



Making waves

IVSS CAMPAIGN MAY 2025



Table of Contents

01. USCG PORTSECURITY ADVISORY
02. GPS INTERFERENCE
03. CYBER SECURITY
04. KARCO TRAINING
05. RIOTINTO – HSE NOTIFICATION – HEAD INJURIES
06. MEDITERRANEAN ECA
07. USE OF THE LATEST VERSION OF COMPANY FORMS
08. RIGHTSHIP SECTION 7A – FUEL MANAGEMENT
09. TAKE OWNERSHIP AND BE VIGILANT
10. SEWAGE SYSTEM

1. USCG PORTSECURITY ADVISORY

Please find attached Port Security Advisory (1-25) issued by USCG.

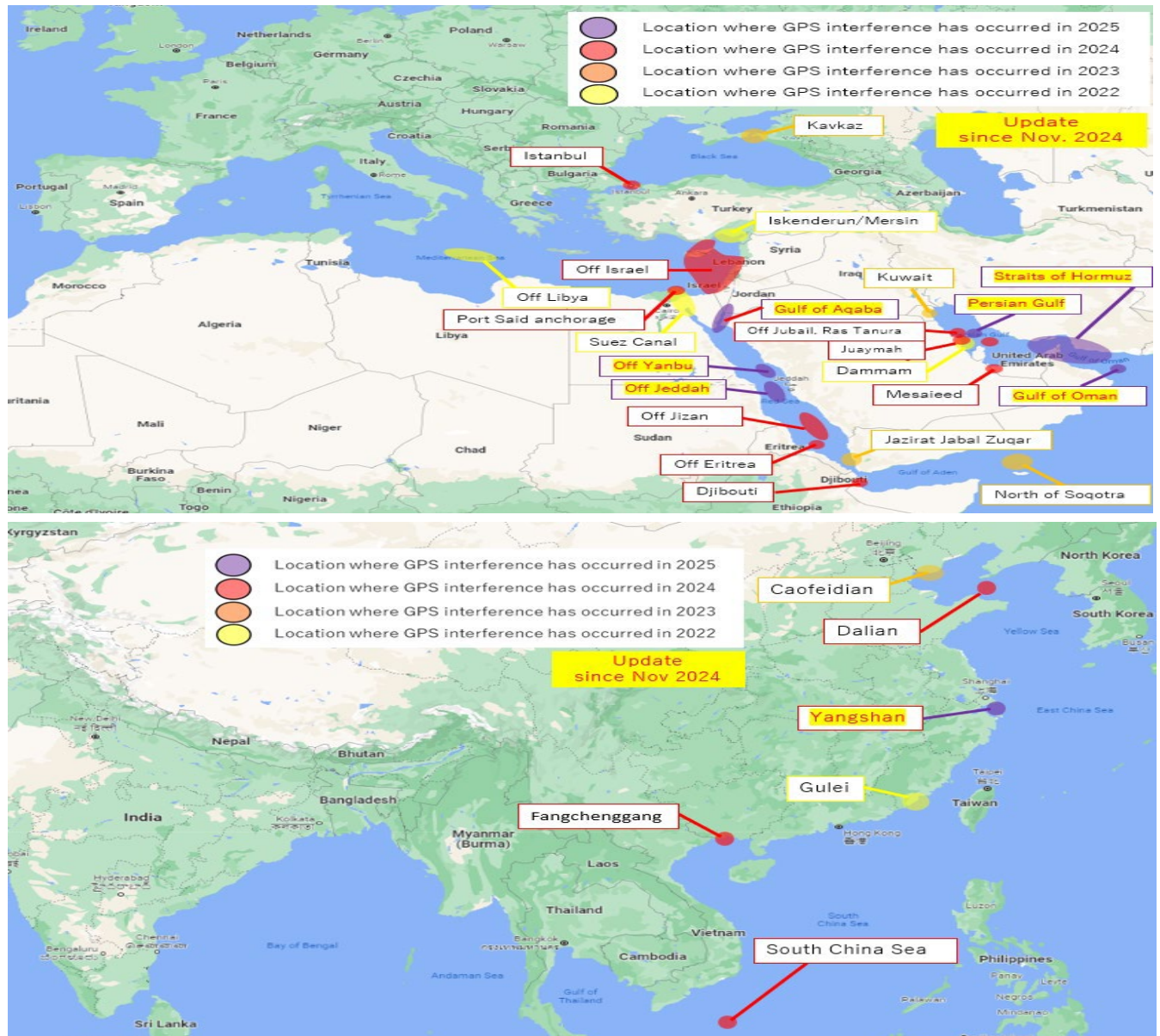
Vessels arriving to the United States that visited the countries listed in paragraph B (with exceptions noted) during their last five port calls must comply with the requirements mentioned in Section C.

Kindly discuss the attached advisory with all deck officers and ratings.

2. GPS INTERFERENCE

Numerous cases of GPS interference have been reported from vessels, particularly in the waters around the Strait of Hormuz and in the waters around Israel and Cyprus in the Eastern Mediterranean in relation to the conflict between Israel and the Palestinian group Hamas. These interferences are resulting in lost or inaccurate GPS signals affecting bridge navigational equipment.

The map below shows areas of GPS interference that occurred from 2022 to 2025.



A GPS positioning failure is caused not only by the failure of the satellite itself, but also by cases of jamming and spoofing.

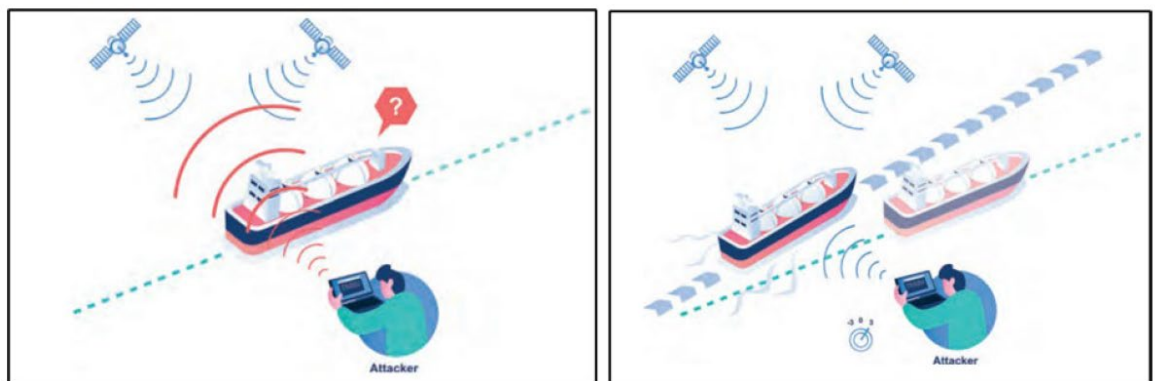
- **Jamming** is caused by interference by noise or radio waves of the same frequency as the GPS. Signal reception will be obstructed at the GPS receiver, so that information on the ship's position, course/speed, and time cannot be obtained. Alarms will sound from the navigation equipment receiving GPS signals, making it easy to realize jamming is occurring
- **Spoofing** is a problem where a GPS receiver is deceived on receiving a fake external GPS signal. The position, course, speed, and time information are in a state where incorrect information is output, and an incorrect position is displayed on the ECDIS. There is a high risk of spoofing triggering a collision or grounding.

【 Reference images 】

Jamming

/

Spoofing



Vessels are strongly requested to pay special attention to unexpected GPS positioning failure when navigating in these areas.

Actions to detect GPS spoofing and jamming should include the use of radar and ECDIS overlay which are by far the best methods to identify jamming and spoofing when land is visible on the radar.

Use the parallel indexing method during coastal navigation to keep safe distances and determine turning waypoints.

Also the positions shall be verified at appropriate intervals as laid out in the Nautical manual.

3. CYBER SECURITY

The Office will be sending video training links to each vessel along with the instructions by email. Once received all crew on board shall view the cybersecurity videos.

Typically, the video's will be made available on the Master's Laptop, CEO's PC and Admin 1 pc. We propose that the Engine Dept. must watch the video on the CEO's PC likewise the Deck Dept. will watch on Admin 1.

The Office will be providing details of the video to be viewed shortly. A poster will also be made available to be displayed.

4. KARCO TRAINING

The ship staff shall conduct the following training modules this month:

- VETTING THE BRIDGE
- RISK ASSESSMENT AND MITIGATION
- SAFETY FAMILIARIZATION ON JOINING OF VESSEL ENCLOSED SPACE ENTRY -PERILS AND PRECAUTIONS

The duration of each title is only about 10-15 minutes.

Training must be carried out in two sessions (based on work/rest hours) to ensure all crew are able to attend. Each session must be opened and concluded by a Senior Officer.

After the training, the Senior Officer should have an interactive session with the crew, discuss questions and the crew can also share their experience (Reflective learning). Once the training is completed, each crew shall log on individually and an assessment must be completed, and the records must be exported to KARCO system.

The Master can contact IT department and support team (support@karcoservices.com) for any queries regarding KARCO.

Records of training to be maintained in form 3.2.3

5. RIOTINTO - HSE NOTIFICATION – HEAD INJURIES

Recent reports on crew injuries indicate an increasing trend of head injuries, especially during routine maintenance/operational activities. In the attached HSE Notification RIOTINTO has shared three of these cases. Kindly discuss the case studies with all the crew at next opportunity.

Also note that on one of our Company managed vessel, the 3EO suffered a head injury which could have been averted if he had worn the helmet.



Ensure helmet is worn when always working in the engine room even if the temperature is high and the crew feel uncomfortable. Ship staff should note that Safety always takes priority over comfort.

As a safety follow-up, please consider the following:

- Raise awareness amongst the ship staff of head-related incidents and remind using the Stop Work Authority for any potential unsafe acts and/or conditions.
- Proper workplan meetings and toolbox talks prior planned jobs, proper assessment of hazards and mitigating measures, and debrief after work is completed.
- Emphasize the importance of adequate supervision during work.

6. MEDITERRANEAN ECA

Please note that the Mediterranean Sea becomes a Sox ECA from 1 May 2025.

Resolution MEPC.361(79), will prohibit ships operating within the Mediterranean Sea ECA from using fuel oils with a Sulphur content exceeding 0.1% m/m

Please inform operators / charterers and plan for your bunkers accordingly well in time (if transiting this area).

Refer attached LR circular which clearly specifies the coordinates for change over.

7. USE OF THE LATEST VERSION OF COMPANY FORMS

Kindly discuss the points below with all officers onboard at the next opportunity:

- SMS forms are being updated regularly by company as part of continual improvement process. Each form has a control number, revision number and date.
- All SMS forms used by ship staff shall be of latest version.
- The latest version can be obtained from company SHEQ system.
- Forms brought while signing off from previous vessel should not be used as they may not be of latest version.
- Forms saved in previous month end folders, personal folders etc shall also not be used as they may not be of latest version.
- The habit of just changing the date and making some minor changes from previous month end /quarterly reports etc and sending to company is unacceptable.
- Do not print and save blank forms in the respective file for further use as the forms may not be of latest version by the time they are put in use
- Departmental heads shall ensure that only latest version of forms are used onboard.
- Uncontrolled / obsolete SHEQ forms shall be deleted from all computers onboard.
- Contents of any controlled form should not be changed by ship staff.
- Senior officers shall ensure that latest version of SHEQ forms are replicated on all computers onboard
- Any issues with latest version of forms shall be reported to company
- Use of obsolete forms can result in nonconformities during internal / external audits

8. RIGHTSHIP SECTION 07-A – FUEL MANAGEMENT

RIGHTSHIP has commenced inspection of dry vessels using their checklist (RISQ) which is uploaded on the landing page of SHEQ.

There are 17 chapters in the RIGHTSHIP questionnaire.

The Company will send guidance for each section as part of the monthly campaign.

For this month, the Master shall go through the attached **“FUEL MANAGEMENT”** checklist with all officers and ensure that the vessel is in compliance with all the items.

Please revert to the Marine Superintendent / Ship Manager with any queries or sections that your vessel does not fully comply with.

9. TAKE OWNERSHIP AND BE VIGILANT

Over the past few months, we have experienced a significant increase in external inspections across the fleet. With more eyes on board, we've had opportunities to view our vessels from fresh perspectives and while that brings its advantages, it has also uncovered some concerning trends.

Several serious defects have been identified—not by us, but by third-party personnel:

- Severe damage to crane jibs
- Deep indentations in the shell plating
- Worn-out or damaged winches
- Compromised hatch covers

These are not minor oversights. These are critical issues that directly affect the safety of our vessels, the integrity of our operations, and the well-being of everyone onboard. Most troubling is that these issues were not reported internally. In many cases, we heard the same response: “We didn't notice.” But the truth is, we should be noticing.

We have a strong Planned Maintenance System in place. Routine rounds are made. Equipment is regularly operated. So how are we still missing major defects?

When an officer walks the jetty to read the drafts, is it not second nature to glance at the side shell?

When a windlass screeches like a train gone off the rails, doesn't that sound call for action?

We're a team and like any good team, we depend on each other. If something can't be addressed onboard, speak up. There is nothing we can't deal with, but we need to know about it - There is no issue that is too big or too small to bring forward.

This isn't just about checklists or maintenance, it's about ownership. It's about looking out not just for your section or your task, but for the vessel as a whole, and for the safety of everyone on board and reminding each other.

Please discuss this section at your next Safety Meeting.

If you need clarification, want to report something, or simply need to talk, please reach out to any member of our shore-based team.

10. SEWAGE SYSTEM

Please find attached Sewage questionnaire for carrying out the checks on the sewage system issued by Marshall Island flag.

Please check each item paying attention in detail and send the completed checklist to Ship Manager.



February 2025

05/2025: New Emissions Control Areas for Mediterranean Sea, Canadian Arctic and Norwegian Sea

Applicability: shipowners, ship operators, ship managers and ship masters.

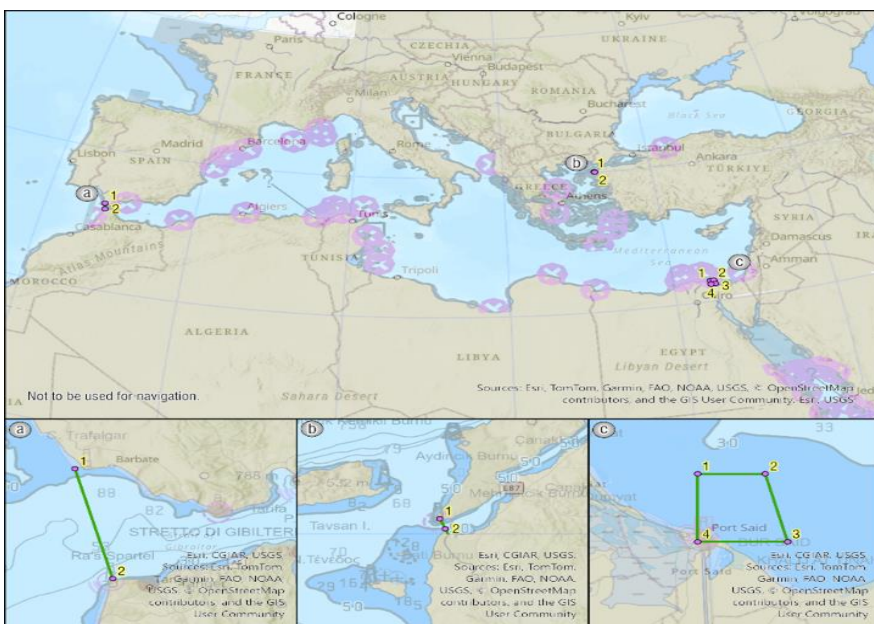
The IMO has adopted amendments to MARPOL Annex VI which introduce three new Emissions Control Areas (ECAs) for nitrogen oxides (NOx) and sulphur oxides (SOx).

The following new areas will require ships to comply with reduced emissions limitations:

- Mediterranean Sea (SOx)
- Canadian Arctic (NOx and SOx)
- Norwegian Sea (NOx and SOx)

These ECAs are defined in the regulations and are illustrated in below charts:

Mediterranean Sea - In the below chart, the numbered points relate to the corresponding coordinates given in the regulations.



05/2025: New Emissions Control Areas for Mediterranean Sea, Canadian Arctic and Norwegian Sea

Lloyd's Register Group Limited (Reg. no.08126909) is a limited company registered in England and Wales. Registered office: 71 Fenchurch Street, London, EC3M 4BS, UK. A member of the Lloyd's Register group. Lloyd's Register is a trading name of Lloyd's Register Group Limited and its subsidiaries. For further details please see www.lr.org/entities © Lloyd's Register Group Limited. 2025.



Canadian Arctic - In the below chart, the numbered points relate to the corresponding coordinates given in the regulations.



Norwegian sea - In the below chart, the numbered points relate to the corresponding coordinates given in the regulations.



Mediterranean Sea becomes a SOx ECA from 1 May 2025

From this date, amendments to MARPOL Annex VI Regulation 14.3.5, as amended by IMO Resolution [MEPC.361\(79\)](#), will prohibit ships operating within the Mediterranean Sea ECA from using fuel oils with a sulphur content exceeding 0.1% m/m unless an approved equivalent arrangement is used such as Exhaust Gas Cleaning Systems.

Canadian Arctic and Norwegian Sea become NOx ECAs from 1 March 2026

From this date, in accordance with MARPOL Annex VI Regulations 13, as amended by IMO Resolution [MEPC.392\(82\)](#), ships operating in either the Canadian Arctic ECA or Norwegian Sea ECA with a marine diesel engine with power output of more than 130kW are required to be certified to the NOx Technical Code 2008 to meet the NOx Tier III standard, as follows:

- For the Canadian Arctic ECA, ships with keels laid or at a similar stage of construction on or after 1 January 2025.

05/2025: New Emissions Control Areas for Mediterranean Sea, Canadian Arctic and Norwegian Sea

Lloyd’s Register Group Limited (Reg. no.08126909) is a limited company registered in England and Wales. Registered office: 71 Fenchurch Street, London, EC3M 4BS, UK. A member of the Lloyd’s Register group. Lloyd’s Register is a trading name of Lloyd’s Register Group Limited and its subsidiaries. For further details please see www.lr.org/entities © Lloyd’s Register Group Limited. 2025.



- For the Norwegian Sea ECA:
 - Ships with a building contract placed on or after 1 March 2026
 - In absence of a building contract, ships with keels laid or at a similar stage of construction on or after 1 September 2026; or
 - The delivery is on or after 1 March 2030

Canadian Arctic and Norwegian Sea become SOx ECAs from 1 March 2027

From this date, amendments to MARPOL Annex VI Regulations 14.3.6 and 14.3.7, as amended by IMO Resolution MEPC.392(82), will prohibit ships operating within either the Canadian Arctic ECA or Norwegian Sea ECA from using fuel oils with a sulphur content exceeding 0.1% m/m unless an approved equivalent arrangement is used such as Exhaust Gas Cleaning Systems.

LR advises that ship owners and ship operators are aware of three new Emissions Control Areas (ECAs) for nitrogen oxides (NOx) and sulphur oxides (SOx).

Ships operating in or entering the new SOx ECAs on or after their effective dates, will need to have on board sufficient compliant fuel oil (0.1% m/m maximum sulphur content) and bring it into use as required, or have installed and operate an approved alternative compliance mechanism, such as an Exhaust Gas Cleaning System.

Ships entering the new SOx ECAs before these dates, which intend to stay in them after the relevant ECA enters effect, will need to ensure that compliant fuel oil is brought into use no later than 00:00 hrs on the effective date. Lloyd's Register recommends that this fuel change-over is recorded in the same way as if the ship was entering an ECA.

Existing ECAs

The existing NOx and SOx ECAs are as follows:

- North American area
- United States Caribbean Sea area
- Baltic Sea area, and
- North Sea area

For further information

For further information or advice, please get in touch with statutorysupport@lr.org.

05/2025: New Emissions Control Areas for Mediterranean Sea, Canadian Arctic and Norwegian Sea

Lloyd's Register Group Limited (Reg. no.08126909) is a limited company registered in England and Wales. Registered office: 71 Fenchurch Street, London, EC3M 4BS, UK. A member of the Lloyd's Register group. Lloyd's Register is a trading name of Lloyd's Register Group Limited and its subsidiaries. For further details please see www.lr.org/entities © Lloyd's Register Group Limited. 2025.





Port Security Advisory (1-25)

A. Background:

The Maritime Transportation Security Act of 2002 (MTSA) requires the U.S. Coast Guard evaluate the effectiveness of anti-terrorism measures in commercial foreign ports. If these ports are deemed inadequate, the MTSA authorizes the Coast Guard to impose conditions on vessels arriving from such locations to ensure the safety of U.S. waters (MTSA, 46 U.S.C. §§ 70108 - 70110).

46 U.S.C. § 70108, as amended by the 2024 National Defense Authorization Act, states that the Department of Homeland Security shall deem any port under the jurisdiction of a foreign government that is a state sponsor of terrorism as not having effective anti-terrorism measures, and apply the sanctions described in 46 U.S.C. § 70110(a) to such a port.

In accordance with 46 U.S.C. § 70108, as amended, and the Department of State's designation of the Republic of Cuba as a State Sponsor of Terrorism, the Coast Guard has determined that Cuba is not maintaining effective anti-terrorism measures in its ports. This determination does not apply to U.S. Naval Station Guantanamo Bay.

Actions required as listed in paragraphs C and D of this Port Security Advisory take effect for all commercial vessels that arrive in the United States on or after April 2, 2025, after visiting ports in Cuba (excluding U.S. Naval Station Guantanamo Bay) as one of their last five ports of call.

B. Countries Affected:

The Coast Guard has determined that ports in the following countries are not maintaining effective anti-terrorism measures:

Cambodia

Cameroon

Exceptions	IMO Port Number
Ebome Marine Terminal	CM394-0001
Quai GETMA (LAMNALCO Base) Facility	CMDLA-0005
Société Nationale de Raffinage (SONARA) Terminal (also known as Cap Limboh Terminal)	CMLIT-0001
Kome-Kribi 1	CM234-0001
Douala International Terminal (also known as Douala Containers)	CMDLA-0002
Moudi Terminal	CMMOU-0001

**U.S. Department of
Homeland Security
United States
Coast Guard**



**International Port Security Program
U.S. Coast Guard**

Comoros

Cuba

Djibouti

Exceptions	IMO Port Number
Doraleh Container Terminal	DJJIB - 0002
Doraleh Oil Terminal (Horizon)	DJJIB - 0004

Equatorial Guinea

Exceptions	IMO Port Number
Ceiba	GQ362-0001/0002
K-5 Oil Center	IMO number not listed
Luba	GQLUB-0001
Punta Europa Terminal	GQ368-0001
Zafiro Marine Terminal	GQ370-0001

Federated States of Micronesia

The Gambia

Guinea-Bissau

Iran

Iraq

Exceptions	IMO Port Number
Al-Basrah Oil Terminal (ABOT)	IMO number not listed
Khor Al Amaya Oil Terminal (KAAOT)	IMO number not listed

Libya

Madagascar

Exceptions	IMO Port Number
Toamasina (also known as Tamatave)	MGTMM-0001

Nauru



Nigeria

Exceptions	IMO Port Number
APAPA Bulk Terminal, formerly APP Apapa Bulk Terminal	NGLOS-0010
APM Terminal, formerly APP AP Moller Terminal	NGLOS-0008
Bert Operation Platform	NGEKE-0002
Bonny River Terminal, formerly BON Bonny River Terminal	NGBON-0003
Escravos BOP	NGWAR-0027
Federal Lighter Terminal (FLT) Onne, formerly ONN FLT	NGPHC-0055
Federal Ocean Terminal (FOT) Onne, formerly ONN FOT	NGPHC-0056
Five Star Logistics Terminal, formerly TIN FSL	NGLOS-0007
FSO YOHO, formerly CBQ FSO YOHO (Exxon Mobile)	NGEKE-0001
GDNL Terminal, formerly APP Greenview Terminal	NGLOS-0014
Intels Nigeria Limited Terminal	NGCBQ-0041
LPG FSO	NGWAR-0028
MRS Oil Gas Jetty, formerly TIN DANTATA	NGLOS-0013
Nigerdock Jetty	NGLOS-0009
Port and Cargo Handling Terminal, formerly TIN PTML Terminal C	NGLOS-0021
Port and Terminal Multiservices Ltd, formerly TIN PTML Terminal E	NGLOS-0040
Shell Bonny Oil & Gas Terminal, formerly BON NLGN Bonny Terminal	NGBON-0005
Shell Export Terminal Forcados	NGWAR-0029
Shoreline Logistics Jetty, formerly CBQ Logistics Base Terminal	NGCBQ-0043
Tincan Island Container Terminal, formerly TIN TICT Terminal B	NGLOS-0018

Sao Tome and Principe

Seychelles

Sudan

Syria

Timor-Leste

Venezuela



Yemen

Exceptions	IMO Port Number
Balhaf LNG Terminal NOTE: The U.S. Coast Guard has separate, more stringent security protocols in place for vessels arriving to the United States from Balhaf. Vessels planning to arrive to the United States from Balhaf should contact the cognizant U.S. Coast Guard Captain of the Port well in advance.	IMO number not listed

C. Actions Required by Vessels Visiting Countries Affected:

Vessels arriving to the United States that visited the countries listed in paragraph B (with exceptions noted) during their last five port calls must take actions one (1) through five (5) listed below while in the countries listed in paragraph B as a condition of entry into U.S. ports:

1. Vessels with approved security plans must implement measures equivalent to Security Level 2. Those without security plans should take appropriate precautions to safeguard themselves while in port, including designated port anchorages.
2. Ensure each access point to the vessel is guarded and that the guards have total visibility of the exterior (both landside and waterside) of the vessel. Guards may be:
 - Provided by the vessel's crew, however, additional crewmembers should be placed on the vessel if necessary to ensure that limits on maximum hours of work are not exceeded and/or minimum hours of rest are met, or
 - Provided by outside security forces approved by the vessel's master and Company Security Officer.
3. Attempt to execute a Declaration of Security;
4. Log all security actions in the vessel's security records; and
5. Report actions taken to the cognizant U.S. Coast Guard Captain of the Port prior to arrival in the U.S.

Vessels that visited the countries listed in paragraph B (with exceptions noted) on or after the effective date in paragraph A, during their last five port calls will be boarded or examined by the Coast Guard to ensure the vessel took the required actions. Failure to properly implement the actions listed in paragraph C.1 through C.5 may result in delay or denial of entry into the United States.

D. Actions Required by Vessels in U.S. Ports:

Based on the findings of the Coast Guard boarding or examination, the vessels that visited the countries listed in paragraph B (with exceptions noted) on or after the effective date in paragraph A may be required to ensure that each access point to the vessel is guarded by armed security guards and that they have total visibility of the exterior (both landside and waterside) of the vessel while in U.S. ports. The

*U.S. Department of
Homeland Security*
**United States
Coast Guard**



**International Port Security Program
U.S. Coast Guard**

number and location of the guards must be acceptable to the cognizant U.S. Coast Guard Captain of the Port. For those vessels that have demonstrated good security compliance and can document that they took the measures called for in C.1. through C.4. above, the armed security guard requirement will normally be waived.

E. This Port Security Advisory supersedes PSA 1-24.

###

Section 7A: Fuel management

NO	QUESTION	GUIDANCE	REFERENCE / GUIDANCE	Verified by CE / Comments
7.1	Is adequate manifold spill containment provided under the bunker manifolds, and are they clean and empty? (V)		<p>Ensure all drip trays are fitted with stainless steel drain plugs</p> <p>Ensure that drain plugs on all the drip trays are always kept plugged.</p> <p>Ensure a chain is connected to each drain plug</p> <p>Ensure that the plug is properly fitted, the threads are in good condition , sealing effectively and plug is free to operate.</p> <p>Ensure that the threads are properly greased</p> <p>Ensure that drip tray capacity is stencilled</p> <p>Ensure drip tray is clean and empty and there are no debris like ropes, rags etc on the drip tray.</p>	<input type="checkbox"/>
7.2	Are bunker transfer systems hydrostatically tested to their Maximum Allowable Working Pressure (MAWP) on an annual basis and to 1.5 times their MAWP at least twice within any five years period?	<p style="text-align: center;">Guide to Inspection</p> <p>A pressure test of 1.5 times the design pressure is a strength test. A test of the design pressure is a tightness test. Pressure testing can reveal small cracks and pin holes that may not be obvious from a visual examination.</p> <p>A vessel's 'Bunker Transfer System' should be tightness tested at least annually. 'Oil Transfer Systems' should be strength tested at least twice within any five-year period. (A Master's Guide to Ship's Piping, 2012) (US Government Publishing Office, 2012)</p> <p>When conducting pressure testing, firstly fill the bunkering piping with fuel oil or similar liquid, then close all the valves connected to bunkering piping or sealed by blind plates and use the designated pump to pressurize to 1.5 times the Maximum Allowable Working Pressure (MAWP). The foresaid method can be adopted for annual testing on board with the testing pressure as 100% MAWP. Shipping companies can also use transfer pumps to make testing pressure. Ensure that the pressure of the safety valve of the transfer pump was adjusted greater than MAWP before operation.</p> <p>The 1.5 times MAWP test is to be carried out combined with the drydock survey, with the assistance of the shipyard. The shipyard prepares the report, which is the same as that of ordinary pressure tests. As with the annual test, it is to be carried out by crews on board during navigation at sea, generally, and the report should be prepared by the Master. The testing medium should not be air, but fuel oil or similar liquid.</p>	<p>Refer Fleet Procedure Manual/16.6. BUNKER MANAGEMENT AND OPERATIONS/Section 4. PRESSURE TESTING OF PIPELINES</p> <p>Please ensure records of annual 100% MAWP and last test in dry dock to 1.5 times the Maximum Allowable Working Pressure (MAWP) are available.</p> <p>The actual testing of the oil transfer lines must be a hydrostatic test.</p> <p>Pressure testing</p>	<input type="checkbox"/>

Section 7A: Fuel management

			<p>using compressed air is not acceptable</p> <p>The Date and test Pressure (in kg/cm² or bar) must be marked in contrasting paint on all pipelines on deck that have been pressure tested</p> <p>Results of the bunker pipelines pressure testing must be entered in Oil record book, Part I under code I, Additional operational procedures and general remarks and also in the Engine room Log Book and Deck Log Book</p>	
7.3	<p>Are the drains, vents, pressure gauges, and thermometers on the bunker manifolds in good working order, and are blanks fitted when they are not in use? (V)</p>		<p>Ensure the drains, vents, pressure gauges, and thermometers on the bunker manifolds are in good working order.</p> <p>Blanks shall be fitted and have the same thickness as flange.</p>	<input type="checkbox"/>
7.4	<p>Are save-alls fitted around all fuel, diesel, and lubricating oil tank vents; are they clean and empty, and is the drain plug secured with a strap chain to a save-all? (V)</p>	<div style="background-color: #2c3e50; color: white; text-align: center; padding: 5px;">Guide to Inspection</div> <p>The height of any save-alls around fuel, diesel and lubricating tank vents must be lower than the vent heads themselves, since this could lead to the ingress of water in bad weather if the save-alls become filled with water.</p> <p>The vent heads should be clearly labelled to indicate the space that they serve. Containers should be clean, empty of water and free of oil. Drain plugs should be in place in port.</p>	<p>Ensure all drip trays are fitted with stainless steel drain plugs</p> <p>Ensure that drain plugs on all the drip trays are always kept plugged.</p> <p>Ensure drain plug is secured with a strap chain to save-all</p> <p>Ensure that the plug is properly fitted, the threads are in good condition, sealing effectively and plug is free to operate.</p> <p>Ensure that the threads are properly greased.</p>	<input type="checkbox"/>

Section 7A: Fuel management

			<p>Ensure that drip tray capacity is stenciled.</p> <p>Ensure the drip tray is clean and empty, no water, oil stains and there are no debris like ropes, rags etc. on the drip tray.</p> <p>Ensure vents heads are marked with the name of the tank they serve.</p>	
7.5	<p>Are there procedures for the analysis of fuel, lubricating and hydraulic oils, and are oil sampling requirements aligned with equipment manufacturer's recommendations ? (V & M)</p>	<p style="text-align: center;">Guide to Inspection</p> <p>The inspector shall review the test results and recommendations of the last analysis / report. Record a Finding when the status of an analysis report was marked "Critical", regardless of action taken.</p> <hr/> <p>Record a Finding when the instructions from the engine manufacturer as to how often oil samples should be drawn for testing was not followed. RightShip recommends that the vessel's manager subscribe to a fuel bunker analysis and advisory service.</p> <p>Lubricating oil analysis by approved organisations is an important tool for monitoring the condition of machinery and components. It is highly recommended that laboratory analysis programmes for lubricating oil and hydraulic oil are implemented on board and are closely monitored by the shore-based technical management.</p> <p>The instructions and procedures for the analysis of fuel shall be incorporated in the safety management system.</p> <p>In the absence of clear instructions from the engine manufacturer as to how often oil samples should be drawn for testing, the lubricant manufacturer should be contacted for advice.</p> <p>Appendix V of MARPOL Annex VI details the information that should be displayed on the Bunker Delivery Note (BDN). From 1st May 2024, the BDN should state a specific flashpoint value of the fuel if the flashpoint is below 70°C. Otherwise, it should include a statement that the flashpoint has been measured at or above 70°C. The BDN should also stipulate the relevant test method for the flashpoint, which is ISO 2719:2016, 'Determination of Flashpoint – Pensky-Martens Closed Cup Method.' This could be either Procedure A (for distillate fuels) or Procedure B (for residual fuels).</p>	<p>Refer Technical Procedure Manual / 17.0 LUBRICATION AND LUBE OIL / FUEL OIL SAMPLING/section 2. ANALYSIS OF OIL SAMPLES</p> <p>Ensure tests reports are available and samples tested as per the frequency provided in section 2.</p> <p>Necessary action to be taken if the analysis report are not satisfactory.</p> <p>Check if BDN is in order and contains relevant information</p>	<input type="checkbox"/>
7.6	<p>Are SMS guidelines for the mitigation of engine damage due to catalytic fines and other potentially injurious elements or Contaminants in place and being followed? (V & M)</p>	<p style="text-align: center;">Guide to Inspection</p> <p>Heavy cycle oil is used worldwide in complex refining as a blending component for heavy fuel. Mechanically damaged catalyst particles (aluminium silicate) cannot be removed completely in a cost-effective way and are found in blended heavy fuel. Correct fuel purifying and filtration on board ships has a removal efficiency of approximately 80 to 90% for catalytic fines. To avoid abrasive wear of fuel pumps, injectors and cylinder liners, the maximum limit for aluminium and silicon defined in ISO 8217: 2010 is 40–60 mg/kg, depending on the viscosity. There are, however, still reported problems with catalytic fines especially in low sulphur fuels.</p> <p>Correct handling and purifying of the fuel, to reduce the presence of catalytic fines to the level recommended by engine manufacturers, can prevent engine damages.</p> <p style="text-align: right;">(Marine Engine Damage due to Catalytic Fines in Fuel, 2013)</p> <p>The Joint Hull Committee of the London insurance market "Marine Engine Damage due to Catalytic Fines in Fuel" provides further guidelines.</p>	<p>Refer Fleet Procedure Manual/16.6.3.2 BUNKER MANAGEMENT AND OPERATIONS/</p> <p>6.3.2. Dealing with OFF SPEC Fuel / Guidelines for consuming fuels with higher levels of Cat fines (Al+Si)</p>	<input type="checkbox"/>
7.7	<p>Are bunkering and oil fuel transfer</p>		<p>Refer Fleet Procedure</p>	<input type="checkbox"/>

Section 7A: Fuel management

procedures carefully planned and executed in accordance with industry standards, are the details of the last operation in accordance with industry standards, is the vessel equipped with a procedure for sampling the oil fuel used on board, and are bunker samples stored in a sheltered location? (V)

Guide to Inspection

Planning of bunkering operations should include the following:

- > An accurate summary of the different quantities and grades of fuel to be supplied.
- > A plan of which bunker tanks are to be filled, which must include the type and quantity assigned to each tank and the maximum filling volumes.
- > A schematic diagram of the bunker system and proper valve line-up.
- > The filling sequence and the required pumping rate, including initial, maximum, and topping off rate.
- > An indication of the safety margin or "slack" space to be left in each tank. For example, no tank is to be more than 90% full.
- > Soundings of each tank prior to commencement of bunkering and the expected soundings/ullages on completion.
- > The method of sounding and/or ullaging, which can be stipulated to avoid confusion.
- > Details of who is in overall charge of the operation; this is usually the Chief Engineer, and the plan should also indicate who else is involved and their respective duties.
- > Emergency procedures and contacts
- > Procedure of line draining and blowing after completion of bunkering
- > If a common line is used for multiple grades, then the line flushing volumes and procedures
- > Testing of high-level alarms setting in the fuel oil tanks or a substitute means in case alarms are not provided.
- > Proper identification and markings of the valves on the bunker lines.
- > Procedure for changing over tanks during the bunkering
- > Vessel stability drafts, trim, and list during the various stages of bunkering
- > Manning requirements to execute the operation safely.

(Safe Bunkering Practices, 2013)

The procedure should specify the locations of fuel oil sampling points and the sampling procedures to be used to confirm the fuel oil's Sulphur level.

- > The MARPOL sample of the bunker fuel delivered to the ship during the bunkering operation must be taken in accordance with MEPC.182(59)
- > Commercial samples' taken during bunker operation for the purpose of verifying physical and chemical properties should be in accordance with ISO 8217;
- > For an in-use sample of a ship's fuel oil (MEPC.1/Circ.864/Rev.1)
- > A sample of the fuel oil to be used or carried in tanks for usage on board (MEPC.1/Circ.889)

Manual/16.6. BUNKER MANAGEMENT AND OPERATIONS

Ensure all sections of the Bunkering operation forms/checklists are properly filled up as required.

Ensure vessel has procedures for sampling the oil fuel used on board, and bunker samples stored for one year in paint store protected by sprinkler system.

Refer below for disposal. (As long as the fuel is no longer on board and the sample is older than one year the sample can be disposed. Samples can be disposed into the engine room sludge tanks. A record must be made in the Marine Fuel Oil Sample Record Book (Against the relevant line item and BDN) and in the Oil Record Book.)

The BDN is a statutory document and must be retained on-board for three years and be available for inspection by Port/Flag State control

Section 7A: Fuel management

<p>7.8</p>	<p>Can the vessel safely comply with the requirements of Emission Control Areas (ECA) and other local requirements regarding use of very-low or ultra-low sulphur fuels in the main engine, auxiliary engines and boilers? (M)</p>	<p style="text-align: center;">Guide to Inspection</p> <p>When ships pass through an Emission Control Area (ECA), their fuel oil is only allowed to contain a maximum of 0.10% sulphur (MARPOL Annex VI). All main and auxiliary engines and boilers are affected by the Regulation, meaning that vessels using heavy fuel oil must have completed the change-over process and operate on ultra-low sulphur fuel upon entering an ECA.</p> <p>The manufacturers of the engines, boilers and/or control system should be consulted for possible modification. Modern boilers may not have been originally designed to burn lighter fuel types such as MGO. If modification of the burners and control systems of the boiler is required, such modification shall be approved by the class society. Upon satisfactory completion of surveys with the classification society, a statement of fact with the same description shall be issued by the classification society.</p> <p>If modifications to the vessels' installed equipment and systems are not required, evidence of such an evaluation and / or a statement of fact from a classification society should be carried on board.</p> <p style="text-align: right;">(Preparing for Low Sulphur Operation, 2015)</p>	<p>Please check that Class statement is available for any modification required for using the very low sulphur fuels in the main engine, auxiliary engines and boilers.</p> <p>If there was no modification required to use very-low or ultra-low sulphur fuels, there should be a letter from the respective manufacturers / Class.</p>	<input type="checkbox"/>
<p>7.9</p>	<p>Are ship-specific procedures to control the change from residual to low-sulphur / distillate fuels and vice versa provided, and is the fuel oil change over logbook and data collection system being maintained correctly? (V & M)</p>	<p style="text-align: center;">Guide to Inspection</p> <p>The use of a fuel change over calculator is recommended.</p> <p>Switching from one type of fuel to another is an operation that does have risks. Vessels trading between areas with different sulphur limitations are required to have specific and detailed change-over procedures. The crew needs to be well trained and aware of any risks associated with the change-over – otherwise they risk engine failure, power loss or even blackout. A full risk assessment should be conducted by all involved in the procedure.</p> <p style="text-align: right;">(Emission Control Areas – Ultra Low Sulphur Fuel Oil Change-over Procedures, 2014)</p> <p>According to MARPOL Annex VI, vessels that use both high and low sulphur fuel oils should have a written change-over procedure. The method should detail how the change-over will be carried out, as well as the time required to flush high sulphur fuel out of the system following the changeover of service tanks, as well as the number of hours required before entering the ECA to begin the change-over.</p> <p>Before entering an ECA, the ship should switch from high sulphur fuel to low sulphur fuel with a sulphur content of less than 0.10 percent by mass. This operation begins by shutting down consumption from the high sulphur service tank using the three-way valve and replacing it with fuel from the low sulphur service tank. Throughout the changeover procedure, the low sulphur fuel will continually dilute the fuel in the service system. The time required to reach the 0.10 percent sulphur level varies according to the amount of machinery fuel oil consumed, the volume of the service system, and the sulphur content of the fuel.</p> <p>Throughout the changeover procedure, all steps must be recorded in the engine logbook and Marine sulphur record book. All entries must accurately reflect the quantities, the time of changeover, and the ship's position. Additionally, what time did the ship enter and exit the ECA/SECA should be documented along with the vessel's position. When the changeover process is complete and the vessel is operating on low sulphur fuel oil, the Chief Engineer shall notify the Master.</p> <p style="text-align: right;">(Fuel change-over procedure, 2022)</p>	<p>Ensure approved fuel change over calculator is onboard and used.</p> <p>Ensure crew are trained on change over procedures.</p> <p>Ensure Class approved procedure/drawing for Fuel Oil change over to Low Sulphur is available.</p> <p>Ensure Risk Assessment is available in MESPAS and done for each changeover.</p> <p>Ensure for each arrival /departure ECA , fuel changeover entries along with position / timings of entry and exiting ECA are recorded in the Engine Logbook and Marine fuel Sulphur record book.</p>	<input type="checkbox"/>

Section 7A: Fuel management

			Ensure proper communication is established between MASTER and CE regarding changeover position and timings.	
7.10	Are the Quick Closing Valves serving fuel and lubricating oil systems being regularly tested and in good order? (v)	<p style="text-align: center;">Guide to Inspection</p> <p>Quick Closing Valves are fitted to the outlets of lubricating and fuel oil storage, and settling and service tanks within the machinery space, boiler room and the emergency generator room. These spring-loaded valves may be operated locally or remotely by pull wires, hydraulics, or compressed air. Quick Closing Valves are essential safety devices. They should be properly maintained.</p> <p style="text-align: right;">(Quick Closing and Self Closing Valves, 2011)</p>	<p>Check if testing / maintenance routines are included in MESPAS</p> <p>Carry out maintenance / testing as per MESPAS routines</p> <p>Ensure quick closing valves are not tampered by any means like bolts</p>	<input type="checkbox"/>
7.11	Are high pressure fuel delivery pipes of diesel engines protected with a jacketed piping and alarm system, and is the alarm system being tested regularly and in good order?	<p style="text-align: center;">Guide to Inspection</p> <p>External high pressure fuel delivery lines between the high-pressure fuel pumps and fuel injectors shall be protected with a jacketed piping system capable of containing fuel from a high-pressure line failure. A jacketed pipe incorporates an outer pipe into which the high-pressure fuel pipe is placed, forming a permanent assembly. The jacketed piping system shall include a means for the collection of leakages and arrangements shall be provided for an alarm to be given of a fuel line failure.</p> <p style="text-align: right;">(SOLAS 74, 2020)</p>	<p>Form 6.6.16- alarm test records</p> <p>Alarm to be tested monthly</p> <p>Identify the leakage tank for ME and AE where the leakages are collected</p>	<input type="checkbox"/>
7.12	Are purifier rooms and fuel and lubricating oil handling areas ventilated, free of oil leaks and clean? (V)		<p>Repair all leaks.</p> <p>Ensure no buckets, drums secured to collect oil leaks</p> <p>Ensure space is clean, no oily rags lying around</p>	<input type="checkbox"/>

Section 7A: Fuel management

7.13	Is the reserve fuel tank of the emergency generator filled with sufficient fuel of a suitable type for at least 18 hours operation? (V)	<p style="text-align: center;">Guide to Inspection</p> <p>If the vessel is trading in area with sub-zero temperature, the fuel tank of the emergency generator should be charged with fuel designed for use in sub-zero temperatures.</p> <ul style="list-style-type: none"> > The generator should be capable of providing full load requirements for at least 18 hours. > Every oil fuel pipe (which, if damaged, would allow oil to escape from a storage, settling or daily service tank situated above the double bottom) shall be fitted with a cock or valve directly on the tank capable of being closed from a safe position, outside the space concerned, in the event of a fire occurring in the space in which such tanks are situated. > Oil fuel pipes (which, if damaged, would allow oil to escape from a storage, settling or daily service tank having a capacity of 500 litres and above situated above the double bottom) shall be fitted with a cock or valve directly on the tank capable of being closed from a safe position, outside the space concerned, in the event of a fire occurring in the space in which such the tanks are situated. > The controls for the remote operation of the valve for the emergency generator fuel tank shall be in a separate location from the controls for the remote operation of other valves for tanks located in machinery spaces. <p style="text-align: right;">(SOLAS 74, 2020)</p>	<p>Ensure the fuel level for emergency generator is topped up and sufficient for 18 hours</p> <p>Mark the 18 hour fuel level on the tank</p> <p>Check if the tank valve can be closed from outside (remote operation)</p>	<input type="checkbox"/>