

Ballast Water Management Plan  
Section 13 – Training and Familiarisation

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### 13.1 Training

Ballast Water discharge from ship is a prominent cause of the establishment of harmful aquatic organisms and pathogens in ports which may poses threat to indigenous animals and plant life and marine environment. It is for this reason that vessel carrying ballast water from foreign port is required to carry a Ballast Water Management Plan.

Training for Masters and its Crews involving Ballast Water Management onboard is essential in order to ensure that the implementation of ballast water exchanges at sea is successful carried out to minimise the transfer of harmful organisms and pathogens into foreign ports. Officers and Rating engage in ballast water exchange at sea should be trained and familiarized with the following:

- Ship's pumping plan that shows ballast pumping arrangements and the position of associated air and sounding pipes, position of all compartment and tank suction and pipelines connecting them to ship's ballast pumps and, in the case of use of the flow through method of ballast water exchange, the openings used for release of water from the top of the tank together with overboard discharge arrangement.
- Methods of ensuring that sounding pipes are clear, and that air pipes and their non return devices are in condition.
- The different times required to undertake the various ballast water exchange operations.
- Methods in use for ballast water exchange at sea if applicable with particular reference to required safety precautions mentioned in Section 6 and 7.
- Method of on-board ballast water record keeping, reporting and recording routine sounding.

A briefing is to be conducted to the crew involved in the operation prior carrying out the Ballast Water Exchange operation.

The Environmental Officer is to provide a scheduled training on Ballasting water exchange **every quarterly and to newly joined crew before the operation.**

### 13.2 Training Scope

All crews engage in ballast operation, are required to undergo familiarisation and training about Ballast Management of the ship.

The Masters opened the training session to explain the importance of ballast water management in compliance with International regulations. The Chief Officer (Environmental Officer) is to explain the methhodo and procedure used for ballast water exchange operations including the safety precautions.

The training scopes shall encompass the following topics:

1. Ballast Management, is required by IMO Resolution A.868(20) requires all vessels carrying ballast must have a ballast management plan on board.

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2. Two type of ballast exchange methods:
  - a) Sequential or Empty and Refill method - This shall be done at mid-ocean, at least 200 miles from shore and at least 2000 meters depth.
  - b) Flow through method - Ocean water is pump into a ballast tank full of water loaded from port and the allowing the excess water to over-flow through the openings on deck, such as Air vents and manholes. The operation shall continue until 3 times the water volume of the tank is exchanged.
3. Safety in performing “Sequential” (Empty and Refill) ballast operations. Ensure that all Air Vents are open to ensure free flow of air in-and-out of the tank, during pumping out and refilling of the tanks. By “Flow Through” method, air vents and manholes of ballast tank on deck shall be open, to prevent over-pressurization of the tank.
4. Minimize loading of ballast in areas identified to have outbreaks of infestations or known population of harmful organisms and pathogens; nearby sewage outfall and near by dredging operations; and in darkness or night time and shallow waters.
5. Reporting Forms: (Records of ballast operations shall be retain for **2 years** onboard)
  - a) NBIC Ballast Reporting Form for U.S.A ports
  - b) AQIS Ballast Water Reporting Form required in Australian Ports
  - c) Anexo B Ballast Water Reporting Form (NORMAN-20/DPC) for Brazil Ports
  - d) New Zealand Ballast Water Declaration
  - e) ROPME (Sea Area) Ballast Water Reporting Form
  - f) Canadian Ballast Water Reporting Form

**After training, the Environmental Officer to maintain the training record in the form enclosed in Appendix VIII.**