency fire pump or emergency generator.
- Inability to lower lifeboats.
- Inoperable lifeboat motors (i.e., will not start).
- Crew incompetent to carry out duties (e.g., fire or boat drills, cargo transfer, stability calculations, etc.).
- Licenses invalid.
- Safe Manning Document not on board.

- |                          |   |  |
|--------------------------|---|--|
| <input type="checkbox"/> | 23. Examine Minimum Safe Manning Document   | SOLAS 14 V/14.1                            |
| <input type="checkbox"/> | 24. Examine Crew Certificates of Competency and Proficiency IAW Safe Manning Document                                   | STCW I/2.11                                |
| <input type="checkbox"/> | 25. Examine Medical Certificates  | STCW I/9.3<br>COMDTINST 16711.12A          |
| <input type="checkbox"/> | 26. Examine Continuous Synopsis Record (CSR)  | SOLAS 14 XI-1/5.1<br>SOLAS 14 XI-1/5.10    |
| <input type="checkbox"/> | 27. Examine International Ship Security Certificate (ISSC)  | SOLAS 14 XI-2/4.2<br>ISPS Code A/19.2.1    |
| <input type="checkbox"/> | 28. Examine International Oil Pollution Prevention Certificate (IOPP) and Record of Construction and Equipment (Form-A) | 33 CFR 151.19<br>MARPOL I/7 & 8            |
| <input type="checkbox"/> | 29. Examine International Sewage Pollution Prevention Certificate (ISPP)  | MARPOL IV/5<br>NVIC 01-09 Encl. 3          |
| <input type="checkbox"/> | 30. Examine International Air Pollution Prevention Certificate (IAPP)   | MARPOL VI/6<br>CG-543 Policy Ltr 09-01     |
| <input type="checkbox"/> | 31. Examine the Engine International Air Pollution Prevention (EIAPP) Certificate(s)                                    | MARPOL VI/13.8<br>NOx Code 2.1.1           |
| <input type="checkbox"/> | 32. Verify compliance with the Vessel General Permit (VGP)  | VGP 1.5.1.1 & 10<br>VGP Table 1            |
| <input type="checkbox"/> | 33. Examine muster lists and emergency instructions   | SOLAS 14 III/8.2                           |
| <input type="checkbox"/> | 34. Examine ballast water management documents  | 33 CFR 151.2025(a)(1)                      |
| <input type="checkbox"/> | 35. Examine Long-Range Identification & Tracking (LRIT) conformance test report   | IMO MSC.1/Circ. 1307                       |
| <input type="checkbox"/> | 36. Examine Ship Energy Efficiency Management Plan (SEEMP)  | MARPOL VI/22                               |
| <input type="checkbox"/> | 37. Examine International Energy Efficiency Certificate (IEEC)  | MARPOL VI/6<br>CG-CVC Policy Ltr 13-02     |
| <input type="checkbox"/> | 38. Examine Energy Efficiency Design Index (EEDI)   | MARPOL VI/20                               |
| <input type="checkbox"/> | 39. Examine International Anti-fouling System Certificate (IAFS)  | AFS 2<br>MSM II/D.1.G.t                    |
| <input type="checkbox"/> | 40. Examine Cargo Securing Manual   | SOLAS 14 VI/5.6                            |
| <input type="checkbox"/> | 41. Examine crew training documentation (hazardous materials/dangerous goods)   | 49 CFR 172.704(d)<br>49 CFR 176.13(c)      |
| <input type="checkbox"/> | 42. Examine Dangerous Cargo Manifest (DCM)  | 49 CFR 176.30(a)                           |
| <input type="checkbox"/> | 43. Examine Document of Compliance for the Carriage of Dangerous Goods  | SOLAS 14 II-2/19.4<br>IMO MSC.1/Circ. 1266 |
| <input type="checkbox"/> | 44. Examine Document of Authorization (DoA) for the Carriage of Grain   | SOLAS 14 VI/9<br>Grain Code A 3.1          |
| <input type="checkbox"/> | 45. Examine ship's stability and grain loading booklet  | SOLAS 14 VI/9<br>Grain Code A 6.2          |

- |                          |  |  |
|--------------------------|--|--|
| <input type="checkbox"/> | 46. Examine Oil Record Book Part I (ORB)   | 33 CFR 151.25<br>MARPOL I/17.1                 |
| <input type="checkbox"/> | 47. Examine Shipboard Oil Pollution Emergency Plan (SOPEP)                       | MARPOL I/37.1                                  |
| <input type="checkbox"/> | 48. Examine Non-Tank Vessel Response Plan (NTRVP)                                | 33 USC 1321(a)(26)<br>33 USC 1321(j)(5)(A)(ii) |
| <input type="checkbox"/> | 49. Verify transfer personnel, procedures, equipment and records                 | 33 CFR 155.700<br>33 CFR 155.710(e)(4)         |
| <input type="checkbox"/> | 50. Examine Garbage Management Plan  | 33 CFR 151.57<br>MARPOL V/9.2                  |
| <input type="checkbox"/> | 51. Examine Garbage Record Book  | 33 CFR 151.55<br>MARPOL V/9.3                  |
| <input type="checkbox"/> | 52. Examine training manuals   | SOLAS 14 II-2/15.2.3.1                         |
| <input type="checkbox"/> | 53. Examine liferaft maintenance records and service logs/reports                | SOLAS 14 III/36.7<br>SOLAS 14 III/20.6         |
| <input type="checkbox"/> | 54. Examine fire detection system maintenance and service logs/reports           | SOLAS 14 II-2/14.2.2.1<br>IMO MSC.1/Circ. 1432 |
| <input type="checkbox"/> | 55. Examine Logbook entries  | 33 CFR 164.25<br>SOLAS 14 V/26                 |
| <input type="checkbox"/> | 56. Examine fire fighting equipment maintenance and service logs/reports         | SOLAS 14 II-2/14.2.2.1<br>IMO MSC.1/Circ. 1432 |
| <input type="checkbox"/> | 57. Examine lifeboat maintenance records and service logs/reports                | SOLAS 14 III/36.7                              |
| <input type="checkbox"/> | 58. Examine the bulk cargo loading, unloading & stowage booklet (Loading Manual) | SOLAS 14 VI/7.2                                |
| <input type="checkbox"/> | 59. Examine Cargo Securing Manual  | SOLAS 14 VI/5.6<br>SOLAS 14 VII/5              |
| <input type="checkbox"/> | 60. Examine charts and publications (when applicable)                            | 33 CFR 164.33<br>SOLAS 14 V/19.2.1.4           |
| <input type="checkbox"/> | 61. Examine echo-sounding device   | 33 CFR 164.35(h)<br>SOLAS 14 V/19.2.3.1        |
| <input type="checkbox"/> | 62. Examine electronic position fixing device                                    | 33 CFR 164.41<br>SOLAS 14 V/19.2.1.6           |
| <input type="checkbox"/> | 63. Examine bridge navigation/propulsion indicators                              | 33 CFR 164.35(f)<br>SOLAS 14 V/19.2.5.4        |
| <input type="checkbox"/> | 64. Examine records of emergency training and drills                             | SOLAS 14 III/19.3.2<br>SOLAS 14 III/19.5       |
| <input type="checkbox"/> | 65. Examine radar(s) and Automatic Radar Plotting Aid (ARPA)                     | 33 CFR 164.35(a) & 37<br>SOLAS 14 V/19.2.3.2   |
| <input type="checkbox"/> | 66. Examine compasses  | 33 CFR 164.35(b)<br>SOLAS 14 V/19.2.1.1        |
| <input type="checkbox"/> | 67. Witness operational test of steering gear                                    | SOLAS 14 II-1/29.7<br>SOLAS 14 II-1/29.8       |
| <input type="checkbox"/> | 68. Examine Voyage Data Recorder (VDR)   | SOLAS 14 V/20<br>IMO Res A.861(20)             |
| <input type="checkbox"/> | 69. Examine Automatic Identification System (AIS)                                | 33 CFR 164.46<br>SOLAS 14 V/19.2.4             |
| <input type="checkbox"/> | 70. Examine radiotelephone (VHF)   | 33 CFR 26.03<br>SOLAS 14 IV/7.1                |

## Requires Corrective Measures Prior to Cargo, Bunkering or Lightering Operations

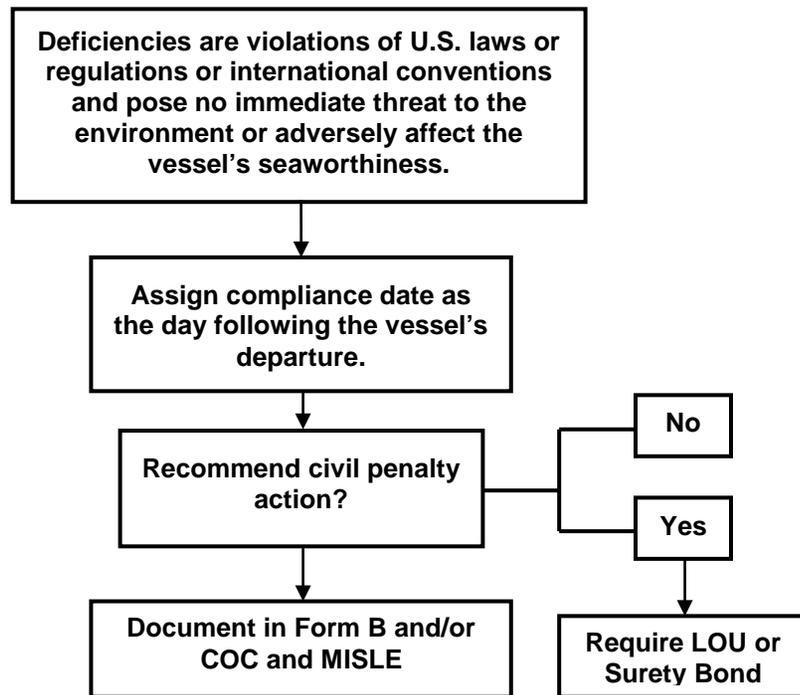
**(NO DETENTION)**



Examples include the following:

- Oil transfer procedures incomplete.
- Information on properties and hazards of cargoes not on board.
- High and low level alarms inoperative.

**Requires Corrective Measures Prior to Return to U.S. Waters**  
**(NO DETENTION)**



Examples include the following:

- Charts or nautical publications not currently corrected.
- Portable hoses have not been tested but appear in good condition.
- Actual location of safety equipment deviates from the vessel safety plan.
- Electrical fixtures in paint locker not appropriately certified for safe usage in hazardous location. (Operational controls, such as disconnecting the electrical power source or removing flammables from the space, may satisfactorily remove risk to vessel.)

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| <input type="checkbox"/> | 71. Examine Global Maritime Distress and Safety System (GMDSS) equipment | SOLAS 14 IV/8-11<br>IMO Res A.694(17)              |
| <input type="checkbox"/> | 72. Examine Long-Range Identification & Tracking (LRIT) equipment        | SOLAS 14 V/19-1 .4.1<br>CG-543 Guidance            |
| <input type="checkbox"/> | 73. Examine daylight signaling lamp                                      | SOLAS 14 V/19.2.2.2                                |
| <input type="checkbox"/> | 74. Examine internal means of communication                              | SOLAS 14 II-1/37                                   |
| <input type="checkbox"/> | 75. Examine accommodations   | ILO-147 p33/1-3 & 13<br>ILO-147 p34/12             |
| <input type="checkbox"/> | 76. Examine hospital space   | ILO-147 p38/27<br>COMDTINST 16711.12A 7(1)(e)      |
| <input type="checkbox"/> | 77. Examine galley   | ILO-147 p31/1(b)<br>COMDTINST 16711.12A 7(1)(f)    |
| <input type="checkbox"/> | 78. Examine refrigerator and dry food stores                             | ILO-147 p30/2<br>COMDTINST 16711.12A 7(1)(f)       |
| <input type="checkbox"/> | 79. Examine sanitation areas   | ILO-147 p36/18-20<br>COMDTINST 16711.12A 7(1)(d)   |
| <input type="checkbox"/> | 80. Examine vessel for general safety items                              | ILO-147 p45/3(b)<br>COMDTINST 16711.12A 7(1)©      |
| <input type="checkbox"/> | 81. Examine means of escape  | SOLAS 14 II-2/13.1<br>SOLAS 14 II-2/13.3.3         |
| <input type="checkbox"/> | 82. Avoid inadvertent entry into a confined space                        | 29 CFR 1915, Part B<br>MSM I/10                    |
| <input type="checkbox"/> | 83. Examine life jackets   | SOLAS 14 III/7.2.1.1<br>SOLAS 14 III/7.2.1.2       |
| <input type="checkbox"/> | 84. Examine immersion suits and stowage (when applicable)                | SOLAS 14 III/7.3<br>SOLAS 14 III/32.2 & .3         |
| <input type="checkbox"/> | 85. Examine line throwing appliance                                      | SOLAS 14 III/18<br>LSA Code 7.1.1.2                |
| <input type="checkbox"/> | 86. Examine pyrotechnics   | SOLAS 14 III/6.3                                   |
| <input type="checkbox"/> | 87. Examine quick-release life buoys                                     | SOLAS 14 III/7.1.3                                 |
| <input type="checkbox"/> | 88. Examine life buoys   | SOLAS 14 III/4<br>LSA Code 2.1.1                   |
| <input type="checkbox"/> | 89. Examine lifeboat   | SOLAS 14 III/31.1<br>SOLAS 14 III/31.2             |
| <input type="checkbox"/> | 90. Examine muster and embarkation stations                              | SOLAS 14 III/11.2 & .3<br>SOLAS 14 III/11.6        |
| <input type="checkbox"/> | 91. Examine inflatable liferafts and installations                       | SOLAS 14 III/4                                     |
| <input type="checkbox"/> | 92. Examine rescue boat  | SOLAS 14 III/31.2<br>LSA Code 5.1.1.1              |
| <input type="checkbox"/> | 93. Examine boat davits (rescue & lifeboat)                              | SOLAS 14 III/20.2 & .4<br>LSA Code Chapter 8       |
| <input type="checkbox"/> | 94. Examine general emergency systems                                    | SOLAS 14 III/6.4.2<br>LSA Code 7.2.1.1             |
| <input type="checkbox"/> | 95. Examine fire hose stations   | SOLAS 14 II-2/10.2.3.1.1<br>SOLAS 14 II-2/10.3.1.2 |
| <input type="checkbox"/> | 96. Examine international shore connection                               | SOLAS 14 II-2/15.2.4.1                             |
| <input type="checkbox"/> | 97. Examine fire-fighter's outfits                                       | SOLAS 14 II-2/15.2.4.1                             |

<input type="checkbox"/>	98. Examine portable fire extinguishers	SOLAS 14 II-2/15.2.4.1 SOLAS 14 II-2/20.6.2.1 MSM II/D.1.G.1.o(6)(a)
<input type="checkbox"/>	99. Examine Fire Control Plan	SOLAS 14 II-2/15.2.4.1
<input type="checkbox"/>	100. Examine areas for compliance with Structural Fire Protection (SFP) requirements	SOLAS 14 II-2/9.2.3 SOLAS 14 II-2/15.2.4.1
<input type="checkbox"/>	101. Examine fixed fire detection and alarm systems	SOLAS 14 II-2/7.4 & .5 SOLAS 14 II-2/14.2.1.1.2
<input type="checkbox"/>	102. Examine fixed fire detection and fire alarm systems (when applicable)	SOLAS 14 II-2/20.4.1 SOLAS 14 II-2/20.4.3
<input type="checkbox"/>	103. Examine space sealing capabilities with fixed fire extinguishing systems installed	SOLAS 14 II-2/20.6.1.1
<input type="checkbox"/>	104. Examine fire main system(s)	SOLAS 14 II-2/10.2.2.2
<input type="checkbox"/>	105. Examine the fixed pressure water-spraying and water mist fire extinguishing systems	SOLAS 14 II-2/10.4.1.1.3 SOLAS 14 II-2/10.4.4
<input type="checkbox"/>	106. Examine fixed high pressure CO2 system	SOLAS 14 II-2/10.4.1.1.1 MSM II/D.1.G.1.o(6)(a)
<input type="checkbox"/>	107. Examine low pressure CO2 fixed fire fighting system	SOLAS 14 II-2/10.4.1.1.1 MSM II/D.1.G.1.o(6)(a)
<input type="checkbox"/>	108. Examine fixed high-expansion foam fire extinguishing system	SOLAS 14 II-2/10.4.1.1.2 MSM II/D.1.G.1.o(6)(a)
<input type="checkbox"/>	109. Examine steering gear assembly and operation	SOLAS 14 II-1/29.1-.3
<input type="checkbox"/>	110. Examine arrangements for propulsion engine(s)	SOLAS 14 II-1/26.1
<input type="checkbox"/>	111. Examine main service generators and prime mover(s)	SOLAS 14 II-1/26.1
<input type="checkbox"/>	112. Examine emergency generator(s) and prime mover(s)	SOLAS 14 II-1/26.1 SOLAS 14 II-1/44.3
<input type="checkbox"/>	113. Examine machinery spaces	MSM II/D.1.G.1.c(2) IMO Res A.1052(27) Appendix 6/3.2
<input type="checkbox"/>	114. Examine transfer procedures (when applicable)	33 CFR 155.100 33 CFR 155.720
<input type="checkbox"/>	115. Examine bilge pumps installation, piping, and valves	SOLAS 14 II-1/35-1.2
<input type="checkbox"/>	116. Examine switchboards	SOLAS 14 II-1/40.1.3 SOLAS 14 II-1/45.2
<input type="checkbox"/>	117. Examine motor controllers	SOLAS 14 II-1/40
<input type="checkbox"/>	118. Examine controls and alarms for unattended machinery spaces (when applicable)	SOLAS 14 II-1/46.3
<input type="checkbox"/>	119. Examine general condition hull and structural members	ICLL 66 I/12-25 MSM II/D.1.G.1.b(1)
<input type="checkbox"/>	120. Examine structural/watertight integrity of the deck/hull	SOLAS 14 II-1/13-1.1 ICLL 66 I/12

**Nonconforming Vessel:** Any vessel that fails to comply with one or more applicable requirements of U.S. laws or international conventions. A non-conforming ship is not necessarily a substandard ship, unless the discrepancies endanger the ship, persons on board or present an unreasonable risk to the environment.

**Substandard Vessel:** In general, a vessel is regarded as substandard if the hull, machinery, or equipment, such as lifesaving, firefighting and pollution prevention, is substantially below the standards required by U.S. laws or international conventions, due to:

- The absence of required principal equipment or its arrangement;
- Gross noncompliance of equipment or equipment arrangement with required specifications;
- Substantial deterioration of the vessel structure or its essential equipment;
- Noncompliance with applicable operational and/or manning standards; or
- Clear lack of appropriate certification or demonstrated lack of competence on the part of the crew.

If the presence of any of these factors could endanger the ship, persons on board or present an unreasonable risk to the environment, the vessel is a substandard vessel.

**Valid Certificates:** A certificate that has been issued by a contracting government, party to a convention, or on the behalf of the government or party by a recognized organization; contains accurate and effective dates; meets the provisions of the relevant convention; and corresponds to the particulars of the vessel and its equipment.

## Section 5: Appendices

### Recommended Port State Control Procedures:

The following flowcharts contain information gleaned from the Marine Safety Manual Volume II, Section D, Chapter 1: General Aspects of Port State Control Examinations. The Port State Control Officer should be familiar with this section.

Considering the seriousness of the deficiencies, the OCMI or COTP must determine the appropriate control action to impose on these vessels to ensure the safety of the vessel, the port, and the environment. The degree of control imposed, as well as the authority used to exercise control, must be consistent with the nature of the deficiencies.

The following definitions and terms of reference are used in the MSM to describe key elements of Port State Control enforcement:

**Clear Grounds:** Evidence that the ship, its equipment or its crew do not correspond substantially to the requirements of the relevant conventions or that the master or crew members are not familiar with essential shipboard procedures relating to the safety of ships or the prevention of pollution.

**Control:** Control is the process of imposing a port state's or flag state's authority over a vessel to ensure that its structure, equipment, operation and crew meet applicable standards. The process is affected by any verbal or written directives from the OCMI/COTPs or their representatives, which require action or compliance by the vessel.

**Detention:** Detention is a control action that restricts a vessel's right of free movement. The imposition of a restriction on the movement of a vessel constitutes a detention regardless of whether or not a delay from a vessel's normal or expected itinerary occurs. Detentions may be carried out within port state control jurisdiction (U.S. waters  $\leq$  12NM) under the authority of the applicable international convention, the Ports and Waterways Safety Act (PWSA) or a Customs hold.

**Intervention:** An intervention is a control action taken by a port state in order to bring a foreign flag vessel into compliance with applicable international convention standards. Interventions may also be undertaken by a port state when a vessel's flag state has not, cannot or will not exercise its obligations under an international convention to which it is a party. This may include requesting information, requiring the immediate or future rectification of deficiencies, detaining the vessel or allowing the vessel to proceed to another port for repairs.

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| <input type="checkbox"/> | 121. Examine watertight doors and weathertight openings                            | SOLAS 14 II-1/15-1<br>SOLAS 14 II-1/16-1      |
| <input type="checkbox"/> | 122. Examine high stress and high impact areas                                     | SOLAS 14 XI-1/2<br>ESP Code 6                 |
| <input type="checkbox"/> | 123. Examine Loading Instrument and Loading Instrument User Manual                 | SOLAS 14 XII/11<br>IMO MSC.1/Circ. 1108       |
| <input type="checkbox"/> | 124. Confirm additional special requirements for carrying dangerous goods          | SOLAS 14 II-2/19.3.1                          |
| <input type="checkbox"/> | 125. Examine Oily Water Separator (OWS) and bilge monitor/alarm (OCM)              | MARPOL I/14<br>G-PCV Policy Ltr 06-01         |
| <input type="checkbox"/> | 126. Examine Marine Sanitation Device (MSD)  | 33 CFR 159.7<br>MARPOL IV/9                   |
| <input type="checkbox"/> | 127. Examine incinerator   | MARPOL Annex VI/16.6.1<br>IMO Res MEPC.76(40) |
| <input type="checkbox"/> | 128. Examine standard discharge connection   | 33 CFR 155.430<br>MARPOL I/13                 |
| <input type="checkbox"/> | 129. Examine paint lockers   | 46 CFR 147.45                                 |
| <input type="checkbox"/> | 130. Examine storage of oxygen and acetylene cylinders                             | 46 CFR 147.60(b)(1)                           |
| <input type="checkbox"/> | 131. Examine cargo ventilation system  | SOLAS 14 II-2/20.3.1.2.2                      |
| <input type="checkbox"/> | 132. Examine intermodal containers (spot check)                                    | SOLAS 14 VII/4 & 5<br>49 CFR 176.30           |
| <input type="checkbox"/> | 133. Verify compliance with Cargo Securing Manual (spot check)                     | SOLAS 14 VII/5<br>IMO MSC.1/Circ. 1353        |
| <input type="checkbox"/> | 134. Examine solid bulk cargo carriage requirements                                | IMSBC Code Appendix 1                         |
| <input type="checkbox"/> | 135. Evaluate fire drill   | SOLAS 14 III/19.3.2<br>SOLAS 14 III/19.5      |
| <input type="checkbox"/> | 136. Evaluate abandon ship drill   | SOLAS 14 III/19.3.4.1<br>MSM II/D.1.G.1.r(1)  |
| <input type="checkbox"/> | 137. Verify International Safety Management (ISM) compliance                       | IMO Res A.1052(17) 2.4<br>MSM II/D.1.G.2      |
| <input type="checkbox"/> | 138. Issue deficiency(s)   | MSM II/D.1.C.8                                |
| <input type="checkbox"/> | 139. Issue control action(s)   | MSM II/D.2.C                                  |
| <input type="checkbox"/> | 140. Verify deficiency corrections   | MSM II/D.1.G.3.f<br>CG-5437A/B                |
| <input type="checkbox"/> | 141. Complete Maritime Information for Safety and Law Enforcement (MISLE) Activity | MSM I/12.H<br>MISLE Work Instruction 3.b      |

