Uninspected Passenger Vessel Examiner Training

Session 3
Requirements
Tasks 3.1 – 3.4
Scope of Training & Major Tasks

*The presentation is provided in nine (9) sections which will allow ease for searching selected areas.*

This presentation does not alleviate or replace on the job training or additional requirements or training required by each Sector.

Additionally there are tasks, depending upon your AOR, that may not be applicable or present the opportunity for field experience however are documented in this presentation for your knowledge.

1. Introduction
   Application
      Task 1-1
2. Application
   Task 1.2
   Equivalents
      Task 2.1
      Task 2.2
Scope of Training & Major Tasks

Continued

3. Requirements
   Tasks 3.1 – 3.4
4. Requirements
   Tasks 3.5 – 3.10
5. Operations
   Tasks 4.1 – 4.7
6. Operations
   Tasks 4.8-4.12
7. General Housekeeping
   Tasks 5.1 – 5.8
8. Expanded Issues
9. Exercise Opportunities
Task 3.0

Requirements

Task 3.1 Navigation
Lights
Task 3.1a
46 CFR §25.10-3

- Navigation light certification requirements
  Marking on light – USCG followed by range
  i.e., “USCG 2nm”
- Sunrise to sunset, reduced visibility
- Running Lights
  - Side lights, masthead and stern
  - >50 meters, additional masthead
  - < 12 meters all around white light
  - Red over Red dive lights
- Sidelight screens
  - >20 meters, matte black
Navigation Lights

• Masthead light
  • White placed over fore and aft centerline
  • Facing forward with visibility arc of 225 degrees
  • Such masthead light or all-around light shall be carried at least 1 m higher than the sidelights.

• Red & Green sidelights
  • Visibility arc of 112.5 degrees

• Stern light
  • Facing aft with visibility arc of 135 degrees

NOTE: A power-driven vessel of less than 12m in length may in lieu of the lights prescribed may exhibit an all-around white light and sidelights.
Navigation Lights

• Sidelights

✓ Sailing vessels less than 20 meters may combine the required lights in one lantern carried at or near the top of the mast.

✓ The sidelights on a vessel of less than 20 meters in length may combine the prescribed lights in one lantern carried on the fore and aft centerline of the vessel.
Navigation Lights

• Screens

✓ The sidelights of vessels of 20 meters or more in length shall be fitted with matte black inboard screens and meet the requirements of § 84.17. On vessels of less than 20 meters in length, the sidelights, if necessary to meet the requirements of § 84.17, shall be fitted with matte black inboard screens. With a combined lantern, using a single vertical filament and a very narrow division between the green and red sections, external screens need not be fitted.

✓ On power-driven vessels less than 12 meters in length constructed after July 31, 1983, the masthead light, or the all-round light described in Rule 23(c) shall be screened to prevent direct illumination of the vessel forward of the operator's position.
Sidelights
Navigation Lights

• Vessels less than 20 meters using a combined lantern with a single filament and a narrow division between red and green sectors, external screens need not be fitted.

• The masthead light or the all-around light of a powered-driven vessel of less than 12 meters in length shall be carried at least one meter higher than the sidelights.
Task 3.2

Lifesaving Equipment

General Requirements

• Life jacket- Type I (only) PFD for each person aboard
• Commercial Hybrids
  • Worn, usage, labeled commercial
• Lights required on Life jackets on coastwise/ocean voyage, Coast Guard approved, appropriate battery and within expiration date.
Type I PFD Requirement

- 46CFR25.25-5(c) Each vessel carrying passengers for hire and each vessel 40 feet in length or longer not carrying passengers for hire must have at least one life preserver approved under subchapter Q of a suitable size for each person on board.

- Subchapter Q – 46CFR160.001-1
  (a) This subchapter contains the general:
    (1) Characteristics of life preservers (Type I) personal flotation devices (PFDs)
Therefore; each reference to a “life preserver” found in 46 CFR §25 is a TYPE I.

Other references other than TYPE I are as follows:

– TYPE II – Buoyant Vest
– TYPE III – Marine Buoyant Vest
General Requirements

• Stowage
  Approved stowed separate from work vests and readily accessible.
  Type I must be separate from all other PFDs on board.
Type I PFD

Retroreflective material
CO₂ Cylinders

Check the CO₂ cylinder
CO₂ cylinders can go rusty for a number of reasons.
The picture shows a rusty cylinder alongside a new cylinder.
Survival Craft

46 CFR §25.25-17

• Vessels 100GT or greater on an ocean voyage, must have a survival craft with capacity for all on board.

Depending upon your AOR, it is possible for an Uninspected Passenger vessel to have on board a life raft, therefore the following is for informational training purposes only.
Inflatable Life Rafts

• Consideration
  – Special Case – UPVs < 100 GT
  – Required – UPVs ≥ 100 GT
    • 46 CFR 25.25-17(a)(1)(2)(b)

• Characteristics
  – May or may not be USCG approved (< 100 GT)
  – Will have servicing requirements and documentation
    • Servicing report
    • Markings on container
  – Included equipment kits
    • Near Coastal, SOLAS B, SOLAS A
Best Practice
Inflatable Life Rafts

• UPVs <100 GT
  – Not required
  – For USCG approved rafts – verify proper installation
    • Owner/operator rectify any observed installation issues
  – Certificate of Inspection sheet should be onboard
  – Extra safety equipment not currently serviced or raft assembly appears damaged should be removed
  – Note any discrepancies found and condition
Inflatable Life Rafts

• USCG Approved when properly documented (inspected/examined)

• Note: This raft does not have a UL or USCG approval and does not meet the current requirements.
Inflatable Life Rafts
Inflatable Life Rafts

• Onboard installation
Inflatable Life Rafts

• How it works

- HRU Cuts Holding Strap Release
- Canister Floats To Surface
- Lanyard Activates Inflation Cylinder
- Weak Link Breaks Freeing Raft From Vessel
Inflatable Life Rafts

- Canister Marking
- Raft Service Document
Task 3.2a
46 CFR §25.25-15

Retroflective material PFD, Buoyant vest, or marine buoyant vest.

Retroflective Material

• 200 sq. cm. each front & back of PFD
• Examine material for deterioration, wearing, and discoloration.
Task 3.2b

USCG Approved Work Vests

• Safety apparel
• Worn by crew members
• Not accepted in lieu of required vests
• Stowed separately

Subpart 26.30—Work Vest

26.30-1 Approved unicellular plastic foam work vests.

(a) Buoyant work vests carried under the permissive authority of this subpart shall be of an approved type, and shall be constructed, listed, and labeled in accordance with subpart 160.053 of subchapter Q (Specifications) of this chapter.

26.30-5 Use.

(a) Approved buoyant work vests are considered to be items of safety apparel and may be carried aboard vessels to be worn by crew members when working near or over the water under favorable working conditions.

(b) When carried, approved buoyant work vests shall not be accepted in lieu of any portion of the required number of approved lifesaving appliances required by §25.25–10 of this subchapter.
Work Vest Stowage

• Work vests shall be stowed separately from the regular stowage of required lifesaving equipment.
Task 3.2d
46 CFR §25.25-5(d)

Ring Lifebuoy

At least one USCG approved ring lifebuoy if >26 feet.

- **Vessel > 26’**
  Minimum of one
  Approved
  24” diameter
  White or orange – orange required in International waters
  Retro tape

- **Vessel at least 100 gross tons**
  At least 3 ring life buoys
Ring Lifebuoy

46 CFR §25.25-5(d)
NOTE: Reference back to 46 CFR§ 25.25-5(b) & (c)
Life Rings - Required on vessels 26 feet or more in length.
You must have one 24" in diameter life ring with CG approval #160.050. It may be white or international orange.
(d) In addition to the equipment required by paragraph (b) and (c) of this section, each vessel 26 feet in length or longer must have at least one approved ring life buoy, and each uninspected passenger vessel of at least 100 gross tons must have at least three ring life buoys. Ring life buoys must be constructed per subpart 160.050 of part 160 of this chapter. The exception is a ring life buoy that was approved prior to May 9, 1979, under former subpart 160.009 of part 160 of this chapter (see 46 CFR chapter I, revised as of October 1, 1979), which may be used as long as it is in good and serviceable condition.
Ring Buoy

- Equipment designed to be thrown must be **Immediately Available**

Task 3.2e

46 CFR §25.25-9(b)
Task 3.2f
46 CFR §25.25-11

Clean & Serviceable Condition

✓ Clean with warm water and mild soap.
✓ Serviceable Condition
  – No deterioration
  – No broken hardware
  – Webbing & straps secure & not torn
  – Buoyant material
Task 3.3

Emergency Position Indicating Radio Beacons (EPIRB)

Task 3.3a
46 CFR §25.26-10

State when an EPIRB is required on a UPV
EPIRB
Emergency Position Indicating Radio Beacon

EPIRBs are for use in maritime applications and are Recommended for all UPV’s. The 406 MHz EPIRBs are divided into two categories.

Category I EPIRBs are activated either manually or automatically. The automatic activation is triggered when the EPIRB is released from its bracket. The unit is housed in a special bracket equipped with a hydrostatic release. This mechanism releases the EPIRB at a water depth of 3-10 feet. The buoyant EPIRB then floats to the surface and begins transmitting. For Category I EPIRB, it's very important the unit be mounted outside the vessel's cabin where it will be able to "float free" of the sinking vessel.

EPIRB – Cat 1, 406 MHz REQUIRED if:
- Vessel is at least 100GT and
- Operates beyond 3 miles from shore.

Category II EPIRBs are activated manually or through immersion in water. It should be stored in the most accessible location on board where it can be quickly accessed in an emergency.
How does a EPIRB Work
406 MHz EPIRBs work with the Cospas-Sarsat polar orbiting satellite system, giving true global coverage. There is an alert delay of about 45 minutes dependent on when the satellites come into view on the horizon.

The satellite can determine the position of your EPIRB to within 5km (3 miles). The coded message identifies the exact vessel to which the EPIRB is registered. This information allows the rescue services to eliminate false alerts and launch an appropriate rescue.

GPS-enabled EPIRBs have a built-in transmitter which will typically alert the rescue services within 3 minutes and to a positional accuracy of +/- 50 metres (updated every 20 minutes) given a clear view skywards.

Some EPIRBs also have a secondary distress transmitter. This transmits on 121.5 MHz and is used for "homing" purposes. When the rescue services get close, this allows them to direction find on the signal. Some EPIRBs also have a high brightness LED flashing light that aids final visual location.
Mounting of Category I Unit

Fitted in an unobstructed ‘float free’ mounting and positioned away from any overhead obstructions to reduce the risk of the EPIRB becoming trapped when released.

Mounting Arrangements

Vertically - Upright  Horizontal – Flat on Deck  Side Mounted
Inspection of EPIRB’S

Hydrostatic Release Unit (HRU) Expiration Date

If the EPIRB is retained in its mount or casing by an HRU, then the expiration date or service date label on the HRU should be noted and clearly visible. The HRU must be replaced every 2 years including any associated plastic bolts, rods, springs, and/or spacing washers. The HRU should be free of any signs of corrosion, cracking, water ingress, etc. Any damage should be repaired in accordance with the manufacturers procedures or replaced.
Checking for Physical Damage and Condition of Lanyard

The EPIRB should be examined thoroughly for any physical damage. If there appears to be any damage, corrosion, cracking, water ingress, etc. The EPIRB should be replaced immediately.

The EPIRB lanyard – presence of a firmly attached lanyard in good condition should also be verified. The lanyard should be neatly stowed, and must not be tied to the vessel or the mounting bracket.
EPIRB Registration
http://www.beaconregistration.noaa.gov/

• New or a used 406 MHz EPIRBs must be registered with NOAA.

• If the boat is sold, the purchaser must re-register the EPIRB with NOAA. Often NOAA will contact the previous owner to insure that a transfer has occurred.
An inspection of the EPIRB registration and decal from NOAA

Current registration *must* be on board and the decal should be properly placed on the unit and clearly visible. If there appears to be any damage to the decal, NOAA should be notified immediately. U.S. law required that all 406 MHz EPIRB’s *must* be properly registered with NOAA.

Every two years NOAA will seek an update of the registration information to ensure accuracy.

However, if at anytime the registration information does change (such as a new phone number, new address, new emergency contact, etc.) NOAA *must* be informed immediately.
The expiration date of the EPIRB’s battery should also be inspected. This is usually given on the EPIRB manufacturer's label or on another plate affixed to the EPRB. Battery life for most EPIRB’s is five (5) years. The battery must be replaced on or before the expiration date or if the EPIRB has been used in an emergency regardless of the length of time. EPIRB batteries are designed to operate the beacon for a minimum of 48 hours and therefore must always be fully charged.
After the EPIRB has been properly inspected, a self-test of the EPIRB can be conducted following the instructions provided by the manufacturer. Most EPIRBs have a visible test switch that is usually spring loaded so it cannot be left on inadvertently and thus reduce the life of the battery. A light will indicate that the test circuits are operating correctly. Sometimes this light will also activate the strobe light. It is recommended that the self-test switch be held for no more than 2 flashes of the strobe light or no longer than 1 minute after the first self-test mode burst transmission.
Self-Test Continued

When operating a 406 MHz EPIRB self-test, the EPIRB is allowed to radiate a single burst which is specially coded so that it is ignored by the COSPAS-SARSAT system.

*The EPIRB must never be tested by actual operation.*

If it is accidentally activated in the transmit mode, then it should be turned off at once and the false alert cancelled by calling the nearest U.S. Coast Guard Station and have them contact the nearest Rescue Coordination Center.
Task 3.4a
33 CFR §151.67
Review vessels compliance with disposal of plastics.
MARPOL

No person on board any ship may discharge into the sea, or into the navigable waters of the United States, plastic or garbage mixed with plastic, including, but not limited to, synthetic ropes, synthetic fishing nets, and plastic garbage bags. All garbage containing plastics requiring disposal must be discharged ashore or incinerated.
Garbage Pollution Prevention

Garbage discharge into U.S. navigable waters prohibited.

No person may discharge garbage into U.S. navigable waters.
Task 3.4c
46 CFR §151.59

Describe when and what placard is required
Simplified overview of the discharge provisions of the revised MARPOL Annex V (resolution MEPC.201(62)) which will enter into force on 1 January 2013 (for more detailed guidance regarding the respective discharge requirements please refer to the text of MARPOL Annex V or to the 2012 Guidelines for the Implementation of MARPOL Annex V)


The Marine Environment Protection Committee (MEPC) of IMO, at its sixty-second session in July 2011, adopted the Revised MARPOL Annex V concerning Regulations for the prevention of pollution by garbage from ships, which enters into force on 1 January 2013. The associated Guidelines which assist States and industry in the implementation of MARPOL Annex V have been reviewed and updated and two Guidelines were adopted in March 2012 at MEPC’s sixty-third session.
Marine Trash Placard Requirement

- **Applicability** - UPVs ≥ 26 feet in registered / documented length (33 CFR 151.51 (e), Feb 29, 2013)

- **33 CFR §151.59 says:** Feb 29, 2013
  
  (a) The master ... of a ship ... shall ensure that one or more placards ...are displayed in prominent locations and in sufficient numbers so that they can be read by the crew and passengers. These locations must be readily accessible to the intended reader ...
  
  (b) Each placard must be at least 20 cm (8 in) wide by 12 1/2 cm (5 in) high, made of a durable material, and legible. (i.e., 40 sq. in vice old 36 sq. in)
It is illegal for any vessel to dump plastic trash anywhere in the ocean or navigable waters of the United States. Annex V of the MARPOL TREATY is a new International Law for a cleaner, safer marine environment. Each violation of these requirements may result in civil penalty up to $25,000, a fine up to $50,000, and imprisonment up to 5 years.

U.S. lakes, rivers, bays, sounds, and 3 miles from shore
ILLEGAL TO DUMP:
- Plastic
- Paper
- Rags
- Glass
- Food

Dunnage (lining & packing materials that float)
Also, if not ground to less than one inch:
- Garbage
- Metal
- Crockery
- Plastic

Outside 25 miles
ILLEGAL TO DUMP:
- Plastic
- Dunnage (lining & packing materials that float)

Working together we can all make a difference!
<table>
<thead>
<tr>
<th>Type of Garbage</th>
<th>Ships Outside Special Area</th>
<th>Ships In Special Area</th>
<th>Offshore Platforms (more than 12 nm from land and all ships within 500 m of such platforms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food wasted comminuted or ground</td>
<td>Discharge Permitted: &gt; 3 nm from the nearest land, en route and as far as practicable</td>
<td>Discharge Permitted: &gt; 12 nm from the nearest land, en route and as far as practicable</td>
<td>Discharge Permitted</td>
</tr>
<tr>
<td>Food waste not comminuted or ground</td>
<td>Discharge Permitted: &gt; 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(1) not contained in wash water</td>
<td>Discharge Permitted: &gt; 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(2) not contained in wash water</td>
<td>Discharge Prohibited: &gt; 12 nm from the nearest land, en route and as far as practicable</td>
<td>Discharge Prohibited: &gt; 12 nm from the nearest land, en route and as far as practicable &amp; subject to two additional conditions (2)</td>
<td>Discharge Prohibited</td>
</tr>
<tr>
<td>Cleaning agents &amp; additives (1) contained in cargo hold wash water</td>
<td>Discharge Permitted</td>
<td>Discharge Permitted: &gt; 12 nm from the nearest land, en route and as far as practicable &amp; subject to two additional conditions (2)</td>
<td>Discharge Prohibited</td>
</tr>
<tr>
<td>Cleaning agents &amp; additives (1) contained in deck &amp; external surfaces wash water</td>
<td>Discharge Permitted</td>
<td>Discharge Permitted: &gt; 12 nm from the nearest land, en route and as far as practicable &amp; subject to two additional conditions (2)</td>
<td>Discharge Prohibited</td>
</tr>
<tr>
<td>Carcasses of animals carried onboard as cargo &amp; which died during 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*</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>
# Simplified Overview of Discharge Provisions

**MARPOL ANNEX V**

*2012 Edition (Effective January 1, 2013)*

<table>
<thead>
<tr>
<th>Type of Garbage</th>
<th>Ships Outside Special Areas</th>
<th>Ships Within Special Areas</th>
<th>Offshore Platforms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food waste comminuted or ground</td>
<td>Discharge permitted ≥ 3 nautical miles from the nearest land and en route</td>
<td>Discharge permitted ≥ 12 nautical miles from the nearest land and en route</td>
<td>Discharge permitted ≥ 12 nautical miles from the nearest land</td>
</tr>
<tr>
<td>Food waste <em>NOT</em> comminuted or ground</td>
<td>Discharge permitted ≥ 12 nautical miles from the nearest land and en route</td>
<td>Discharge prohibited</td>
<td>Discharge prohibited</td>
</tr>
<tr>
<td>Cargo residues contained in wash water and not harmful to the marine environment</td>
<td>Discharge permitted ≥ 12 nautical miles from the nearest land and en route</td>
<td>Discharge only permitted in specific circumstances and ≥ 12 nautical miles from the nearest land and en route (See Annex V 6.1.2)</td>
<td>Discharge prohibited</td>
</tr>
<tr>
<td>Cargo residues <em>NOT</em> contained in wash water and not harmful to the marine environment</td>
<td>Discharge prohibited</td>
<td>Discharge prohibited</td>
<td>Discharge prohibited</td>
</tr>
<tr>
<td>Cleaning agents and additives contained in cargo hold wash water and not harmful to the marine environment</td>
<td>Discharge permitted</td>
<td>Discharge only permitted in specific circumstances and ≥ 12 nautical miles from the nearest land and en route (See Annex V 6.1.2)</td>
<td>Discharge prohibited</td>
</tr>
<tr>
<td>Cleaning agents and additives contained in deck and external surfaces wash water and not harmful to the marine environment</td>
<td>Discharge permitted</td>
<td>Discharge permitted</td>
<td>Discharge prohibited</td>
</tr>
<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, domestic wastes, cooking oil, incinerator ashes, operational wastes and fusing gear</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>Discharge prohibited</td>
<td>Discharge prohibited</td>
</tr>
</tbody>
</table>

Discharge of any type of garbage must be entered in the Garbage Record Book. For more detailed guidance please consult the 2012 Guidelines for the Implementation of MARPOL, Annex V.
Marine Trash Pollution

• 33 CFR §151.69 (Feb 28, 2013)
  – 100 nautical miles and the maximum water depth possible for animal carcasses.
  – Mixtures of garbage having different discharge requirements
    • Retained onboard, or
    • Discharged per the more stringent requirement
Garbage Pollution Prevention

• Ocean going UPVs equal to or greater than 40 feet must have a written waste management plan. 33 CFR §151.57

• Include:
  – Who is responsible for the garbage
  – How shall it be collected
  – How is it to be stowed
  – How is it to be disposed of
Marine Trash Review

- **33 CFR §151.05** (Feb 28, 2013)
  - *Garbage* means all kinds of food wastes, domestic wastes and operational wastes, all plastics, cargo residues, cooking oil, fishing gear, and animal carcasses generated during the normal operation of the ship and liable to be disposed of continuously or periodically …

- **33 CFR §151.67** (May 2, 1990)
  - Discharge of plastic prohibited

- **33 CFR §151.69** (Feb 28, 2013)
  - Operating requirements:
    - Discharge of garbage outside special areas.
    - >12 nm for unground food wastes
    - > 3 nm from nearest land for ground food wastes
      - Screen with openings no greater than 25 millimeters (one inch)

- **33 CFR §151.75.** (Feb 28, 2013)
You have completed Session 3

Requirements

Document and save information in a folder as it will assist you as you work toward status as a UPV Examiner.

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