BMA

BHP Mitsubishi Alliance

BMA HAY POINT VESSEL LOADING SEQUENCE QRG

Status: Approved

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1 Introduction

BHP Hay Point terminal is located forty kilometres (40km) south of Mackay, Queensland and is located within the Great Barrier Reef. The terminal consists of three (3) offshore berths that can moor a range of bulk carriers from Handymax (59k DWT) up to Cape size (180k DWT plus).

The berths at Port of Hay Point are located up to four (4) kilometres offshore and are exposed to the SE trade winds that blow for most of the year. The winds produce a short sharp sea with wave heights of approximately two (2) meters being experienced at the berth. Longer period waves of approximately one (1) meter in height are generated from the long fetch seventy-five kilometres (75km) due to the berth's alignment to the Capricorn Channel. In addition, the area experiences a large tidal range with king tides reaching heights of seven meters (7 m) above LAT. With this large tidal range comes currents of approximately one (1) knot with the Ebb tide setting to the NNW and the flood tide to the SSE on about 150º.

The upper Met Ocean conditions experienced at the terminal do provide challenging mooring conditions at the berth. In more severe conditions, ships do move whilst alongside the berth placing large mooring loads on the vessels and terminal mooring infrastructure. The movement can lead to broken mooring lines, uncontrolled ship excursion, and damage to wharf infrastructure (fenders). Therefore, ships' Masters, crews and terminal staff need to be particularly vigilant when undertaking cargo operations at the facility and monitor mooring lines at the terminals stated intervals.

The Master is responsible at all times for the safe loading of the ship, and details of the loading sequence must be confirmed to the terminal, which in this case is Hay Point. For vessels with a Length Overall (LOA) of 250 meters or less, two loading sequences **MUST** be submitted:

1. With a trim of 2.5 meters or less and propeller at 100% immersion.
2. With a trim of 3.5 meters or less and propeller with immersion of 90% or greater.

The vessel will note the load plan file supplied has 2 load sequence templates, ensure both are completed for vessels <250m LOA

Vessels greater than 250 meters LOA are not required to complete two loading sequences but must ensure 100% propeller immersion. Please submit your loading sequence within 7-10 days but no later than 7 days prior to arrival to ensure smooth and efficient loading operations at Hay Point.
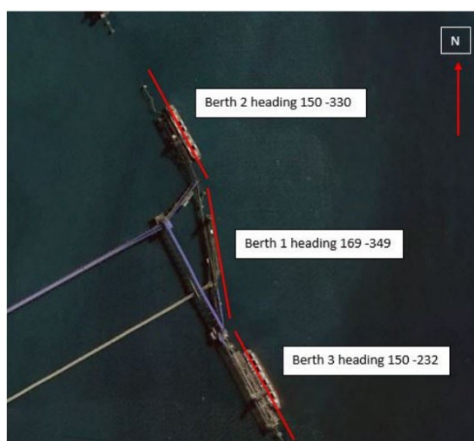

Figure 1

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2 Load Sequence Completion

2.1 Plan Version

Specify the version of the loading plan being submitted. This ensures that the terminal has the most up-to-date and accurate information for coordinating the loading operations. Vessels less than 250M LOA **MUST** complete 2 load sequences one with a 2.5M trim with 100% propeller immersion and another with a <3.5m trim and greater than 90% propeller immersion.

2.2 Plan Date

Indicate the date on which the loading plan was created. This helps in tracking timelines and relevance of the plan, ensuring that all data is current.

2.3 IMO Number

Provide the International Maritime Organization (IMO) number of the vessel. This unique identifier is essential for tracking and regulatory purposes.

2.4 Voyage ID

State the unique identifier for the voyage. This ID helps in distinguishing between different voyages and ensures that all documentation is correctly associated with the specific journey.

2.5 Vessel

State the name of the vessel. This information is crucial for identifying the ship and ensuring that all loading operations are tailored to its specifications.

2.6 Loading Port

Detail the port where the loading will take place. This helps in coordinating logistics and ensuring that all parties are aware of the loading location.

2.7 Cargo

Detail the type of cargo to be loaded at this port of call

2.8 Last Port

Detail the last port where the vessel unloaded

2.9 Last Bulk Cargo

Provide information about the last cargo carried by the vessel.

2.10 Total Ballast Onboard (Tonnes)

Detail the total ballast onboard on arrival at the berth, this is used to calculate an approx. time for deballasting

2.11 Fuel

Specify the type and quantity of fuel on board. This information is important for calculating the vessel's stability.

2.12 Metric Tonnes

Specify the total weight of the cargo in metric tonnes to be loaded. This is a critical parameter for planning the loading sequence and ensuring that the vessel's stability and draft are within safe limits.

2.13 Maximum Air Draft

State the maximum air draft of the vessel. This is the distance from the waterline to the highest point on the deck (Generally the top of hatch cover) and is important for ensuring that the ship can safely berth and commence loading.

2.14 Cargo Density %

Provide the density of the cargo as a percentage. This helps in calculating the stowage factor and ensuring that the cargo is loaded in a manner that maintains the vessel's stability.

2.15 Deballast Rate (tph)

Detail the rate at which ballast water will be discharged. This is important for confirming the vessels stated deballast time against the rate stated.

2.16 # Mooring Lines on Winches

Detail the number of mooring lines that are run off winch drums and **NOT** secured to bitts

2.17 Loaders

Hay Point only has 1 Shiploader per berth, this is prefilled

2.18 Loading Rate

Specify the maximum load rate the vessel is able to be loaded at in TPH, this figure should be corelated to the average rates detailed for each shiploader. Vessel should work and calculate on average rate, Average rate allows for Hatch Changes etc.

2.19 Stowage Factor

Detail the stowage factor for the cargo, typically in cubic feet per metric tonne. This helps in determining the volume of space required for the cargo and ensuring that it is stowed in a manner that maintains the vessel's stability. Note for stowage factors of 40 and below as calculated by the terminal, the terminal accepts no accountability for spillage on the deck of the vessel.

2.20 Dock Water Density t/m³

Provide the density of the dock water in tonnes per cubic meter. This is important for calculating the vessel's draft and ensuring that it remains within safe limits during loading and unloading. Hay Points density is detailed on the load sequence in general information. Please note the density of the water at the port of Hay Point is between 1.022 - 1.025

2.21 Approx Deballast Hours

This number is calculated and not required to be completed by the vessel

2.22 Arrival Drafts

State the drafts of the vessel upon arrival, including Forward, Aft, Trim and Midship drafts. This information is crucial for ensuring that the vessel can safely enter the port and berth at the terminal.

2.23 Sailing Drafts

State the drafts of the vessel upon departure, including Forward, Aft, Trim and Midship drafts. This assists in ensuring that the vessel remains within safe limits for departure.

2.24 Average Shiploader Rates

Describes the average loading rates for each of the ship loaders at Hay Point:

- Shiploader 1: 5000 tph   Max Rate 6500 tph
- Shiploader 2: 6000 tph   Max Rate 8000 tph
- Shiploader 3: 6000 tph   Max Rate 8000 tph

2.25 Hold Information

Vessel is to complete information for all holds including,

- Hold Number (Selectable from the dropdown if blank)
- Discharge Port of each hold
- Metric Tonnes in the hold
- Grade of the Product
- % used of the hold

2.26 Pour Plan

Vessel is to complete pour sequence, for each step sequence the plan must include,

- Pour Number
- Hold Number
- Hatch Number
- Grade
- Metric Tonnage

- Ballast Operations inclusive of tank detail and status, PI = Pump In; GI = Gravitate In; F = Full; PO = Pump Out; GO = Gravitate Out; MT = Empty)
- Pumping Time for each hold/sequence
- Any Comments or notes for each pour, ensure comments are completed for information that may be required by the Terminal.
- Fwd./Aft/Mid drafts for each pour
- Trim after the completion of each pour (Vessel is to minimise going down by the head)
- Air Draft after each pour
- SF% after each pour (Shear Force)
- BM% after each pour (Bending Moment)

2.27 Notice/Loading Foreman information

All notices should be read and complied with to ensure safe and efficient loading operations. This includes any specific instructions or warnings provided by the terminal to prevent accidents and delays. The loading Foreman contact information is detailed on the loading sequence for ease of reference

2.28 Arrival Information

Propeller immersion - Vessel is to detail the propellers immersion on berthing, this is essential for vessels under 250M LOA as these vessels must complete 2 load sequences and may have a propeller immersion greater than 90%. Vessels greater than 250m LOA must have 100% immersion.

Arrival Displacement – Vessel is to indicate arrival displacement, this is to ensure the vessel is safe to berth at the ports infrastructure.

2.29 Radio Channel Information

Ensure the vessel does not change the Radio channel for the berth it is moored to, if the vessel changes the radio channel the vessel could be talking to the wrong shiploader which is a safety event.

- Berth 1: Channel 9
- Berth 2: Channel 10
- Berth 3: Channel 11

2.30 Vessel Information

Provide contact details for the Vessel, Master and Chief Officer. This ensures the vessel can be contacted easily for any issues or questions and can be promptly addressed.

2.31 General Information

Read and acknowledge all general information provided to ensure compliance with terminal requirements. This includes any specific instructions or guidelines for safe and efficient loading.

2.32 Deballast Times

Detail deballast/pump time for each pour, the vessel should adhere to the specified deballast times and contact the shiploader immediately if any issues or delays arise. This ensures that the vessel remains within safe draft limits and that loading operations are not delayed. The vessel MUST notify the terminal as soon as possible if there are any deballasting delays or issues. The port will assist the vessel as much as possible to avoid stoppages while keeping the vessel safe. Communication is important for avoiding any delays allocated to the vessel, the loading foreman or representative will liaise with the vessel regarding delays, agreed delays between the vessel and terminal that have no impact on sailing times etc will not incur a delay. If the vessel does not communicate sufficiently the delay will be allocated to the vessel as the terminal has had no time to assist.

2.33 Trimming Tonnes

Always allow 2.5% of total cargo for trimming this is to allow for variances onshore and to ensure the vessel gets full cargo

3 References

Controlled Document Number	Title	Document Number
Site Documents		
HPT-PRO-0001	HPT PRO Bulk Vessel Mooring Line Standard	012261011
HPT-PRO-004	HPT PRO Port Information & Regulations For Vessels Arriving	000196672
HPT-CHL-0023	HPT CHL Vessel Pre-Arrival Questionnaire For Masters	013088441

Table 1: List of reference documents

4 Version Management

Version	Details	Date
1.0	Initial release	17 February 2025

Table 4: Version Management