

# Precautionary Measures for EDB/ESG Managed Shipyards and/or Process (Petrochemical/Petroleum) Terminals



● ● ● Updated on 29 Oct 2021



**EDB:**  
SINGAPORE

# Background

(Updated on 29 Oct 2021)

## For EDB/ESG Managed Process (Petrochemical/Petroleum) Terminals

- Effective 2 May 2021, contactless operations (ops)\* will be the **default cargo ops**.

From 29 Oct 2021,

- For both **contact and contactless ops**, EDB/ESG-managed process terminals must ensure the **3 pre-arrival criteria are fulfilled** before accepting all ships (*details on slide 4*).

## For EDB/ESG Managed Shipyards

Effective 29 Oct 2021, all ships, regardless of the last port of call, calling at shipyards for repairs must adhere to the Mandatory Precautionary Measures (*details on slide 9*)

- For **contact ops**, EDB/ESG-managed shipyards must ensure the **3 pre-arrival criteria are fulfilled and shipyard must sight the negative results of the PCR swab test (PDT) at the last port of call**, before issuing the letter of acceptance to ships
- **Thereafter, the ship is only allowed to conduct contactless operations in other ports of call prior to entering Port of Singapore.**
- By default, EDB/ESG-managed shipyards must conduct contactless ops for all operations except for ship repairs or ship maintenance.
- For contactless ops, the arriving NTL crew are not required to undergo PCR swab test.

- Regardless of the last port of call, if a C+ or a close contact of a C+ is suspected/detected on board the vessel, the vessel must declare to MPA and NEA Port Health Section (PHS).
- If the vessel is granted permission by MPA and PHS to enter the Port of Singapore, the vessel can only conduct (i) full contactless operation, (ii) enhanced contactless operations with segregation protocol after disinfection is completed.

# Contactless Operations (Ops)

## Contactless Ops

No shore-based personnel, including shipowners/operator/charterers/terminal representatives, cargo interest representatives and etc, are allowed to board the vessel.

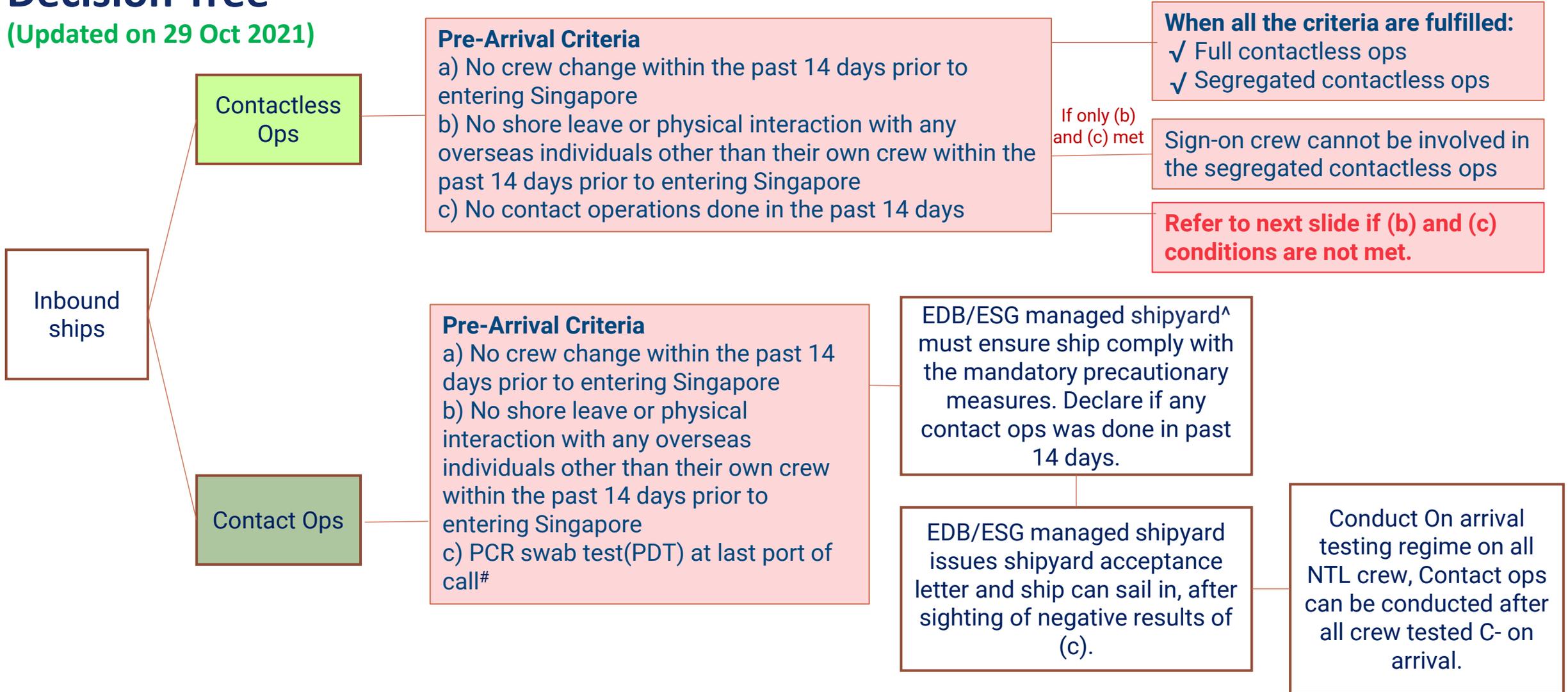
- The connection and disconnection of hoses/arms, quality sampling, quantity checking and etc, are to be conducted by the ship's crew.
- Exchange of documents (i.e. cargo papers and loading plans) must be carried out preferably electronically or contactless exchange.
  - If any of the processes involves a shore-based personnel other than a MPA-licensed harbour pilot, MPA Port Chemist or Dock Master in Full PPE boarding the vessel, EDB would not be able to make a successful appeal for the vessel to conduct contactless ops.

## Segregated Contactless Ops

- Ops conducted without interaction between the vessel crew and shore-based personnel, and further segregations between the vessel crew and the shore-based personnel can be achieved through implementation of enhanced safe management measures (SMM).

# Decision Tree

(Updated on 29 Oct 2021)



<sup>^</sup> - Process terminals are to conduct contactless ops by default.

<sup>#</sup> - After the PDT is done, ship is not allowed to conduct any contact operations in other ports of call prior to entering Singapore.

# Decision Tree

(Updated on 29 Oct 2021)

When the Pre-Arrival Criteria of (b) and (c) are not fulfilled

EDB/ESG-Managed Shipyards/ Process Terminals must adopt

**Enhanced Segregated  
Contactless Operations (ESCO)**

With the high number of infections in the community, EDB CCO is implementing the enhanced segregated contactless ops at EDB/ESG-managed shipyards and process terminals. The intent is to protect our shore-based personnel and reduce the risk of community transmission.

**Mooring crew** can board the vessel to connect/disconnect the loading arm and must disembark immediately once the work is completed.

(All vessel crew must be in their accommodation at all times)

**Surveyor** can board the vessel only with **all the vessel crew stationed in their accommodation at all times.**

If a surveyor conducts segregated contactless ops with vessel crew (who signed on **>14 days**), the surveyor must don on heightened Personal Protective Equipment (PPE) (*details on next slide*) before boarding the vessel. There must be at least a 3m safe distancing maintained at all times.

If any vessel is unable to meet the conditions of the enhanced segregated contactless ops, the vessel will not be allowed to conduct any ops at the EDB/ESG-managed shipyards and process terminals. No exemptions will be given.

# PPE Requirements

1. For the Enhanced Segregated Contactless Operations, the shore-based personnel must minimally fulfil the personal protective equipment (PPE) requirements. The PPE includes face shield or safety goggles or equivalent, fitted N95 masks, gown and gloves
2. The Heightened PPE includes hospital grade coverall, full face respirator with cartridges/ half face respirator with cartridges and safety goggles and gloves (images below)



Coveralls



Half face  
respirator with  
filter cartridges



Full face respirator with  
filter cartridges



Gloves

**Effective 29 Oct 2021, EDB/ESG-managed shipyards and process terminals are to comply with the Mandatory Precautionary Measures under the Ship Repair Framework for all ship repair calls OR contact ops from all ports of call**

**Mandatory Precautionary Measures (wef 29 Oct 2021)**

**Pre-arrival Criteria**

1. Ship must not have had any new sign-on within the last **14** days prior to entering the Port of Singapore.
2. All crew/passengers must not have had shore leave and any physical interaction with any overseas personnel in port of calls within the last **14** days prior to entering the Port of Singapore
3. **Yards must ensure that all crew, from ALL countries, must have their PCR swab test (PDT) taken and tested negative before departure from the last port of call. Thereafter, the ship is only allowed to conduct contactless operations in other ports of call prior to entering Port of Singapore.** Yards must sight and keep the crew's PDT negative test results as records.
4. Shipyard is to issue LOA ONLY after the preceding criteria are fulfilled.
5. Ships agent/ manager/ owner must include the shipyard's LOA and PDT results when submitting the Pre-Arrival Notifications to MPA.

**On-arrival Criteria**

1. **D1 PCR Swab test , D3, D7 and D10 ART** to be done onboard the vessel at EDB/ESG managed shipyard / process terminals.
2. **Shore based personnel can only board after all crew are tested COVID Negative (C-) for their On arrival PCR Swab.**

**Emergency Repairs**

1. Ships calling at shipyards for emergency repairs must adhere to the testing regime above.
2. Emergency repairs are exempted from pre-arrival criteria above. Shore-based personnel shall only board the ship to work after **all crew have tested ART negative on D10**. Contactless repair works can still be carried out once ship is safely berthed in shipyard.



# Schematics of the Heightened Measures at the Marine & Process Worksites

# Mitigation Measures for Arriving NTL Crew (Updated on 29 Oct 2021)

## Before entering Port Limits

No crew change, no shore leave for crew and no physical interaction with overseas individuals within the last **14** days, regardless of last port of call

Pre-departure PCR Swab Tests to be taken at last port of call for all crew from all countries

Shipyards issue Shipyard's acceptance letter **only** after inbound ships fulfilled all the Mandatory Precautionary Measures (MPM) and **sight** the negative results of the PCR swab test (PDT) at the last port of call

Ship agent provides the PDT results, Maritime Declaration of Health and shipyard's acceptance letter to MPA upon submission of the Electronic Pre-Arrival Notification

Port Limits

## Anchorage

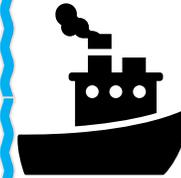
Contactless Ops for sustenance ops e.g. food resupplies, bunkering, demucking

Essential shore-based personnel e.g. PSA Harbour Pilot, Port Chemist boards in full PPE and are vaccinated as priority

SmartEntry at Sea implemented by MPA regarding all shore based personnel that boards ships at anchorages or at sea to be on RRT.



Shipyard Water Line



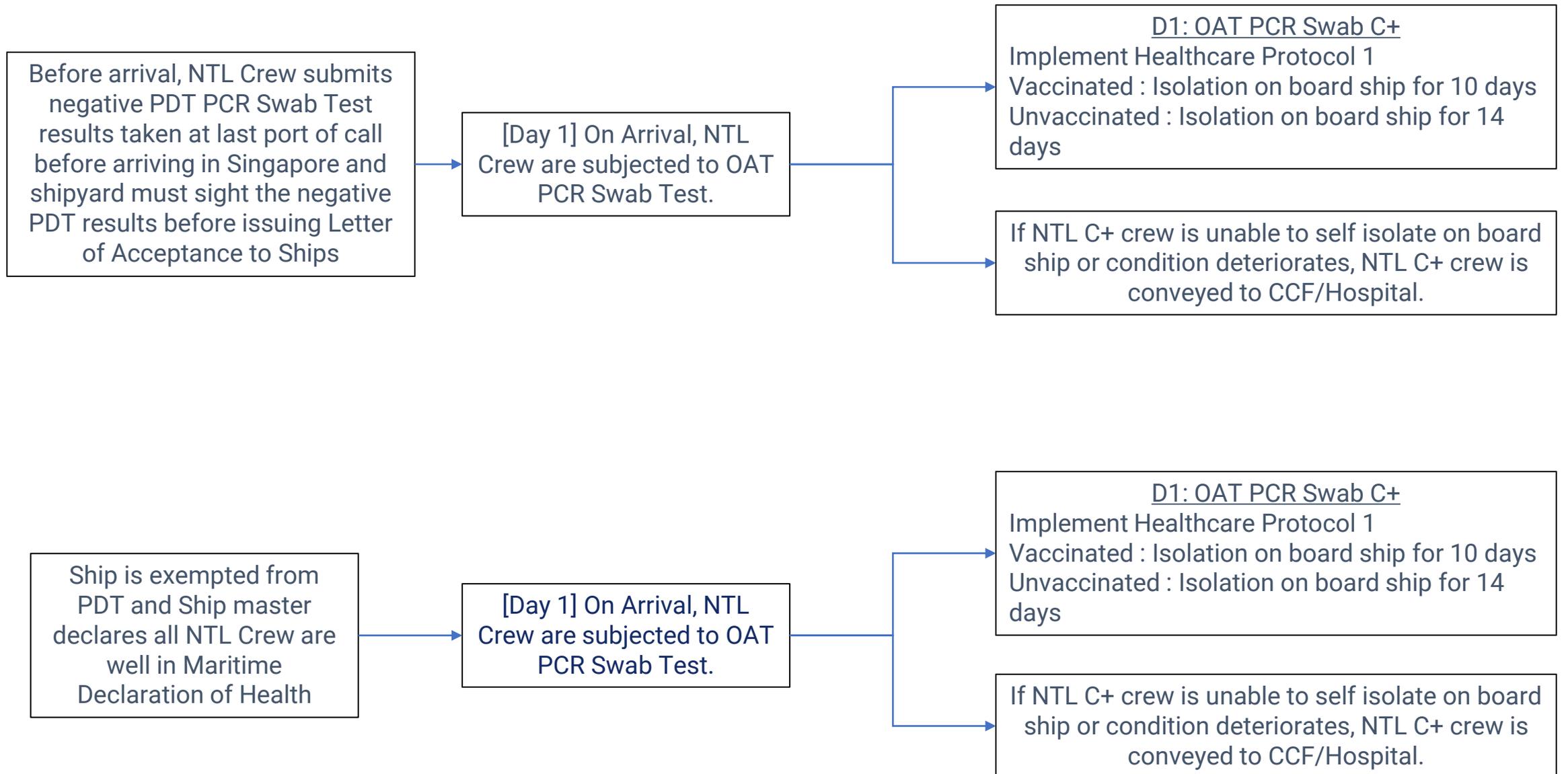
## Arrival into Shipyards

Arriving NTL crew must adhere to the updated enhanced testing regime:

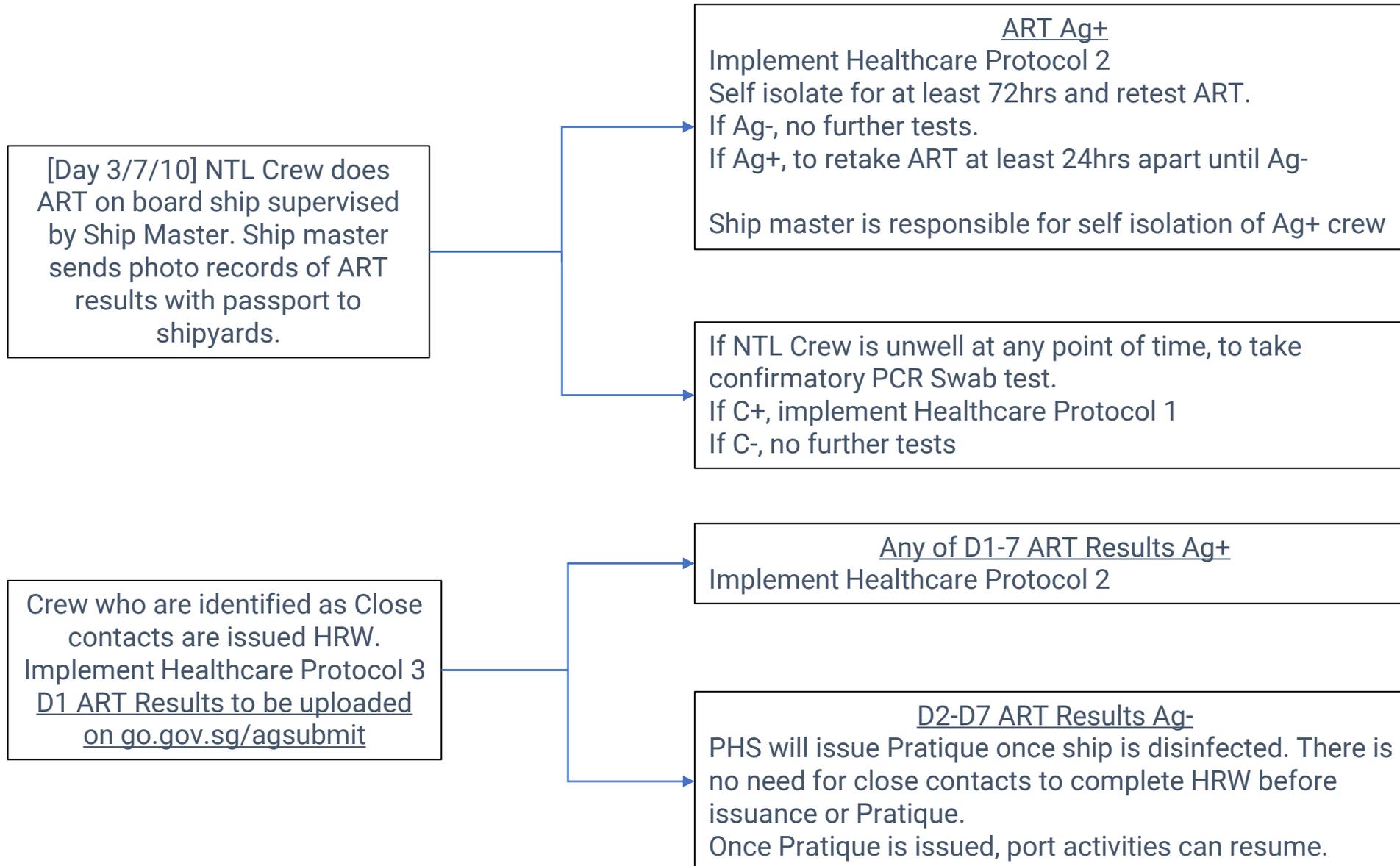
- a. PCR Swab on D1
- b. ART on D3, D7 and D10

Shore based personnel are allowed to board and work only after all NTL crew are tested C- for their D1 PCR Swab tests.

## Flowchart for Updated Testing Regime effective from 29 Oct 21



## Flowchart for Updated Testing Regime effective from 29 Oct 21



# Sign On Crew Procedures (Updated on 29 Oct 2021)

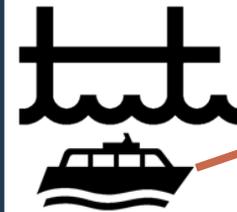
Only for Crew Change Sign On meeting prevailing PMC i.e. Sign on crew must depart within stipulated time frame upon arriving into SG

## Shipyard

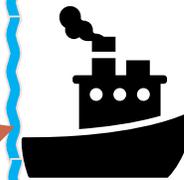
If the **vessel living conditions are not conducive**, the ship agents must arrange alternative accommodation for the sign-on crew and, ensure crew adhere to the M&O Safety Management Measures (SMMs) so as to enter the production areas of shipyard

Shipyard Water Line

Marina South Pier(MSP)  
Or West Coast Pier (WCP)



Water Taxi



MPA Sign On - Crew Holding Facility



Singapore

Airport

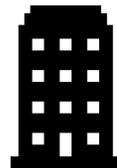


Gov Tpt

MTI STVP SGL (Limited quota)

- OAT Swab at Airport
- Traveller to take Gov Subsidised Transport to SDF
- Travellers signing on as crew that requires to stay in Singapore for longer period (>48hrs)

10D SHN



Testing Regime  
D10 (Exit Swab)



Crew Home Country

Certified fit to travel within 24hrs prior departure to SG



Pre Depart Swab test within 48hrs prior departure to SG



Recommended self isolation for 5 days



# Mitigation Measures for Shore-based Personnel (Updated on 29 Oct 2021)

Shipyard Water Line



## Production Areas of Shipyards

As part of Shipyards' security and safety requirements, shipyards must keep records of shore-based personnel boarding and disembarking from ships

Shore-based personnel must adhere to the prevailing MPA's Port Marine Circular (PMC) SMM

Shore-based personnel boarding ships in Singapore's port or anchorages must check in and out using SafeEntry@Sea

Shipyard Entry to Production Areas

## Pre-entry requirements for shore-based personnel entering the production areas of shipyards

1. Be on prevailing Rostered Routine Testing (RRT) i.e. 3 Days (3D) Antigen Rapid Test (ART) aka 3D FET RRT from 1 Nov 21 onwards
2. With effect from 1 Nov 21, Shipyards must enforce all ad-hoc visitors/workers, who are not in any FET RRT regime, to be tested ART Negative (Ag-) within 24hrs prior to entering the shipyards. (Companies can consider turning on vaccinated differentiated settings/pre event testing in SE Business App to check adhoc workers/visitors who are not in any form of FET RRT into the worksite. These adhoc workers/visitors must be tested ART negative at MOH's approved test centres e.g. Quick Testing Centre or SASH Clinic within the past 24hrs before they are allowed to enter the worksite.)



# Evaluation Criteria on Contactless Ops

# Evaluation Criteria

Evaluation criteria on the contactless operations is aligned with MPA's contactless cargo operations at Petrochemical Terminals\*

Key principle – **Safety comes first** when conducting contactless operations

There should be no form of physical interactions between the shore-based personnel and crew at all times. There must be at least a 3m safety distance between them.

# EVALUATION CRITERIA

Activities	Ship's Crew	Shore Based Personnel
<p><b>Health Declaration</b></p>	<p>Vessel calling into the terminal/waterfront facility must complete the MPA's Maritime Declaration of Health. Applicant shall conduct its own risk assessment based on the declaration before allowing vessel to be berthed.</p> <p>Applicant shall verify and declare all contact operations vessel has undertaken in any port located within any of the specified countries.</p>	<p>Shore based personnel shall preferably be fully inoculated with Singapore approved COVID-19 vaccines and have undergone at least two 7D RRT cycles after receiving their second dose.</p> <p>Applicant shall not deploy any shore-based personnel who have exhibited any ARI symptoms in the last 14 days.</p>
<p><b>Safe Distancing</b></p>	<p>To remain in designated accommodation</p> <p>At all times, not to interact with shore-based personnel.</p>	<p>At least 3 metres from any other personnel when onboard vessel</p> <p>At all times, not to have any form of physical interaction with ship crew and limited to the declared work areas.</p> <p>Applicant must declare if interaction between shore-based personnel and ship crew cannot be avoided.</p>

# EVALUATION CRITERIA

Activities	Ship's Crew	Shore Based Personnel
<p><b>Enhanced Segregation Measures</b></p>	<p>Unless otherwise approved, vessel crew shall remain in their designated accommodation area throughout the ops.</p>	<p>Dock master / Pilots assisting in the berthing and unberthing of vessel shall, as far as possible, conduct their activity at an open area, i.e. the bridge wing. They are to be in full PPE.</p> <p>Shore based personnel shall limit their movement to the declared work zones on board the ship only.</p> <p>Shore based personnel shall not consume meals while onboard, and must not use of any of the vessel's common facilities such as toilet, pantry and smoking area.</p> <p>Submission/receiving of documents shall be done electronically or contactless, and meetings with vessel crew shall be done virtually or through other non face-to-face means such as walkie-talkie.</p> <p>Shore based personnel shall disembark immediately upon completion of ops.</p>

# EVALUATION CRITERIA

Activities	Ship's Crew	Shore Based Personnel
<b>PPE</b>	Must wear a fitted N95 mask at all times. In addition, other appropriate personal protective equipment, such as gloves and gown, should be worn if they do not jeopardise operational and personal safety.	Must wear a fitted N95 mask at all times. In addition, other appropriate personal protective equipment, such as face shield, gloves and gown, must be worn if they do not jeopardise operational and personal safety.  PPE must be displaced as bio hazard waste
<b>When the vessel arrive at the terminal</b>	Sanitize gangway, common areas and areas with high touch point before shore based personnel board the vessel, and ensure that there is hand sanitizer available in these areas. The ship's crew shall remain in the accommodation upon completion of the task.	No unauthorised personnel are to go onboard the vessel. Apart from the ship crew, only mooring crew, loading master and the appointed 3 <sup>rd</sup> party surveyor in full PPE are allowed onboard with no physical interaction with crew at all times. A minimal stand off distance of 3m at all times.
<b>Hose connection</b>	Remain in the accommodation. Monitor the operations from the bridge, or other appropriate location in the accommodation block.	Mooring crew movement is restricted between the gangway and cargo manifold. Not to access the accommodation block when onboard the vessel. Disembark the ship immediately upon completion.
<b>Tank Gauging and cargo sampling</b>	Chief Officer and one crew member are allowed to carry out the tank gauging and cargo sampling. Move away from the area when the Loading Master and 3 <sup>rd</sup> Party Surveyor are verifying the readings.	Observe the operations from afar at least 3m away. Proceed to verify the reading after the crew members have moved at least 3m away from the area.

# EVALUATION CRITERIA

Activities	Ship's Crew	Shore Based Personnel
<p><b>Safety Checklist and Cargo papers</b></p>	<p>Signing of safety checklist, pre and post ship/shore figure shall be done in separate area.</p> <p>Bill of Lading shall be done electronically</p>	<p>Signing of safety checklist, pre and post ship/shore figure shall be done in separate area. Loading Master and 3<sup>rd</sup> Party shall not enter into the accommodation block as well as minimise the time on board the vessel.</p> <p>Bill of Lading shall be done electronically</p>
<p><b>Tending the ship's mooring and cargo operations</b></p>	<p>As far as practicable, minimise the number of crew and time spent on the deck during cargo operations. When conducting such operations, ship crew shall adhere to safe distancing and safe management measures.</p>	<p>Avoid being in the same general area of the deck as the ship crew at any time (e.g. if ship crew are moving along seaward side of the vessel, shore based personnel are to move along the shore side of the vessel.) Such movement are to be coordinated by the ship crew using radios.</p> <p>All lines should be handled by heaving lines. Mooring line eyes and heaving lines will be disinfected prior berthing.</p>
<p><b>Post Ops Duffing</b></p>		<p>Shore-based personnel shall duff (disinfect) themselves thoroughly upon reaching the shore end of the gangway.</p> <p>PPEs shall be disposed in accordance to existing guidelines on disposal of infectious waste.</p>



# Updated Mandatory Precautionary Measures Table

# Updated Assessment Framework incorporating Heightened MPM for Shipyard Repair Calls in Singapore as of **29 Oct 21**

Shipyard shall issue the Letter of Acceptance (LOA) to ship owner/ master/ agent if and only if shipyard has assessed and is satisfied that all criteria for default approval have been met by incoming vessel and crew.

Ship owner/master/agent shall then submit LOA to the MPA together with the Pre-Arrival Notification, before the ship's arrival in Singapore.

## Passenger Ships<sup>[2]</sup>

(e.g. cruise ships, crew boats, yachts, ferries, etc.)

## Non-Passenger Ships

(e.g. harbour craft, tankers, bulk carriers, container and cargo vessels, oil rigs, semi-submersibles, FPSOs, offshore construction and offshore support vessels such as DSVs, AHTS, PSVs, pipelay vessels, etc.)

### Pre-Arrival Criteria for all ship types

#### **Before arrival into Port of Singapore:**

- a) Ship must not have had any new sign-ons within the last **14** days prior to entering the Port of Singapore.
- b) All crew/passengers must not have had shore leave and must not have had any physical interaction with any overseas shore-based personnel in port of calls within the last **14** days prior to entering the Port of Singapore
- c) Yards must ensure that **all crew have their negative PCR swab test (PDT) taken before departure from the last port of call, for ALL countries. Thereafter, the ship is only allowed to conduct contactless operations in other ports of call prior to entering Port of Singapore.** Yards must sight and keep the crew's PDT negative test results as records.
- d) Shipyard is to issue LOA ONLY after the preceding criteria are fulfilled.
- e) Ships agent/ manager/ owner must include the shipyard's LOA and PDT results when submitting the Pre-Arrival Notifications to MPA.
- f) **Any ship with suspected C+ or close contact on board will not enter Port of Singapore unless MPA and PHS approve of the contactless ops only**

<sup>[2]</sup> Passenger and Non-Passenger Ships together form an exhaustive list of all ships coming into our yards for repair.

# Updated Assessment Framework incorporating MPM for Shipyard Repair Calls in Singapore as of **29 Oct 21**

Criteria for Default Approval	
<b>Passenger Ships<sup>[2]</sup></b> (e.g. cruise ships, crew boats, yachts, ferries, etc.)	<b>Non-Passenger Ships</b> (e.g. harbour craft, tankers, bulk carriers, container and cargo vessels, oil rigs, semi-submersibles, FPSOs, offshore construction and offshore support vessels such as DSVs, AHTS, PSVs, pipelay vessels, etc.)
<b><u>Pre-Arrival Criteria for all ship types (cont'd)</u></b> <b>Before arrival into Port of Singapore:</b> <ul style="list-style-type: none"> <li>g) Before Gas Free inspection can be conducted by Port Chemist, de-mucking operation can be conducted at the anchorages.</li> <li>h) Once vessel is anchored, de-mucking operation will be contactless (vessel crew will stay in cabin). Workers will go direct to tanks to start works. Meals and water will be arranged by contractor and workers will consume meals at a marked location near the deck open area.</li> <li>i) Only Recovered or Vaccinated Shore workers will be sent onboard to conduct the de-mucking operation.</li> <li>j) If de-mucking operation extends beyond a day, all Shore workers will be sent back to dormitory at night and return to vessel on following day until de-mucking operation is completed.</li> <li>k) For entry into shipyards, the total number of crew onboard must be:               <ul style="list-style-type: none"> <li>i. less than 250 pax for passenger ships (until further notice)</li> <li>ii. less than 100 pax for non-passenger ships (until further notice)</li> </ul> </li> </ul>	

## Criteria for Default Approval

### Passenger Ships<sup>[2]</sup>

(e.g. cruise ships, crew boats, yachts, ferries, etc.)

### Non-Passenger Ships

(e.g. harbour craft, tankers, bulk carriers, container and cargo vessels, oil rigs, semi-submersibles, FPSOs, offshore construction and offshore support vessels such as DSVs, AHTS, PSVs, pipelay vessels, etc.)

### Upon arrival into Shipyard:

- l) **An on-arrival PCR swab test for all crew must be done onboard the ship in the yard** <sup>[3]</sup>. No local worker or shore-based personnel shall board the ship at anchorage, berth or in the shipyard for visits, services or works (e.g. surveys, inspections, samples collection, ship husbandry, ship agency, ship superintendent, cargo, repairs, services, etc) until **all crew are tested negative for on arrival PCR swab test**. All local workers who board the ship in the shipyard must adhere to the prevailing MPA Port Maritime Circular on SMM requirements onboard ship and prevailing Rostered Routine Testing (RRT) requirements, prior to boarding the ship.
- m) Subsequently, crew are required to take **Antigen Rapid Test (ART) on Day 3 (D3), D7 and D10**. After the **D10** ART, there are no more further tests to be done unless required to do so for public health actions. If the ship departure date coincides with the tests required and the departure time is after 12:00pm, the crew are required to take the test on the day of departure. If departure is before 12:00pm, a test should be arranged for the day before.
- n) There is a maximum of 20 sign-ons per shipyard call (following STB's prevailing guidelines for crew change for cruise ships). Sign-ons will be carried out according to MPA's crew change guidelines within 48 hours prior to ship's departure from Singapore.
- o) There is a maximum of 50 sign-offs per shipyard call, as per existing conditions attached (following STB's prevailing guidelines for crew change for cruise ships). Sign-offs can be carried out in yard according to MPA's crew change guidelines.
- p) Any pre-departure swab tests required for sign-offs from Singapore are to be done onboard the ship in the yard or berthed next to shore<sup>[3]</sup>, subject to MPA's approval.
- q) Crew change is allowed based on the prevailing limits for sign-ons and sign-offs.
- r) Shore leave for crew is subject to MPA's prevailing shore leave framework.

<sup>[3]</sup> Any Ministry of Health, Singapore (MOH), Licensed Healthcare Institutes (HCI) listed in <https://www.moh.gov.sg/licensing-and-regulation/regulations-guidelines-and-circulars/details/list-of-covid-19-swab-providers> that is approved to perform offsite swab tests can perform the pre-departure swab test for sign-offs and on-arrival swab test onboard the ship in the yard or berthed next to shore. No swab tests shall be performed at anchorage. If the HCI is not approved by MOH Licensing Division to perform offsite swabs, it will need to seek MOH Licensing Division's approval via [eLIS@moh.gov.sg](mailto:eLIS@moh.gov.sg) (cc [cco@edb.gov.sg](mailto:cco@edb.gov.sg)).

### **Exemption for Harbour Craft from “no sign-ons within last 14 days” and PDT criteria**

Harbour Craft are exempted from “no sign-ons within last 14 days” and PDT criteria above if the harbour craft crew are brought in under prevailing MPA Harbour Craft Crew Change Regime. However, they are still subjected to all the other criteria above.

### **Exemption for Emergency Repairs from Pre-Arrival Criteria**

Ships calling at shipyards for emergency repairs must adhere to the updated testing regime above.

Emergency Repairs are exempted from Pre-Arrival criteria above. Shore-based personnel shall only board the ship to work after **all crew have tested ART negative on D10**. Contactless repair works can still be carried out once ship is safely berthed in shipyard.

# Format of the Proposed Contactless Ops SMM

1. Before Arrival / Start of Cargo Operation
2. During Mooring / Unmooring
3. Marine Loading Arm Connection and Disconnection
4. Ship / Shore Conference, Checklist and Transfer of documents, communications between ship and shore
5. Tank Gauging and Cargo Sampling
6. Other Safe measures adopted

The above contactless ops SMM will be incorporated as an Annex in work site SMM.

\* - Where there is contactless ops with segregation, specific safe working procedures must be spelt out clearly to ensure at all times the shore based personnel are working in defined working areas and how the tag in and tag out of both crew and shore based personnel would take place. Both crew and shore based personnel should be in Full PPE unless there is safety consideration.

**If shipyard or process terminal has further queries,**

Please write into [cco@edb.gov.sg](mailto:cco@edb.gov.sg) with email header

“Query: Contactless/Contact Ops at

“shipyard/process terminal name>”



# End

● ● ● 29 Oct 2021



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# Annex

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MPA  
SINGAPORE

# Contactless Cargo Operations at Petrochemical Terminals

**Maritime and Port Authority of Singapore**



MPA  
SINGAPORE



# Objectives

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In view of the enhanced COVID-19 measures in Singapore, the Maritime and Port Authority of Singapore has been working with the industry for ship to adopt contactless cargo operations or contactless cargo operations with segregation protocols in the Port of Singapore.

**In contactless cargo operations**, no shore-based personnel, including shipowners/operator/charterers/terminal representatives, cargo interest representatives, etc, are allowed to board the tanker. Hence, the connection and disconnection of hoses/arms, quality sampling, and quantity checking, etc, are to be conducted by the ship's crew. The exchange of cargo papers and loading plans are to be carried out electronically. If any of the processes involves a shore personnel boarding the vessel, other than a MPA-licensed harbour pilot, we would not be able to make a successful appeal for the ship to conduct contactless operations.

**In contactless cargo operations with segregation protocol**, it is done without interactions between ship's crew and shore-based personnel, and further segregations between the ship's crew and the shore-based personnel can be achieved through implementation of enhanced safe management measures (SMM).

# Contactless Cargo Operations with Segregation Protocol

Activities	Ship's Crew	Shore Based Personnel
<b>PPE</b>	Must wear a fitted N95 mask at all times. In addition, other appropriate personal protective equipment, where necessary, such as gloves and gown, should be worn if they do not jeopardise operational and personal safety.	Must wear a fitted N95 mask at all times. In addition, other appropriate personal protective equipment, where necessary, such as gloves and gown, should be worn if they do not jeopardise operational and personal safety.
<b>When the vessel arrived at the terminal</b>	Sanitize gangway, common areas and areas with high touch point before shore based personnel board the vessel, and ensure that there is hand sanitizer available in these areas. The ship's crew shall remain in the accommodation upon completion of the task.	No unauthorised personnel are to go onboard the vessel. Apart from the ship crew, only mooring crew, loading master and the appointed 3 <sup>rd</sup> party surveyor are allowed onboard.
<b>Hose connection</b>	Remain in the accommodation. Monitor the operations from the bridge, or other appropriate location in the accommodation block.	Mooring crew movement is restricted between the gangway and cargo manifold. Not to access the accommodation block when onboard the vessel. Disembark the ship immediately upon completion.
<b>Tank Gauging and cargo sampling</b>	Chief Officer and one crew member are allowed to carry out the tank gauging and cargo sampling. Move away from the area when the Loading Master and 3 <sup>rd</sup> Party Surveyor are verifying the readings.	Observe the operations from afar. Proceed to verify the reading after the crew members have moved away from the area.

Activities	Ship's Crew	Shore Based Personnel
<b>Safety Checklist and Cargo papers</b>	<p>Signing of safety checklist, pre and post ship/shore figure shall be done in separate area.</p> <p>Bill of Lading shall be done electronically</p>	<p>Signing of safety checklist, pre and post ship/shore figure shall be done in separate area. Loading Master and 3<sup>rd</sup> Party shall not enter into the accommodation block as well as minimise the time on board the vessel.</p> <p>Bill of Lading shall be done electronically</p>
<b>Tending the ship's mooring and cargo operations</b>	<p>As far as practicable, minimise the number of crew and time spent on the deck during cargo operations. When conducting such operations, ship crew shall adhere to safe distancing and safe management measures.</p>	<p>Avoid being in the same general area of the deck as the ship crew at any time (e.g. if ship crew are moving along seaward side of the vessel, shore based personnel are to move along the shore side of the vessel.) Such movement are to be coordinated by the ship crew using radios.</p>

# Responsibilities

## Responsibility of owners, occupiers and managers of any waterfront facility

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- a) Ensure that shore-based personnel going entering their premise to directly or indirectly board a vessel provides proof of the requisite test (i.e RRT or PCR/ART)
- b) Must not allow any shore-based personnel who has flu or fever-like symptoms to board a vessel
  - i. coughing,
  - ii. sneezing,
  - iii. breathlessness,
  - iv. runny nose,
  - v. loss of sense of smell
  - vi. Temperature higher than 37.5 degrees Celsius
- c) Ensure shore-based personnel check-in and check-out using SafeEntry@Sea

## Responsibilities of shore-based personnel

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- a) Must have a valid negative test result from a COVID-19 Polymerase Chain Reaction (PCR) test from his/her rostered routine testing (RRT), taken within the last 7 days prior to boarding a vessel;
- b) If the shore-based personnel is not enrolled on a RRT programme, he/she must have a valid negative test result from a COVID-19 PCR test or Antigen Rapid Test (ART) within 72 hours prior to boarding a vessel. After disembarking, these shore-based personnel must take a PCR test between the 5th and 7th day, and a final PCR test on the 11th day.
- c) Must check-in and check-out with SafeEntry@Sea.
- d) Must not board a vessel if he/she does not have (a) or (b), or did not check-in with SafeEntry@Sea; in any case, shore-based personnel who are unwell must not board a vessel.
- e) Must always wear a mask (unless the work activity requires that no mask be worn). In addition, shore-based personnel are to wear other appropriate personal protective equipment (PPE), such as gloves, and gown, without jeopardising operational and personal safety.
- f) Must minimise interaction with the vessel's crew, as far as reasonably practicable.
- g) Must bring and consume his/her own food and beverages, using his/her own utensils; and consume his/her meals in an area separate, and at a safe distance, from the vessel's crew.
- h) Must not consume any food and beverages from the ships' stores.
- i) Must ensure a safe distance of at least 1 metre between himself or herself and any other individual on board.
- j) Must not convene or take part in any gathering when on board except where necessary or in the course of the performance of his or her duties as shore-based personnel.
- k) No loitering in the crew living or common areas.
- l) Not remain onboard for a longer period than necessary to discharge his or her duties as a shore-based personnel, and not in any case, stay onboard overnight.

## Responsibility of owner, agent or master of vessel (i)

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- a) All crew members and shore-based personnel must wear a mask at all times (unless the work activity requires that no mask be worn) and, as far as is reasonably practicable, keep a distance of at least one metre apart from each other. In addition, the shore-based personnel are to wear other appropriate personal protective equipment, where necessary, such as gloves and gown, without jeopardising operational and personal safety.
- b) All crew members must take and record their temperature twice daily.
- c) All crew members must maintain good hygiene in the vessel's accommodation areas by cleaning frequently touched surfaces (e.g. desk, chart tables, dining tables, bridge/engine room consoles, door handles, handholds, switches, telephones/VHF handsets, faucets, etc.)
- d) The vessel must have a safe management plan for management of shore-based personnel boarding the vessel. Crew members to be briefed on the plan and to comply with the precautionary measures.
- e) Unwell crew members and/or passengers must be isolated onboard the vessel.
- f) Shore-based personnel who are unwell must be denied access to the vessel.
- g) Records of all embarkation/disembarkation of shore-based personnel must be maintained.
- h) Briefing on the safe management measures must be carried out for the shore-based personnel boarding the vessel and/or harbour craft and logged down for record purposes.

## Responsibility of owner, agent or master of vessel (ii)

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- a) A responsible officer onboard must be appointed to monitor/ensure the compliance of safe management measures by all crew and shore-based personnel onboard his vessel.
- b) Minimise interaction of crew with shore-based personnel as far as reasonably practicable.
- c) Designate a separate, clean and disinfected place that is a fully enclosed as a rest area, and dedicated toilets for only shore-based personnel to use.
- d) No loitering in the crew living or common areas.
- e) Ensure that shore-based personnel do not remain onboard for a longer period than necessary to discharge their duties, and not in any case, stay onboard overnight.
- f) Ensure that shore-based personnel do not consume any food or drinks from the ships' stores.
- g) Ensure that the shore-based personnel consumes only his/her own food or beverage that the shore-based personnel brought along, using his/her own utensils.
- h) Ensure that shore personnel consume his/her own food or beverage in an area separate, and at a safe distance, from the crew.
- i) Upon shore-based personnel disembarking the vessel, disinfect the areas that have been used and especially the frequently touched surfaces. National Environment Agency's guidance for disinfecting common areas and rooms should be followed.



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