

PROCESS SECTOR SPECIFIC SMM

FOR ENERGY & CHEMICALS (E&C)¹ PLANT OWNERS AND PROCESS CONSTRUCTION AND MAINTENANCE (PCM) COMPANIES² UNDERTAKING:

(I) PROCESS CONSTRUCTION WORKS NOT REGULATED UNDER THE BUILDING CONTROL ACT, OR (II) PROCESS TURNAROUND MAINTENANCE ACTIVITIES

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*Refer to <https://www.gobusiness.gov.sg/safemanagement/sector/> for the latest COVID-Safe Restart Criteria Information

¹ Energy & Chemicals (E&C) refers to the Petroleum/Petrochemicals and other Chemicals manufacturing sector.

² This refers to registered members of the Association of Process Industry (ASPRI) that hire Process Sector Work Permit or S-Pass Holders.

All Process sector companies are required to adhere to the General SMM for workplace.
(refer to mom.gov.sg/covid-19/requirements-for-safe-management-measures)

Business Continuity Plans Best Practice Guide for Process sector companies are also available
(refer to mom.gov.sg/covid-19/requirements-for-safe-management-measures)

The following are the sector specific SMMs which Process sector companies are required to adhere to.

Mandatory Precautionary Measures and Contactless Operations Procedures for Process Terminals / Marine and Process Waterfront Facilities Accepting Vessels [Updated 15 Mar 22]

Contactless Operations

EDB Managed Process Terminals / Marine & Process Waterfront Facilities are to conduct contactless operations / contactless operations by segregation by default, on all vessels calling at their facilities, regardless of their last port of call.

Contactless Operations

- No shore-based personnel, including shipowners /operator/ charterers/ terminal representatives, cargo interest representatives etc, can board the vessel.
- The connection and disconnection of hoses/arms, quality sampling, and quantity checking, 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.
- For any of the processes involves shore-based personnel other than a MPA-licensed harbour pilot, MPA Port Chemist or Loading Master in Full PPE when boarding the vessel, EDB would not be able to make a successful appeal for the ship to conduct contactless ops.

Contactless Operations with Segregation Protocol (aka Segregated Contactless Operations)

- Operations conducted without interaction 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).

Mandatory Precautionary Measures for Contact Operations

All arriving "Not to Land" (NTL) crew from ships arriving to conduct contact operations in process terminals / marine & process waterfront facilities are subjected to the Mandatory Precautionary Measures (MPM) (refer to edb.gov.sg/en/how-we-help/supporting-you-through-covid-19 or gobusiness.gov.sg/safemanagement/sector for the latest updates).

Pre-Arrival Criteria:

- a. No crew change within the past 7 days prior to entering Singapore
- b. No shore leave or physical interaction with any overseas individuals other than their own crew within the past 7 days prior to entering Singapore
- c. Yards must ensure that all crew, from ALL countries, must have their PCR³ swab test (PDT), or Antigen Rapid Test (ART) administered by a trained medical professional from an internationally accredited or recognised lab/clinic/medical facility and tested negative before departure from the last

³ Including saliva samples

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 the crews' PDT/ ART negative test results before letter of acceptance is issued to ship agent/owner.

Upon Arrival in Process Terminals/ Marine & Process Waterfront Facilities:

- a. On Arrival PCR Swab Test on board ships: Day 1
- b. 6 Antigen Rapid Tests (ART): Day 2-7. ART is to be supervised either by Ship Master, Ship agent or approved medical service provider.
- c. Shore-based personnel can board the ship for work if the following requirements are met:
 - i. After the NTL crew are tested C- for the On Arrival PCR Swab Test
 - ii. After NTL crew are tested Ag- for Day 2-7 ART.

If the vessel is unable to meet all criteria, the shipyard cannot accept the repair call. Shipyards can approach their respective account managers from the Singapore Economic Development Board (EDB) or Enterprise Singapore (ESG) and copy to EDB Central COVID Ops (CCO) team at cco@edb.gov.sg, with their specific queries at least 7 days in advance. The case will be assessed, and an approval may be given on a case-by-case basis.

Mandatory Precautionary Measures for Shipyard Repair Calls and Waterfront Facilities Accepting Vessels in Singapore

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.

Criteria for Default Approval

Passenger Ships ^[2]

(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 7 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 7 days prior to entering the Port of Singapore
- c) Yards must ensure that all crew, from ALL countries, must have their PCR⁴ swab test (PDT), or Antigen Rapid Test (ART) administered by a trained medical professional from an internationally accredited or recognised lab/clinic/medical facility 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 the crews' PDT/ ART negative test results before letter of acceptance is issued to ship agent/owner.
- d) Shipyard is to issue LOA ONLY after the preceding criteria are fulfilled.
- e) Ship 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+/Ag+ or close contact on board will not enter Port of Singapore unless MPA and PHS approve of the contactless ops only
- g) Before Gas Free inspection can be conducted by Port Chemist, de-mucking operation can be conducted at the anchorages.
- 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.
- i) Only Recovered or Vaccinated Shore workers will be sent onboard to conduct the de-mucking operation.

⁴ Including saliva samples

- 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.
- k) For entry into shipyards, the total number of crew onboard must be:
 - i. less than 250 pax for passenger ships (until further notice)
 - ii. less than 100 pax for non-passenger ships (until further notice)

Upon Arrival into Shipyard:

- l) An on-arrival PCR swab test for all crew must be done onboard the ship in the yard^[3]. 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 except for contactless operations. 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)⁵ on Day 2 to Day 7. After the D7 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 adhere to the prevailing Port Marine Circulars (refer to mpa.gov.sg)
- 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 (PDT) required for sign-offs from Singapore are to be done onboard the ship in the yard or berthed next to shore^[3], subject to MPA's approval. **No other pre-departure swab tests for the crew of vessels leaving Singapore, can be done onboard the ship in the yard or berthed next to shore.**
- 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.

⁵ ART is to be supervised either by Ship master, ship agent or medical service provider. Real-time Virtually supervised self-swab ART or Tele-ART is now accepted by Ministry of Health. For a list of telemedicine providers who are able to provide such Tele-ART services, please go to <https://flu.gowhere.gov.sg/>.

^[3] 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 (cc cco@edb.gov.sg).

Exemption for Harbour Craft from “no sign-ons within last 7 days” and PDT criteria

Harbour Craft are exempted from “no sign-ons within last 7 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.
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Exemption for Emergency Repairs from Pre-Arrival Criteria
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Emergency Repairs are exempted from Pre-Arrival criteria above. NTL crew of Ships calling at shipyards for emergency repairs will take 2 PCR tests namely OAT PCR and D7 PCR.

Shore-based personnel shall only board the ship to work after all crew <u>have tested PCR negative on D7</u> . Contactless repair works can still be carried out once ship is safely berthed in shipyard.

ADDITIONAL SAFE MANAGEMENT MEASURES PERTAINING TO SHIPYARD REPAIR CALLS IN SINGAPORE

To safeguard against the risk of transmission from crew during ship repairs, the following additional SMMs will apply to all shipyard repair calls in Singapore:

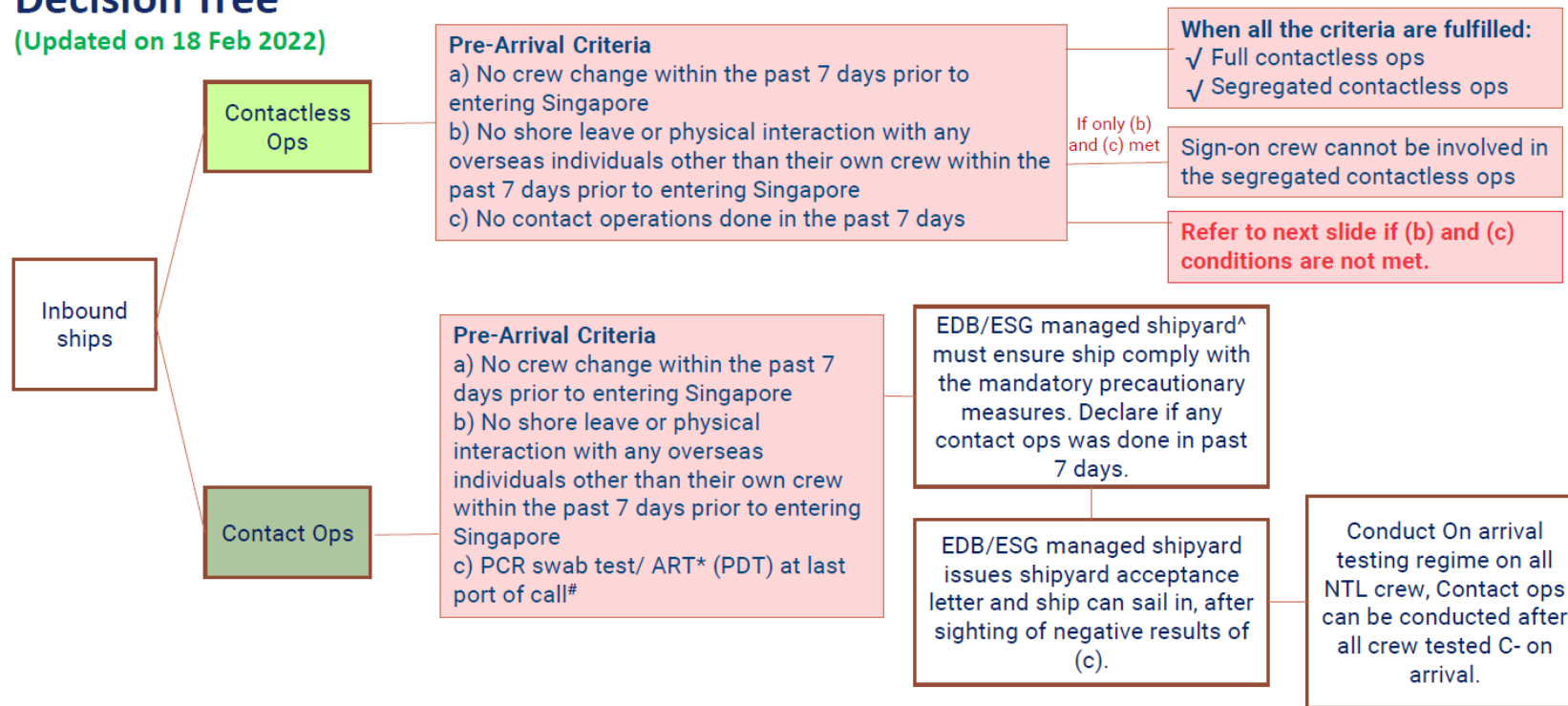
- a. Ship will appoint 1 Safe Distancing Officer (SDO) for every 50 crew. SDOs will assist the shipyard's Safe Management Officer (SMO) to implement the SMM onboard.
- b. Ship will submit the ship's SMM plan⁶ to the shipyard to facilitate the management of potential ship crew COVID-19 positive cases and shipyards shall communicate to ship their shipyard's SMM plans that will cover management of potential COVID-19 positive cases. Ship is required to comply and adhere to shipyards' SMM policies, when in the shipyard.
- c. Shipyards shall communicate to ship their SMM plans that will cover management of potential COVID-19 positive cases when vessel is in the shipyard.
- d. Vessel Safety Coordination Committee (VSCC) meetings should be conducted virtually before ship crew are tested negative.
- e. Movement of local workers are limited to assigned work areas, e.g. dock bottoms, engine room, tanks. All local workers are to adhere to the additional measures for works onboard vessels. Refer to COVID-Safe Worksite, Section H.
- f. Physical interaction between ship crew and yard workers (except ship's vessel management team) is prohibited.
- g. There is no sharing of amenities (e.g. food, bathrooms, etc.) between crew and yard workers.
- h. Physical interaction between the shipyard and ship personnel should be limited to the shipyard Project Management Team and the ship's vessel management team (Captain, Chief Engineer, Chief Officer, etc.). The interaction to be kept to a minimum and in a group of not more than 10 persons. Where possible, virtual meetings should take the place of physical meetings.

⁶ Refer to MPA's Port Marine Circular No. 04 of 2021, Annex B, point (d).

Please refer to the flow-chart below for all inbound vessels calling on process terminals / marine and process waterfront facilities.

Decision Tree

(Updated on 18 Feb 2022)



^ - Process terminals are to conduct contactless ops by default.

* - Antigen Rapid Test (ART) administered by a trained medical professional.

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

EDB/ESG-managed shipyards and process terminals must manage the incoming vessels according to the Decision Tree. (Updated on 18 Feb 2022)

Decision Tree

(Updated on 24 Feb 2022)

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 **>7 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.

Evaluation Criteria on Contactless Operations:

No.	Activities	Ship's Crew	Shore-Based Personnel
1	Health Declaration	<p>Vessel calling into the terminal/waterfront facility must compare the MPA's Maritime Declaration of Health. Applicant shall conduct its own risk assessment based on the declaration before allowing vessels 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 be inoculated with Singapore approved COVID-19 vaccines and have undergone at least 4 cycles of the 3D FET 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>
2	Safe Distancing	To remain in designated accommodation always and not to interact with shore-based personnel.	<p>At least 3 metres from any other personnel onboard the vessel.</p> <p>Always not to have any form of physical interaction with ship crew and limited to the declared work areas.</p> <p>Applicant <u>SHALL</u> declare if interaction between shore-based personnel and ship crew cannot be avoided.</p>
3	Enhanced Segregation Measures	Unless otherwise approved, vessel crew shall remain in their designated accommodation area throughout the ops.	<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 also to be mandatorily in full PPE.</p> <p>Shore-based personnel shall limit their movement to the declared work zones on board the vessel only.</p> <p>Shore-based personnel shall not consume meals while onboard, and must not use any of the common facilities, such as toilet, pantry and smoking area.</p> <p>Submission / receiving of documents shall be done electronically or be contactless, and meetings with vessel crew shall be done virtually or through other non-face-to-face means, such as a walkie-talkie.</p>
4	PPE	Vessel crew shall always wear a fitted N95 mask. Additionally, other appropriate personal protective equipment (PPE), such as gloves and gown should be	Shore-based personnel shall always wear a fitted N95 mask. Additionally, other appropriate personal protective equipment (PPE), such as gloves and gown should be worn if they do not jeopardise operational and personal safety.

		worn if they do not jeopardise operational and personal safety.	PPE must be discarded in a bio-hazard bin.
No.	Activities	Ship's Crew	Shore-Based Personnel
5	When Vessels Arrive at the Terminal	Sanitize gangway, common areas and areas with high touch points before shore-based personnel board the vessel. Ensure that there are hand sanitizers available at these areas. The vessel's crew shall remain in their accommodation upon completion of the task.	No unauthorised personnel are to go onboard the vessel. At all times, apart from the vessel crew, only the mooring crew, loading master, and appointed 3 rd Party Surveyor donned in Full PPE shall be permitted onboard with no physical interaction with crew. A minimal standoff distance of 3m to be strictly adhered to.
6	Hose Connection	Remain in the accommodation Monitor operations from the bridge, or at other appropriate locations within 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 vessel safely upon hose connection completion.
7	Tank Gauging and Cargo Sampling	Only the Chief Officer and 1 crew member can carry out the tank gauging and cargo sampling. Move away from the area when the Loading Master and 3 rd Party Surveyor are verifying readings.	Observe the operations from at least 3m away. Proceed to verify the reading after the crew members have moved at least 3m away from the area.
8	Safety Checklist and Cargo Papers	Signing of safety checklist, pre and post vessel / shore figures shall be conducted in separate areas. Bill of Lading shall be done electronically.	Signing of safety checklist, pre and post vessel / shore figures shall be conducted in separate areas. Loading Master and 3 rd Party Surveyor shall not enter the accommodation block as well as minimize time being on board the vessel. Bill of Lading shall be done electronically.
9	Tending the Vessel's Mooring and Cargo Operations	As far as reasonably practicable, minimize the number of crew and time spent on deck during cargo operations. When conducting such operations, vessel crew shall adhere to strict safe distancing and safe management measures,	Avoid being in the same general area of the deck as the vessel crew at any time (e.g. if vessel crew are moving along seaward side of the vessel, shore-based personnel are to move along the shore-side of the vessel.) Such movements are to be coordinated by the vessel crew using radios. All lines should be handled by heaving lines. Mooring line eyes and heaving lines shall be disinfected prior vessel berthing.
10	Post Duffing Operations	NA	Shore-based personnel shall duff (disinfect) themselves thoroughly upon reaching the shore end of the gangway. PPEs shall be disposed in strict accordance to existing guidelines on disposal of infectious waste.

**C+/Ag+ Management for Shipyards with vessels under
quarantined by Port Health Section and Maritime Port
Authority of Singapore [Updated 15 Mar 22]**

All vessels with C+ or Ag+ crew will have to adhere to the requirements of PHS and MPA.

Relevant MPA Port Marine Circulars **[Updated 15 Mar 22]**

Vessel owners/agents, shipyards that accepts vessels and personnel boarding a vessel in port (e.g. anchorage) are to adhere to measures stipulated in MPA's Port Marine Circulars. In particular:

Port Marine Circular	Description
No 3 of 2022	CREW CHANGE FOR CARGO SHIPS IN THE PORT OF SINGAPORE AND APPLICATION FOR VACCINATION
No 40 of 2021	REQUIREMENTS FOR VESSELS ARRIVING IN THE PORT OF SINGAPORE DURING COVID-19
No 26 of 2021	CHANGES TO PRE-ARRIVAL NOTIFICATION AND NOTIFICATION OF ARRIVAL
No. 08 of 2021	REQUIREMENTS FOR SHORE-BASED PERSONNEL BOARDING VESSELS AT ANCHORAGES, SHIPYARDS, TERMINALS AND MARINAS, IN THE PORT OF SINGAPORE
No. 043 of 2020	SHORE LEAVE FOR CREW WORKING ONBOARD VESSELS IN PORT OF SINGAPORE
No. 042 of 2020	FURTHER ENHANCEMENTS TO CREW CHANGE FOR CARGO SHIPS IN THE PORT OF SINGAPORE
No. 035 of 2020	ADVISORY ON MARINE SERVICE PROVIDERS ATTENDING TO VESSELS AT ANCHORAGES AND TERMINALS IN THE PORT OF SINGAPORE
No. 032 of 2020	ADVISORY FOR SHORE PERSONNEL AND SHIP CREW VISITING OR WORKING ONBOARD VESSELS ALONGSIDE WHARVES, IN SHIPYARDS AND AT ANCHORAGES
No. 016 of 2020	MARITIME DECLARATION OF HEALTH
No. 05 of 2006	GUIDELINES FOR PREPARING VESSEL FOR GAS-FREE INSPECTION

The list above is non-exhaustive. Please refer to latest guidance at <https://www.mpa.gov.sg/web/portal/home/port-of-singapore/circulars-and-notifices/port-marine-circular>.

Enforcement Matrix for Process Sector [Updated 15 Mar 22]

Enforcement matrix will adhere to the prevailing enforcement framework stipulated in the Workplace Safety and Health (COVID-19 Safe Workplace) Regulations 2021.

Definition of Tier 1-3 Offences:

	Definition
Tier 1	Advisory offences
Tier 2	CF offences
Tier 3	Prosecution for egregious CF offences

Appeals Against Composition Fines:

Enforcement officers may waive composition sums in full upon receiving appeals or requests to review a composition notice that has been issued to an offender. A suitably senior enforcement officer should be appointed to consider such cases accordingly. Exceptional cases which are particularly high-profile, novel or sensitive should nonetheless be forwarded to AGC for consideration of such decisions.

For avoidance of doubt composition may not be waived in part. I.e. agencies are not to allow for part payment of a composition sum and a waiver of the remainder.

Composition should be waived in full only in the following exceptional circumstances:

- (i) The offender can adduce evidence that the underlying offence has not been committed.
- (ii) The offender faces genuine financial difficulty and is unable to pay the composition sum; or
- (iii) The offender suffers from a mental condition (including low IQ) that caused or contributed to the commission of the offence.

For (i) above, the appropriate action is to take no further action against the offender thereafter. For (ii) and (iii), the offender should be issued a 12-month conditional warning for the same offence after waiving the composition sum.