



**Singapore Refining Company Private Limited**  
Company Registration No: I97900084K

# **TERMINAL INFORMATION AND REGULATIONS BOOKLET**

**(July 2014 Edition)**



## **JURONG ISLAND VLCC JETTY1**

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**SRC PTE LTD - TERMINAL INFORMATION AND REGULATIONS BOOKLET**

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| Prepared By: Marine Superintendent              | Approved By: OMA Manager |
| Procedure Title : <b>Amendment Record Sheet</b> |                          |

| Date of Revision | Procedure No     | Issue No | Description of Change/reviewed by   |
|------------------|------------------|----------|---|
| Dec 2013         | Whole booklet    | 01       | New issue after taking over from TMS as operator.   |
| June 2014        | Minor Amendments | 02       | Due to typo error & contact points/telephone nos. on Pages 5 & 8. Also, changed TMS to SRC on Disclaimer: at bottom of Page 21. |
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Prepared By: Marine Superintendent

Approved By: Oil Movements Area (OMA) Manager

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| Prepared By: Marine Superintendent                                      | Approved By: OMA Manager |
| Procedure Title : <b>Distribution List &amp; Notice of Terms of Use</b> |                          |

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| Prepared By: Marine Superintendent | Approved By: OMA Manager |
| Procedure Title : <b>Warnings</b>  |                          |

# **WARNINGS**

## **SMOKING**

**SMOKING IS STRICTLY PROHIBITED ON THE JETTY AND ONBOARD TANKERS ALONGSIDE, EXCEPT IN THOSE SPACES ONBOARD SPECIFICALLY DESIGNATED BY THE MASTER AND APPROVED BY SRC AS “SMOKING AREA”. FAILURE TO COMPLY WITH THESE REGULATIONS WILL INVOLVE CESSATION OF OPERATIONS AND MAY RESULT IN THE VESSEL VACATING THE BERTH PENDING A COMPLETE INVESTIGATION AND RECEIPT OF RETURN ASSURANCE FROM THE MASTER THAT EFFECTIVE CONTROLS HAVE BEEN ESTABLISHED.**

**THE COMPANY RESERVES THE RIGHT, IN UNUSUAL CIRCUMSTANCES, TO PROHIBIT SMOKING AT ANY TIME, IN ANY PLACE.**

## **ALCOHOL / DRUGS**

**MASTERS ARE ADVISED THAT OPERATIONS WILL CEASE, IF THE ACTIONS OF A PERSON OR PERSONS INVOLVED IN OPERATIONS ARE NOT UNDER PROPER CONTROL AS A RESULT OF THE USE OF ALCOHOL OR DRUGS.**

**OPERATIONS WILL NOT RESUME UNTIL THE MATTER HAS BEEN REPORTED TO AND FULLY INVESTIGATED BY THE RELEVANT AUTHORITIES AND SINGAPORE REFINING COMPANY (SRC) CONSIDER IT SAFE TO DO SO. DELAY OR CANCELATION OF THE VESSEL’S DEPARTURE MAY RESULT.**

**ACCESS MAY BE DENIED TO JOINING OR RETURNING CREW MEMBERS SIMILARLY AFFECTED BY ALCOHOL OR DRUGS.**

## **POLLUTION**

**IT IS AN OFFENCE TO :**

- **SPILL OIL**
- **DUMP GARBAGE**
- **EMIT EXCESSIVE FUNNEL SMOKE**

**ALL INCIDENTS WILL BE INVESTIGATED AND PROSECUTION COULD RESULT.**

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| Prepared By: Marine Superintendent                              | Approved By: OMA Manager |
| Procedure Title : <b>Chapter 2 : Pre-arrival communications</b> |                          |

**1.1 Emergency Alarm Signals**

**Jetty :**

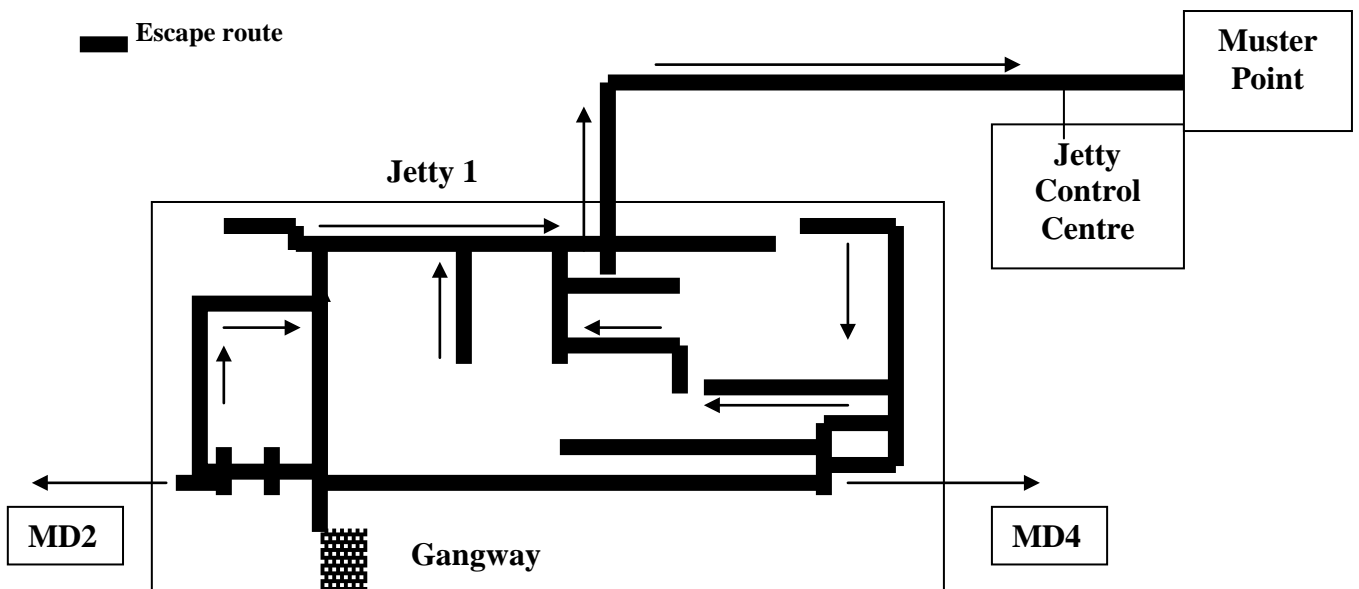
- Intermittent sounding of siren.
- Continuous ringing of general alarm bell (Jetty shelter and Jetty Control Centre)
- Announcement via the Public Address system.

**Ship :**

- Series of long blast of 10 seconds or more on the ship's Whistle or air horn
- Continuous ringing of general alarm bell.

**1.2 Muster Points and Escape Route Layout**

- Escape route direction is identified by yellow arrows painted on the berth deck.



Alternative escape route to mooring dolphin (MD2 & MD4) for rescue boat

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| Prepared By: Marine Superintendent                              | Approved By: OMA Manager |
| Procedure Title : <b>Chapter 2 : Pre-arrival communications</b> |                          |

1.3 Action in the Event of Fire.

| Fire Action - Ship  |  |
|---|--|
| <b>Fire on your Ship</b>  | <b>Fire on another Ship or Ashore</b>  |
| <ul style="list-style-type: none"> <li>• Raise alarm</li> <li>• Fight fire with aim of preventing spread</li> <li>• Inform terminal</li> <li>• Cease all cargo/ballast operations and close all valves</li> <li>• Stand by to disconnect hoses or arms</li> <li>• Bring engines to stand by</li> </ul>  | <ul style="list-style-type: none"> <li>• Raise alarm</li> </ul> <p><b>Stand by, and when instructed:</b></p> <ul style="list-style-type: none"> <li>• Cease all cargo/ballast operations and close all valves</li> <li>• Disconnect hoses or arms</li> <li>• Bring engines and crew to stand by, ready to unberth</li> </ul> |
| Fire Action - Ashore  |  |
| <b>Fire on a Ship</b>   | <b>Fire Ashore</b>   |
| <ul style="list-style-type: none"> <li>• Raise alarm</li> <li>• Contact ship</li> <li>• Cease all cargo/ballast operations and close all valves</li> <li>• Stand by to disconnect hoses or arms</li> <li>• Stand by to assist fire-fighting</li> <li>• Inform all ships</li> <li>• Implement terminal emergency plan</li> </ul>   | <ul style="list-style-type: none"> <li>• Raise alarm</li> <li>• Cease all cargo/ballast operations and close all valves</li> <li>• Fight fire with aim of preventing spread</li> <li>• If required, stand by to disconnect hoses or arms</li> <li>• Inform all ships</li> <li>• Implement terminal emergency plan</li> </ul> |
| In case of fire, do not hesitate to raise the alarm   |  |
| <p><b>Terminal Fire Alarm:</b></p> <p>At this terminal, the fire alarm signal is :<br/> <u>Intermittent sounding of siren,</u><br/> <u>Continuous ringing of general alarm bell,</u><br/> <u>Announcement via the Public Address System</u></p> <p><b>Ship Fire Alarm :</b></p> <ol style="list-style-type: none"> <li>1. Sound the recognized alarm consisting of a series of <u>long blasts</u> on the ship's whistle, each blast of not less than ten seconds duration supplemented by a continuous sounding of the general alarm system.</li> <li>2. Contact the terminal.</li> </ol> <p>Telephone : <u>67953090</u> VHF Channel : <u>1 of hand held VHF set provided</u></p> |  |
| In case of fire, personnel will direct the movement of vehicular traffic ashore   |  |

ICS / OCIMF / IAPH 2006

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| Procedure Title : <b>Chapter 2 : Pre-arrival communications</b> |                          |

**1.4 Action in the event of Oil Spillage from the Ship or Terminal.**

**ACTION - SHIP**

- **Inform Jetty Supervisor via the portable VHF radio provided.**
- **Stop all cargo operations (stop all cargo pumps) and close all valves .**
- **Maintain communication with Jetty Supervisor at all times.**

**In the event of an oil spill at the Terminal or on board the Ship, the Terminal Emergency Plan will be activated. The ship will be kept informed of any actions implemented or required.**

**1.5 Contact Points and Telephone Numbers for Key Personnel ( All below Marine VHF Channels are Hague Plan Frequencies, except for Channel 9 which is SRC Private Frequency)**

| Station   | Telephone No.                           | Marine VHF                        | Handheld VHF (For Internal Use only) |
|---|---|-----------------------------------|--------------------------------------|
| Jetty Control Centre  | 6795 3090                               | Channel 5                         | Position 5                           |
| MPA Port Operations   | 6325 2493/4                             | Channel 16 & 09                   | -                                    |
| West Jurong Control   | 63252493                                | Channel 22                        | -                                    |
| Sinki Control   | 63252493                                | Channel 68                        | Position 7                           |
| Civil Defense<br>(Jurong Fire Station)<br>(Banyan Fire Station) | 995 (Fire )<br>6267 4712/3<br>6515 8616 | -                                 | -                                    |
| Ambulance   | 995                                     | -                                 | -                                    |
| Police Coastguard   | 63775539/40                             | Channel 7                         | Position 6                           |
| Singapore Pilot Office  | 6379 9814                               | Channel 20                        | -                                    |
| Pilot Channel for Berthing/ Un-berthing                         | -                                       | Private Frequency<br>150.550Mhz   | Position 2                           |
| PSA Marine Tugs   | 6379 9811                               | Channel 17                        | -                                    |
| Singapore Refining Company                                      | 6357 0143                               | Channel 9 (SRC Private Frequency) | Position 1                           |

**1.6 Safety Requirements for Ship Visitors**

(See Appendix IV – Terminal Visitors Card and Visitor’s Emergency Action Card)

- 1.6.1 All visitors must comply with the instructions detailed in the Terminal Visitors Card and Visitors Emergency Action Card.
- 1.6.2 Use of electronic equipments such as mobile telephones, pagers and cameras in the Terminal and on the ship’s open deck is prohibited
- 1.6.3 All visitors must comply with no smoking and naked light regulations.
- 1.6.4 All visitors to the ship must report to the Jetty Supervisor at the Jetty Control Centre prior to boarding and similarly inform the Jetty Supervisor when they disembark.
- 1.6.5 On boarding, all ship visitors must be escorted by a crew member to the Duty Officer and similarly inform the Duty Officer when they plan to disembark.
- 1.6.6 All visitors to the ship must obey all the ship’s rules and regulations.

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| Prepared By: Marine Superintendent                              | Approved By: OMA Manager |
| Procedure Title : <b>Chapter 2 : Pre-arrival communications</b> |                          |

1.6.7 All visitors to the ship must be briefed by responsible ship officer on:

- Emergency Alarm – ship and shore
- Emergency station, escape routes and muster points.
- Ships regulations for visitors

**2.1 Pre-Arrival Information required from ship:**

- AA Arrival displacement; Summer Deadweight
- BB Maximum Arrival draft.
- CC ETA at Pilot West Boarding Ground A
- DD Crude Grades, Quantity, Temperature and Pour-point.
- EE Total Cargo Quantity.
- FF Free water in individual cargo and slop tanks.
- GG Slop quantity and indicate whether load on top.
- HH Any slop required to be discharged.
- II Stowage and discharge plan of cargo and slops.
- JJ Prepare 4 x 16 inches & 150lbs ASA manifold flanges for 4 loading arms. Ship’s manifold to meet OCIMF recommendations.
- KK No. of hours required for complete discharge inclusive of COW (Minimum COW).
- LL Vessel must maintain full readiness to maneuver at short notice during stay at Jetty. Immobilization of engine is not permitted.
- MM Prepare 20 mooring lines for ships > 200,000 scantling dwt or 16 mooring lines for ships < 200,000 scantling dwt. Mooring is most of the time port side alongside.
- NN Vessel to prepare approved equipment for ullaging and sampling without breaching IG pressure.
- OO The height of the manifold should be maintained between 6 metres and 30 metres above water level at all times during discharge operation.
- PP Confirm ETA to Pilot Office on VHF radio Ch 20, 2 to 3 hours before arrival.
- QQ Are there any ship defects which may affect port performance including the need for any repairs.
- RR Is inert gas plant fully operational and in compliance with SOLAS.
- SS Is COW system pressure tested to conform to the ship’s COW manual.
- TT What is the maximum H2S content found in the cargo tanks vapour space.

**2.2 Vessel’s mooring arrangement plan and type of mooring lines on board.**

Vessel to provide the following before arrival:

- a) Mooring Arrangement Plan of the vessel and
- b) Particulars and number of mooring lines and winches available on board with distances from the centre of manifolds. List of questionnaires will be sent to the vessel.

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| Prepared by: Marine Superintendent                | Approved by: OMA Manager |
| Procedure title : <b>Chapter 3 : Port Control</b> |                          |

**3.1 Location of Jurong Island VLCC Jetty 1.**

The Jurong Island VLCC Jetty 1 is located at the south-eastern part of Jurong Island in the Sinki Fairway in position Lat 01 deg 13.5 ' N Long 103 deg 40.6 ' E

**3.2 Controlling Authority**

Located within the port limits of Singapore, the Jetty comes under the jurisdiction of the Maritime and Port Authority (MPA) of Singapore. The MPA Act applies with regards to inward and outward clearance of the vessel.

**3.3 Vessel Traffic Information Service**

The Vessel Traffic Information Service (VTIS) covers the Singapore Straits. Reporting to VTIS is mandatory.

**3.4 Confirmation of Arrival with Port Control**

Vessels are required to confirm arrival with VTIS:

- On VHF Channel 73 (VTIS West) when passing Brothers' Light if arriving from the West;
- On VHF Channel 10 (VTIS East) when passing Horsburgh Light if arriving from the East;

**3.5 Pilotage**

Pilotage is compulsory. Under normal circumstances, the pilot will board the vessel at pilot west boarding ground A (Lat.01 deg 13.1'N Long.103 deg 36.1'E). However, the Maritime and Port Authority of Singapore recommend that vessels bound for the Jurong Island VLCC Jetty 1, board their pilot at the Precautionary Zone. VLCCs are usually berthed port side to stemming the flood current (west-going) with the assistance of 4 tugs.

**3.6 Anchorage**

The vessel will anchor at the VLCC anchorage westward of Sinki Fairway if the tidal condition is not suitable for berthing on arrival. Vessel may also anchor at the alternative Sudong Special Purpose Anchorage with permission from port control.

**3.7 Communication with Port Control**

| Authority                                   | Telephone No.       | VHF Channel (Haque Plan Frequency) |
|---|---------------------|------------------------------------|
| Port Operations – East Control              | <b>6325 2493</b>    | <b>12</b>                          |
| Port Operations – West Control              | <b>6325 2493</b>    | <b>68</b>                          |
| Vessel Traffic Information System – East    | <b>6325 2493</b>    | <b>10</b>                          |
| Vessel Traffic Information System – Central | <b>6325 2493</b>    | <b>14</b>                          |
| Vessel Traffic Information System – West    | <b>6325 2493</b>    | <b>73</b>                          |
| Immigration and Port Health                 | <b>63775939/40</b>  | <b>78</b>                          |
| MPA Port Marine Safety/Emergency            | <b>6325 2488/89</b> | <b>7</b>                           |
| Sinki Control                               | <b>6325 2493</b>    | <b>68</b>                          |
| West Jurong Control                         | <b>63252493</b>     | <b>22</b>                          |
| Singapore Pilot Office                      | <b>63799814</b>     | <b>20</b>                          |

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| Prepared By: Marine Superintendent                                   | Approved By: OMA Manager |
| Procedure Title : <b>Chapter 4 : Information on Jetty Facilities</b> |                          |

#### 4.1 Jetty Facilities

The VLCC Jetty 1 at Jurong Island is designed to handle vessels ranging from 95,000 to 387,000 tonnes displacement.

The layout of the VLCC jetty is shown in Appendix I and the jetty comprises the following:

- Jetty platform with 4 x 16 inch marine loading arm.
- Four breasting dolphins (BD 1-4).
- Four mooring dolphins (MD 1-4).
- Walkways link the platform with the breasting and mooring dolphins.
- Approach/pipe trestle between the shore and jetty platform.
- Speed of approach system and environmental monitoring sensors.
- Quick Release Hooks and Mooring Hook Load Monitoring System
- Jetty Control Centre.
- Security guardhouse.
- Access roads.

On the Service Platform pertinent equipment installed include:

- Four 16-inch unloading arms with hydraulic quick connect disconnect coupler
- Access gangway with utility crane
- Two elevated fire monitors
- Fire fighting system

#### 4.2 Jetty Dimensions

| Jetty | Depth (m) alongside | Channel Depth (m) | Max. Displacement (tonnes) | Max. length (m) | Min Parallel Body (m) |
|-------|---------------------|-------------------|----------------------------|-----------------|-----------------------|
| 1     | 24.5                | 22.5              | 387,000                    | 353             | 78                    |

#### 4.3 Navigation Information

- The approach depth of the channel is 22.5 metres and depth alongside is 25.0 metres. The jetty alignment is 045 / 225 degrees true. The highest tidal range is 3.68 metres and while tidal stream rates of 2.0 knots are normal, rates of 3.5 knots can be experienced.
- Laser berthing aids are installed on the jetty and the lateral rate of approach should not exceed 5 cm per second when landing on the fenders, with the vessel parallel to the jetty face.

#### 4.4 Mooring Facilities

- The jetty is provided with two outer and two inner breasting dolphins. The outer breasting dolphins are provided with a fender system capable of berthing vessels up to 387,000 tonnes displacement. The inner dolphins and outer dolphins are each fitted with 2 quick release mooring hooks and a capstan.

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| Prepared By: Marine Superintendent                                   | Approved By: OMA Manager |
| Procedure Title : <b>Chapter 4 : Information on Jetty Facilities</b> |                          |

- There are four mooring dolphins. Each mooring dolphin is fitted with 4 quick release mooring hooks and a capstan. The quick release mooring hooks will allow for safe release of the mooring lines. They can also be operated remotely from the Jetty Control Centre. The loads on the mooring hooks are also monitored.
- Two mooring boats will be assisting in the mooring of the vessel.

#### 4.5 Mooring Arrangements

(See Appendix IIA, IIB)

- Generally the mooring arrangement for vessel below 200,000 Scantling dwt is 8 lines fore and 8 lines aft, (3x3x2 or 4x2x2). For vessels of 200,000 Scantling dwt and above, 10 lines forward and 10 lines aft, (4x4x2). All lines should be wires and must be on spool drums.
- All mooring lines and associated rope tails (pendants) leading to the same dolphin shall be as per OCIMF recommendations.
- Vessels whilst secured alongside the jetty must rig emergency towing wires as per OCIMF guidelines, on the seaward bow and quarter, ready for emergency towing.

| <b>UNDER DESIGN ENVIROMENT AT SITE : 40 KNOTS WIND , 3.2 KNOTS CURRENT</b> |                           |                            |                   |
|--|---------------------------|----------------------------|-------------------|
| <b>VESSEL SIZES</b>  |                           | <b>NO OF MOORING LINES</b> | <b>MBL (TONS)</b> |
| <b>(X 1,000 DWT)</b>   | <b>LOA (METRES)</b>       |                            |                   |
| <b>80 &lt; DWT ≤ 120</b>   | <b>231 &lt; LOA ≤ 256</b> | <b>16 (3 x 3 x 2)</b>      | <b>60</b>         |
|  |                           | <b>14 (3 x 2 x 2)</b>      | <b>70</b>         |
| <b>120 &lt; DWT ≤ 200</b>  | <b>267 &lt; LOA ≤ 274</b> | <b>16 (3 x 3 x 2)</b>      | <b>70</b>         |
|  |                           | <b>14 (3 x 2 x 2)</b>      | <b>80</b>         |
| <b>200 &lt; DWT ≤ 320</b>  | <b>322 &lt; LOA ≤ 334</b> | <b>20 (4 x 4 x 2)</b>      | <b>80</b>         |
|  |                           | <b>16 (3 x 3 x 2)</b>      | <b>110</b>        |

GUIDELINES FOR MOORING RESTRAINT UNDER DESIGN ENVIROMENT CONDITIONS AT SITE

#### 4.6 Moorings in Adverse Weather Conditions

- Thunder squalls known as SUMATRAS occur during the SW Monsoon period (May to September) and can occur during the day or night. They are accompanied by very heavy cloud, which spreads quickly over the sky. The cloud gives brief warning of the onset of the squall. As the wind freshens it shifts suddenly from a southerly direction to between Southwest and Northwest and usually reaches wind force of 5 or 6. It may even reach force 7 or 8 for brief periods. These squalls last from one to four hours.
- Wind Force :

Wind direction and velocity will be monitored with the aid of the Jetty Environmental Monitoring System, by the Jetty Supervisor at the Jetty Control Center. Consideration will be given to the

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| Prepared By: Marine Superintendent                                   | Approved By: OMA Manager |
| Procedure Title : <b>Chapter 4 : Information on Jetty Facilities</b> |                          |

recommended operational requirements of the Marine Loading Arms and any adverse stress experienced on the Mooring Load Monitoring System, due to excessive wind velocities. At certain conditions the discharge operation may be stopped and the Marine Loading Arms disconnected. Further action may be taken in consultation with the ship's master.

Ships are expected to monitor the prevailing weather conditions at all times and take whatever actions necessary to maintain a safe operation while alongside.

- Current Strength :

While current velocities of 2.0 knots are normal, rates of 3.5 knots can be experienced during certain tidal conditions. The load on each mooring hook is monitored by the Jetty Supervisor at the Jetty Control Center. If excessive loads are experienced the discharge operation may be stopped and the Marine Loading Arms disconnected. Further action may be taken in consultation with the Ship's Master. Ships are expected to monitor mooring lines at all times for excessive loads and to prevent surge. The ship's crew must take whatever actions necessary to maintain a safe operation while alongside.

#### 4.7 Discharging Facilities

- Four hydraulically operated loading arms are available for use on the jetty. The loading arms are designed to operate within a specified envelope (see Appendix III).
- An Emergency Shutdown System has been installed at the jetty.
- Vessels should have 4 x 16-inch 150 lb ASA presentation flange of OCIMF specification ready on arrival.

| Jetty | Maximum manifold height       | Minimum manifold height      |
|-------|-------------------------------|------------------------------|
| 1     | 30.0 metres above water level | 6.0 metres above water level |

- Designed discharging capacity

| Jetty | No. of Loading Arms | Size    | Max. Discharge rate       | Products | Max. pressure at ship's manifold. |
|-------|---------------------|---------|---------------------------|----------|-----------------------------------|
| 1     | 4                   | 16 inch | 16,000 m <sup>3</sup> /hr | Crude    | 10.0 kg                           |

- An Auto-Sampler System is installed ashore on the main pipeline to take a representative sample of the transferred cargo.

#### 4.8 Manning

- Throughout the period the vessel is alongside, the jetty will be manned by two Jetty Supervisors; one in the Jetty Control Centre and one on the Jetty. An oil spill response (OSR) / safety boat, with two crew members, is on permanent standby at the Jetty. One Fire Technician with one Security Guard at the Gate House, are also on duty at the Jetty.
- The Jetty Supervisor will visit the vessel periodically while alongside to ensure its compliance with Port and Jetty regulations and ISGOTT requirements.

#### 4.9 Safety Systems

| Procedure No  | Date of Issue | Issue No | Page No     |
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|  |                          |
|--|--------------------------|
| Prepared By: Marine Superintendent                                   | Approved By: OMA Manager |
| Procedure Title : <b>Chapter 4 : Information on Jetty Facilities</b> |                          |

- The Speed of Approach (SOA) display will indicate the lateral speed of approach, distance off the fenders and the angle of approach during the berthing operation (see appendix V). The speed should be less than 0.1 kts (5 cm per sec) when landing on the fenders.
- A Mooring Load Monitoring system which monitors the loads on each mooring hooks is displayed in the Jetty Control Center.
- Oil Booms are installed at the jetty end mooring dolphins for use during any oil spill.
- The Marine Loading Arms are installed with 1<sup>st</sup> and 2<sup>nd</sup> stage range monitoring alarms to continuously monitor the status of the arms. When the limits are reached a distinct alarm will be sounded to warn the Jetty Supervisor that the arm is near its operating limit.
  
- An Emergency Shutdown (ESD) system is installed at the jetty. ESD push buttons will be provided at the following locations:
  - Inside the operator shelter on the service platform.
  - At the shore abutment of the approach trestle to the jetty.
  - On the control panel in the jetty control room.
  
- Fire fighting/protection equipment at the VLCC jetties include the following:
  - Smoke detection system.
  - Firewater intake pump house.
  - Firewater pump and foam distribution system.
  - Water/foam monitors.
  - Water hydrants.
  - Hose reels.
  - Portable fire extinguishers.

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| Prepared By: Marine Superintendent                                   | Approved By: OMA Manager |
| Procedure Title : <b>Chapter 5 : Ship / Shore Safety Regulations</b> |                          |

**5.1 Conditions of Acceptance**

- 5.1.1 Vessels are allowed to berth and use the Jetty facilities on the condition that they indemnify SRC from all claims of demurrage and cost due to delays and all other causes. (See Appendix VI – Letter of Indemnity).
- 5.1.2 Vessel owners, charterers and agents are liable for all damages caused to the jetty and its equipment by their vessels when berthing, lying alongside or during unberthing due to whatever cause. For extensive damages vessels are required to furnish a bankers guarantee to SRC for the estimated amount of the damage.
- 5.1.3 Generally, vessels alongside are accepted on the understanding that operations will be conducted safely and expeditiously and that the jetty will be vacated as soon as practicable after cargo operations have been completed.

SRC reserves the right to monitor the discharge of any vessel to ensure compliance with all applicable laws/regulations, and notify the appropriate authority in the event of contravention. Any cost as a result of violation of these regulations as well as applicable laws and industry codes shall be for ship account.

**In an emergency, none of these regulations should prevent the master or responsible ship officer from taking measures that in his opinion, are most effective to remove the cause of emergency and to protect human lives, property and the environment**

**5.2 Ship / Shore Safety Checklist**

The purpose of the ship/shore safety checklist is to ensure the safety of both the ship and Jetty and should be completed jointly by the ship’s responsible officer and Jetty representative. A joint physical check by both parties will be made to verify each item ticked. At least every 6 hours the checklist must be reviewed by both parties and corrective measures undertaken when required. (See Appendix VII – Ship/Shore Checklist).

**5.3 Suspension of Operation and Removal of Vessel Alongside**

Singapore Refining Company (SRC) reserves the right to suspend operations and/or require removal of vessel alongside its Jetty for:-

- 5.3.1 Infringement, disregard or breach of these regulations.
- 5.3.2 Defects in the vessel and her equipment, manning or operations which in the reasonable opinion of the Jetty representative present a hazard to premises, personnel, environment or operations.
- 5.3.3 Operational performance that fails to utilize satisfactorily the available Jetty facilities and thereby in the reasonable opinion of the Jetty representative constitutes an unacceptable constraint in the Jetty operations.

**Note that the Jetty shall not be liable for any cost, demurrage, claims or demands incurred by a vessel, its owners, charterers or agents as a result of the above. All cost, demurrage, claims or demands arising from the suspension of operation and/or removal of vessel alongside the Jetty relating to the above shall be for the owners, charterers or agents account.**

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|  |                          |
|--|--------------------------|
| Prepared By: Marine Superintendent                                   | Approved By: OMA Manager |
| Procedure Title : <b>Chapter 5 : Ship / Shore Safety Regulations</b> |                          |

**5.4 Access to Jetty and Ships Alongside**

- 5.4.1 Only authorized persons with entry permits/ID's issued by SRC or JTC are allowed access to jetty premises.
- 5.4.2 Visitors to ships are the responsibility of the ship master who shall ensure that they comply with these regulations. Visitors and off duty ship's crew are not allowed access to the jetty area.
- 5.4.3 Visitors and persons whose sobriety or conduct presents a hazard to the jetty and its personnel shall be refused access to the Jetty or to disembark from the ship.
- 5.4.4 No marine craft may approach within the 25 meters exclusion zone of the jetty area unless an entry permit has been issued in respect of such marine craft. No craft may be moored, made fast or anchored overnight without express approval from SRC.
- 5.4.5 Vehicles utilizing the jetty parking area should park properly at designated parking areas. Their vehicles should be facing outwards ready for immediate evacuation.
- 5.4.6 For personnel access to and from the vessel from the offshore side, the master must ensure that the ship provided gangway is properly rigged, illuminated, clean and well tended. A lifebuoy with at least a 25 metres lifeline shall be positioned on the vessel at or near the gangway.

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|  |                          |
|--|--------------------------|
| Prepared By: Marine Superintendent                         | Approved By: OMA Manager |
| Procedure Title : <b>Chapter 6 : Communication in Port</b> |                          |

## 6.1 Communication Equipment

6.1.1 The Jetty Control Centre and Jetty Shelter are equipped with the following:

i) At the Jetty Control Centre:

- Telephone / Fax
- Direct line to Guard House and Jetty Shelter.
- Marine VHF radio
- Portable VHF radios.
- Public Address System.
- Manual Call Point (zoned fire alarm system).

ii) At the Jetty Shelter:

- Direct telephone line to Jetty Control Centre and Guard House.
- Public Address System.
- Portable VHF radio.
- Manual Call Point (zoned fire alarm system).

6.1.2 Mobile telephones must be switched off in the working areas. However in safe areas such as the Jetty Control Centre and on board within the ship's accommodation, usage is permitted.

## 6.2 Routine Communication

6.2.1 During cargo transfer, communication between ship and shore must be maintained. A continuous listening watch, on the portable VHF radio provided, must be kept by the ship's duty officer.

## 6.3 Jetty Emergency Communication

6.3.1 In an emergency the first point of contact ashore is the Jetty Supervisor. The Jetty Supervisor will maintain constant contact with the vessel using the portable VHF sets. On receiving the message of an emergency situation, the Supervisors will activate the Terminal Emergency Plan (TEP).

6.3.2 Should communication via the portable VHF provided failed, the ship may also call the Jetty Control Centre on Marine VHF channel 5.

6.3.3 If the Jetty Supervisors cannot be contacted either by the portable VHF radio provided or on Marine VHF channel 5, call Port Emergency Response Centre on channel 7.

## 6.4 Flag and Light Signals

6.4.1 Ships while alongside will fly the international signal code 'B' by day to indicate their activities and warn others in the vicinity to exercise extra caution.

6.4.2 At night, a visible all round red light should be displayed.

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|  |                          |
|--|--------------------------|
| Prepared By: Marine Superintendent                             | Approved By: OMA Manager |
| Procedure Title : <b>Chapter 7 : Cargo Transfer Operations</b> |                          |

**7.1 Pre-Operations Meeting and Vessel Inspection**

Before any cargo transfer operations commence, the Jetty representative and the ship’s duty officer will:

- 7.1.1 Carry out a Safety Inspection
- 7.1.2 Complete the applicable items of the ship-shore checklist.  
(See Appendix VII)
- 7.1.3 Discuss any deficiencies found during the inspection and completion of the ship-shore checklist and agree any additional precautions required. The Jetty reserves the right not to commence discharge if the required standards are not met.
- 7.1.4 The ship’s master shall ensure that by following the cargo discharge plan the stress on the vessel’s hull will not exceed the maximum level permitted by the Classification Society and that she will have adequate stability throughout her port stay so as to be able to leave the berth at any time.

**7.2 Operational Conditions to be Observed**

In general, all operations shall be conducted in accordance with the national law and the recommendations of the latest edition of ISGOTT and Terminal Regulations.

- 7.2.1 General requirements while vessel is alongside
  - a) Jetty staff shall connect and disconnect the marine loading arms.
  - b) Sufficient crew must remain on board the vessel, under the supervision of the ship officer, to control routine operations and to cater for any emergency.
  - c) A Jetty Supervisor will remain on the jetty at all times.
  - d) An English speaking ship officer should be on duty and available at all times. The officer should be capable of understanding the instructions from the Jetty Supervisor.
  - e) Sufficient crew shall be stationed near the ship’s manifold, unless attending to moorings and fire wires, to:
    - Observe manifolds in case of leakage
    - Observe and tend the gangway
    - Communicate with the Jetty Supervisor
    - Maintain watch and tend to ship’s moorings
  - f) All external doors, portholes and openings leading into the vessel accommodation or machinery spaces (other than the pump-room) shall be kept closed, except for access, during operations. No doors are to be locked.
  - g) Intakes of central air conditioning or mechanical ventilation system should be adjusted to prevent the entry of hydrocarbon gas. If at any time it is suspected that gas is being drawn into the accommodation, they should be stopped and the intakes closed and / or covered. Window type air-conditioning units shall be electrically disconnected.
  - h) Cargo tank hatch lids shall be kept closed and secured at all times.

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|  |                          |
|--|--------------------------|
| Prepared By: Marine Superintendent                             | Approved By: OMA Manager |
| Procedure Title : <b>Chapter 7 : Cargo Transfer Operations</b> |                          |

- i) During cargo transfer operations, the venting of cargo tanks must take place only through the vessel's fixed venting system.
- j) The inert gas system is required to be maintained with oxygen levels in cargo tanks at less than 8%. If the IGS fails during discharging operations, discharge is to be stopped immediately and the Jetty Supervisor informed.
- k) If at any time there is heavy accumulation of gas on the main deck, cargo operations shall be stopped.
- l) Any sea valves connected to the cargo system are to be lashed closed and confirmed by Chief Officer.
- m) Vessel cargo pump room ventilation shall be kept in continuous operation and atmosphere in the pump room maintained at all times in a condition that will allow safe entry.
- n) The responsible officer shall give verbal notice to the Jetty Supervisor 15 minutes before completion of any cargo transfer operation.
- o) At 6 hour intervals, the Jetty Supervisor together with the responsible ship's officer will conduct operational checks and confirm that:
  - The ship-shore safety checklist remains valid
  - Operational procedures are continuing in a satisfactory manner
  - Jetty safety regulations are not being contravened.

**7.2.2 Prevention of Sparking**

Funnels at times give off sparks and in such an event all operations must stop. Blowing of ship's boiler tubes is prohibited.

**7.2.3 Blanking of unused cargo and bunker manifolds.**

All unused cargo and bunker connections must be closed and blanked. Blanked flanges must be fully bolted.

**7.2.4 Matches and Lighters**

The carrying of matches and lighters is prohibited. Matches must be of the safety type and be confined to approved smoke rooms.

**7.2.5 Use of Naked Lights**

Use of naked light is prohibited

**7.2.6 Galley Stoves and Other Cooking Equipment**

Open flame type cooking appliance especially LPG operated stoves are strictly prohibited. Master and shore representative should agree that no hazard exists and that galley doors and other openings onto the open decks are kept closed at all times.

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| Prepared By: Marine Superintendent                             | Approved By: OMA Manager |
| Procedure Title : <b>Chapter 7 : Cargo Transfer Operations</b> |                          |

7.2.7 Repair Work

Repair Work either hot or cold work or the use of naked lights is prohibited on board or on the jetty while the vessel is alongside, unless the permission of the Jetty Supervisor has been requested and granted in writing. Repair/maintenance work will include boiler work, chipping and scrapping, testing, servicing or retrofitting of electrical equipment (including radar, radio and domestic electrical equipment) etc.

7.2.8 Landing Material

No material may be landed from the vessel onto the jetty.

7.2.9 Entry into Vessel's Tanks

While vessel is alongside, no person shall enter any vessel's tanks during cargo operation.

7.2.10 High H2S cargos.

The Master shall inform the Jetty Supervisor of any additional health hazards associated with the cargo, such as H2S quantities. The ship's master and Jetty Supervisor will then take additional precautions to ensure cargo operations are safe and in full compliance with ISGOTT and Jetty Procedures.

7.2.11 Portable electrical equipment.

The use of portable electrical equipment outside the ship's accommodation is prohibited.

**7.3 Pollution Prevention**

(See Appendix IX – Port Marine Circular No. 35 of 1997)

Following conditions must be observed to prevent marine pollution when a ship is alongside:

7.3.1 Before cargo handling commences, all scuppers must be plugged.

7.3.2 No oil product or any mixture containing oil shall be discharged over the side or allowed to escape from the ship. Air driven diaphragm pumps are to be positioned aft on either side of the main deck ready to pump any oil, or any mixture containing oil, to a designated containment tank.

7.3.3 Garbage disposal is not available at this jetty.

7.3.4 Only clean ballast from segregated ballast tank system may be discharged to sea while ship is alongside provided permission of the local authorities and the Jetty have been granted.

7.3.5 Any overflow, leakage or spillage of oil or oily mixture must be reported immediately by the master to MPA and the Jetty Supervisor. Operations will be suspended until the leakage or spill has been cleaned up to their satisfaction. The Jetty may mobilize resources to assist the ship in the containment and clean up of pollution caused by a vessel without authority of the master but in taking such action it shall be considered to be acting on behalf of the master and with his approval.

7.3.6 Vessel shall have oil spill equipment available at the cargo manifold.

7.3.7 The emission of excessive funnel smoke is prohibited.

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|  |                          |
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| Prepared By: Marine Superintendent                   | Approved By: OMA Manager |
| Procedure Title : <b>Chapter 8 : Emergency Plans</b> |                          |

**8.1 Ship's Requirements.**

- 8.1.1 Discuss on arrival with the Jetty representative actions to be taken in an event of an emergency. This shall include procedures to be followed and means of communication as stated in this booklet (see chapter 1).
- 8.1.2 Have adequate emergency equipment including fire fighting appliances and fire pumps ready for immediate use.
- 8.1.3 The fire fighting appliances shall include the following:
  - a) Two fire hoses fitted with combination jet and spray nozzles, uncoiled, connected to the tanker's fire main and laid out on the main deck near the cargo manifold in use.
  - b) Two portable fire extinguishers of the dry chemical type, placed near the vessel manifold.
  - c) One International Ship / Shore Fire Connection available and clearly sign posted at an agreed position.
  - d) A pilot ladder or accommodation ladder shall be rigged on the offshore side of the ship ready for immediate lowering as a means of escape in an emergency.
- 8.1.4 Immobilization of ship's engines.
  - a) While alongside the berth the ship must maintain a state of readiness to move in an emergency.
  - b) Approval for ship immobilization will only be given at the discretion of the Terminal Manager.
  - c) The Jetty reserves the right to order tugs on behalf of the master in case emergency immobilization of the ship has occurred.

**8.2 Jetty Emergency Shutdown (ESD)**

- 8.2.1 Activation of the Jetty ESD system will close all discharge motor operated valves at the jetty. The controls of the Jetty Emergency Shutdown are located at the following locations:
  - Inside the jetty shelter
  - At the shore abutment of approach trestle of the jetty
  - On the auxiliary console in the Jetty Control Centre
- 8.2.2 Before initialization of the Jetty ESD the Jetty Supervisor will confirm with the ship's duty officer that all cargo pumps are stopped and all ship's manifold valves are closed.

**8.3 Emergency Assistance from Shore**

- 8.3.1 The Emergency Response Centre at the Port Operations Control can be contacted for emergency assistance. A fleet of tugs and marine craft fitted with fire fighting and oil dispersing capabilities can be dispatched to deal with marine emergencies.
- 8.3.2 Both Oil Spill Response Ltd (OSRL) and Singapore Oil Spill Response Centre (SOSRC) are available in Singapore for assistance with oil pollution control.
- 8.3.3 When the emergency alarm is raised at the Jetty, the Jurong Island Fire Service is automatically alerted.

• Disclaimer: This booklet is intended to acquaint Owners, Charterers and Masters of vessels calling at the VLCC Jetty 1 Jurong Island with some details of the general conditions, facilities and services available at the terminal. This booklet is not intended to take the place of any official publication of the various authorities to which references must be made. Singapore Refining Company Private Limited assumes no responsibility for the consequences of the use of any information contained in this booklet.

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Prepared By: Marine Superintendent

Approved By: OMA Manager

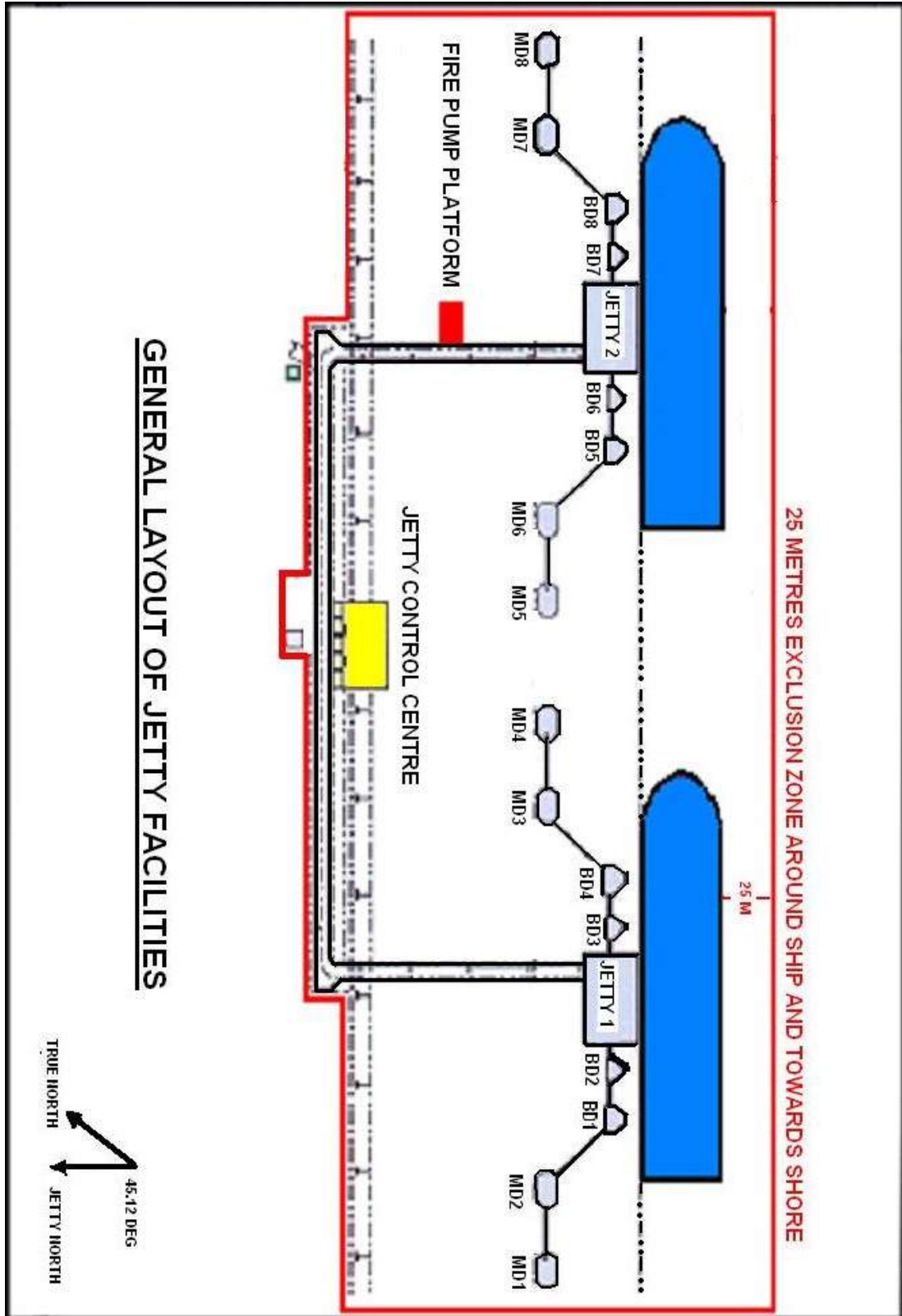
Procedure Title : Chapter 9 : Glossary

|                  |   |
|------------------|---|
| CCTV             | - CLOSE CIRCUIT TELEVISION                                    |
| CO <sub>2</sub>  | - CARBON DIOXIDE  |
| COW              | - CRUDE OIL WASHING   |
| DCS              | - DISTRIBUTED CONTROL SYSTEM                                  |
| DWT              | - DEADWEIGHT TONNAGE  |
| EAS              | - EMERGENCY ALARM SYSTEM                                      |
| ESD              | - EMERGENCY SHUTDOWN  |
| ETA              | - ESTIMATED TIME OF ARRIVAL                                   |
| FFA              | - FIRE FIGHTING APPARATUS                                     |
| H <sub>2</sub> S | - HYDROGEN SULPHIDE   |
| IG               | - INERT GAS   |
| ISGOTT           | - INTERNATIONAL SAFETY GUIDE FOR OIL TANKERS AND<br>TERMINALS |
| LLW              | - LOW LOW WATER   |
| LPG              | - LIQUEFIED PETROLUEM GAS                                     |
| LSA              | - LIFE SAVING APPARATUS                                       |
| MCP              | - MANUAL CALL POINT   |
| MPA              | - MARITIME AND PORT AUTHORITY                                 |
| OMA              | - OIL MOVEMENTS AREA  |
| OSRL             | - OIL SPILL RESPONSE LIMITED                                  |
| PA / GA          | - PUBLIC ADDRESS / GENERAL ADDRESS                            |
| PWBGA            | - PILOT WEST BOARDING GROUND "A"                              |
| SOSRC            | - SINGAPORE OIL SPILL RESPONSE CENTRE                         |
| SRC              | - SINGAPORE REFINING COMPANY PTE LTD                          |
| TMS              | - TANKER MOORING SERVICES CO PTE LTD                          |
| UHF              | - ULTRA HIGH FREQUENCY  |
| VHF              | - VERY HIGH FREQUENCY   |
| VLCC             | - VERY LARGE CRUDE CARRIER                                    |
| VTIS             | - VESSEL TRAFFIC INFORMATION SERVICES                         |

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|  |                          |
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| Prepared By: Marine Superintendent                                       | Approved By: OMA Manager |
| Procedure Title : <b>Appendix I : General Layout of Jetty Facilities</b> |                          |

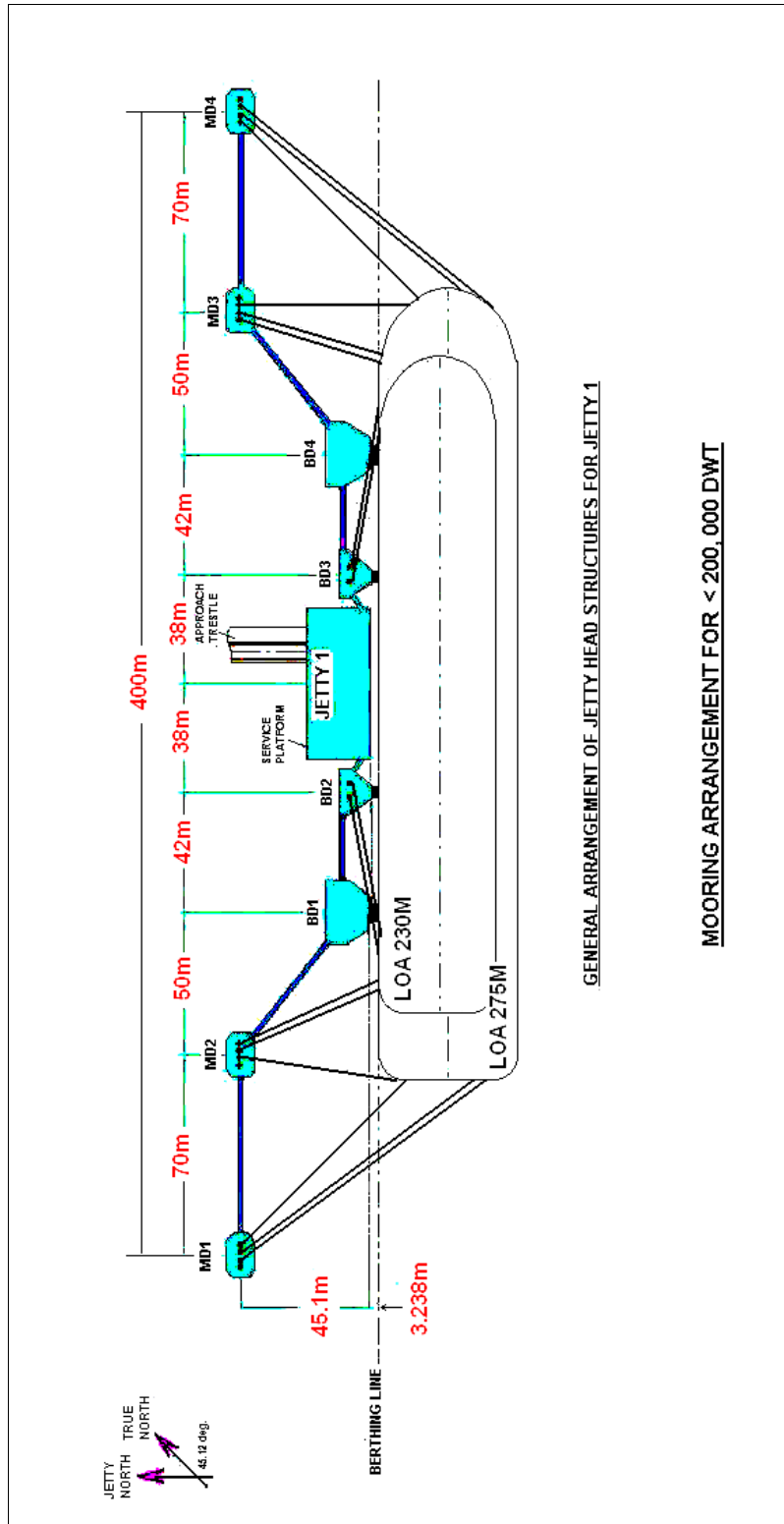


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| Procedure No   | Date of Issue | Issue No | Page No |
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|  |                          |
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| Prepared By: Marine Superintendent   | Approved By: OMA Manager |
| Procedure Title : <b>Appendix IIa : Mooring Arrangement - &lt; 200,000 DWT</b> |                          |

Appendix IIa



GENERAL ARRANGEMENT OF JETTY HEAD STRUCTURES FOR JETTY 1

MOORING ARRANGEMENT FOR < 200,000 DWT

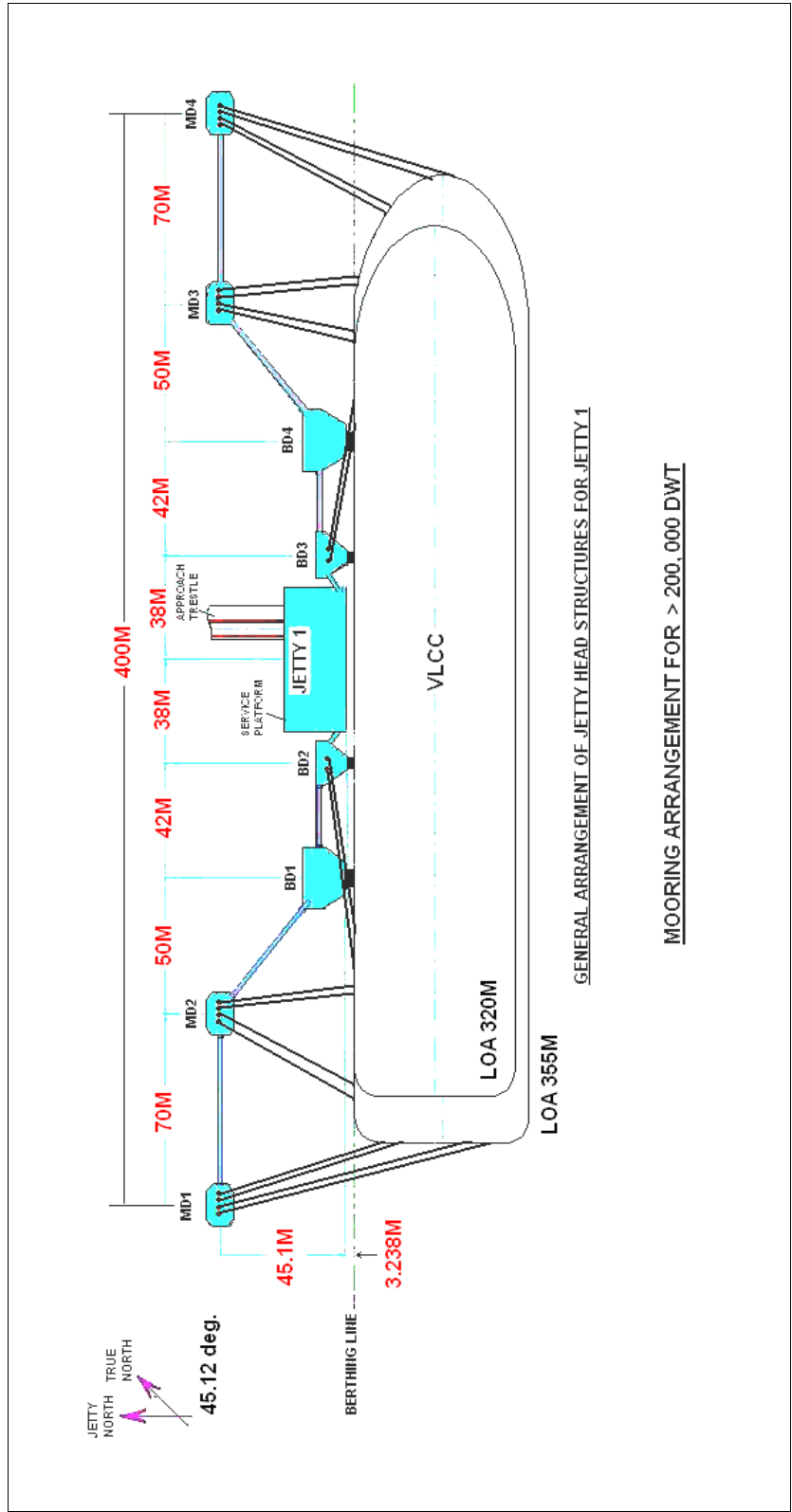
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| Procedure No | Date of Issue | Issue No | Page No |
| TIRB - A IIa | June 2002     | 01       | 1 of 1  |





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| Prepared By: Deputy Terminal manager   | Approved By: Terminal Manager |
| Procedure Title : <b>Appendix IIb : Mooring Arrangement - &gt; 200,000 DWT</b> |                               |

Appendix IIb



GENERAL ARRANGEMENT OF JETTY HEAD STRUCTURES FOR JETTY 1

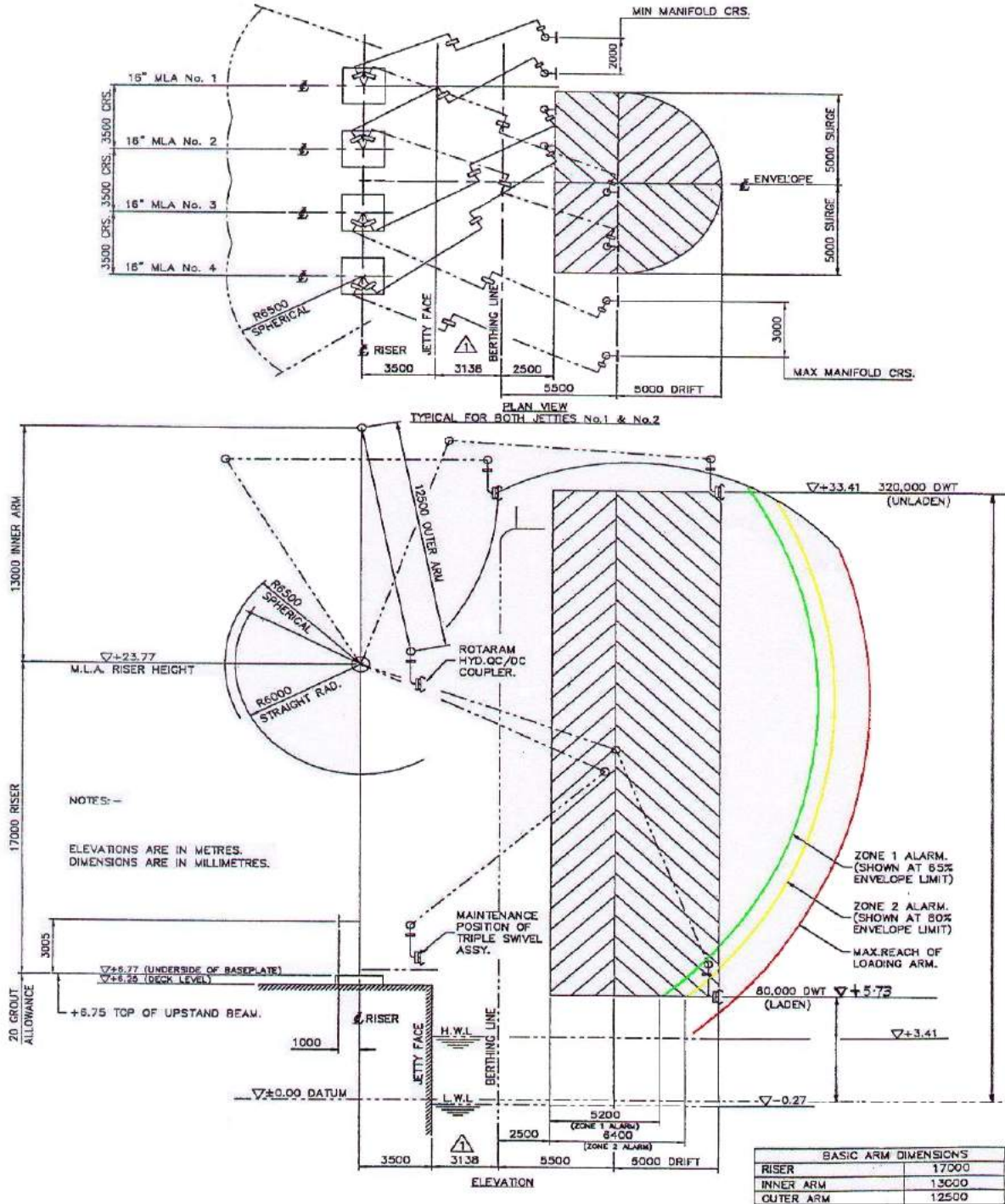
MOORING ARRANGEMENT FOR > 200,000 DWT

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| SRC TIRB - A IIb | December 2013 | 01       | 1 of 1  |



|  |                          |
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| Prepared By: Marine Superintendent                                   | Approved By: OMA Manager |
| Procedure Title : <b>Appendix III : Marine Loading Arms Envelope</b> |                          |

**Marine Loading Arms Envelope**



|                  |               |          |         |
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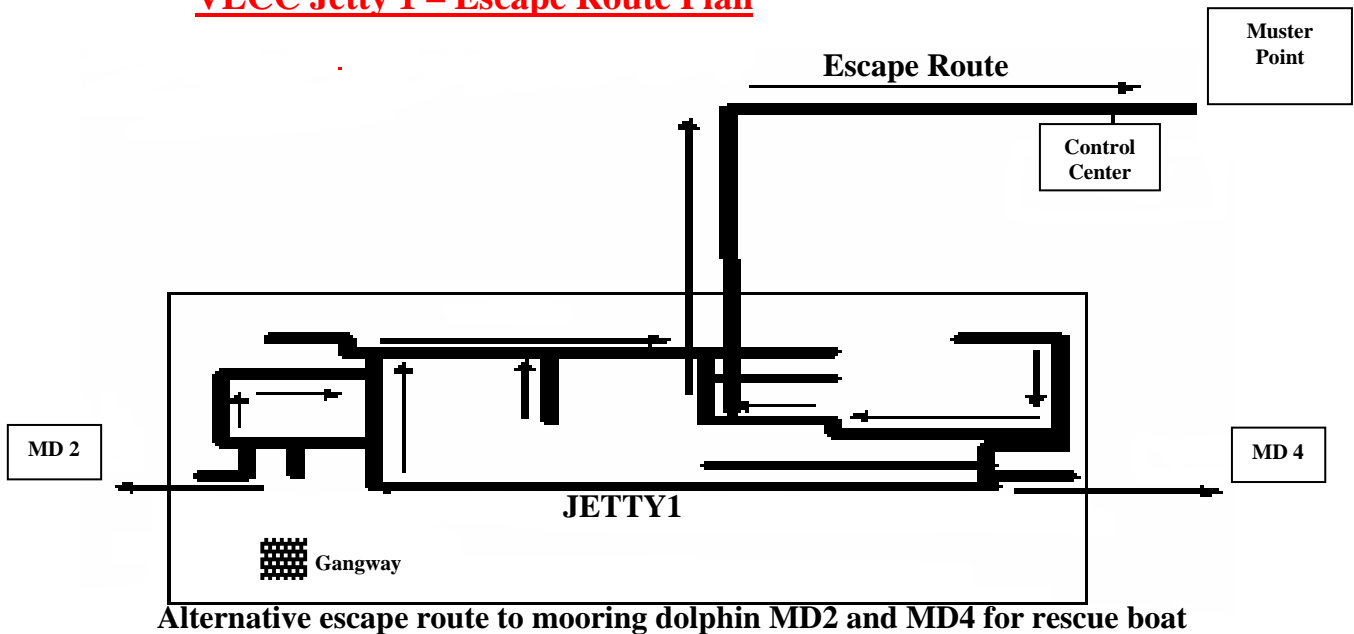
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| Prepared By: Marine Superintendent                                      | Approved By: OMA Manager |
| Procedure Title : <b>Appendix IVa : Visitor's Emergency Action Card</b> |                          |

## **VISITOR'S EMERGENCY ACTION CARD**

### Emergency Signals

- Jetty1** :
- Intermittent sounding of siren.
  - Continuous ringing of general alarm bell (Jetty shelter and Jetty Control Centre)
  - Words of mouth over PA/GA speakers.
- Ship** :
- Series of long blast of 10 seconds or more on the ship's Whistle or air horn.
  - Continuous ringing of the general alarm bell.

### VLCC Jetty 1 – Escape Route Plan



When alarm is heard,

- Report to ship's Master or shore representatives.
- Proceed to muster point as directed.
- Retreat to safe position if danger is imminent, following the escape route
- Attract attention if isolated.

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Prepared By: Marine Superintendent

Approved By: OMA Manager

Procedure Title : **Appendix IVb : Visitor's Card**

Appendix IVb



**Singapore Refining Company Private  
Limited**

**Visitor's Card**

**NO SMOKING  
NO NAKED LIGHTS  
NO LIGHTERS OR MATCHES  
MOBILEPHONE AND PAGERS TO BE SWITCHED OFF**

**REPORT TO JETTY SUPERVISOR AT**

- 1) JETTY CONTROL CENTER**
- 2) BERTH SHELTER**

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| SRC TIRB - A IVb | December 2013 | 01       | 1 of 1  |



|  |                          |
|--|--------------------------|
| Prepared By: Marine Superintendent   | Approved By: OMA Manager |
| Procedure Title : <b>Appendix V : Berthing Aid - Speed of Approach Display</b> |                          |

Appendix V

## Berthing Aid - Speed Of Approach Display



- Top Row Display** : Distance off Breasting Fenders in metres (forward and after)
- Middle Row Display** : Rate of Approach in cm. per sec. (forward and after)
- Bottom Row Display** : Angle in degrees of the Ship's Fore and Aft line and the Jetty's face
- Red light** : Unsafe Berthing Speed
- Orange light** : Berthing Speed between safe and unsafe set parameters.
- Green light** : Safe Berthing Speed

**Note :** The Safe Berthing Speed is set between 5 cm/sec at the fenders for VLCCs

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|  |                          |
|--|--------------------------|
| Prepared By: Marine Superintendent                         | Approved By: OMA Manager |
| Procedure Title : <b>Appendix VI : Letter Of Indemnity</b> |                          |

**LETTER OF INDEMNITY**

IN CONSIDERATION of Singapore Refining Company Private Limited (hereinafter referred to as "SRC") agreeing to permit

m.t./s.s.:.....(hereinafter referred to as the "Vessel")

to use the Fixed Jetty at Jurong Island VLCC Jetty 1, NOW WE the owners of the Vessel hereby agree :

(i) that in no event shall SRC be liable for any claims, demands, actions, proceedings or damages whatsoever, including, but not limited to, any direct, indirect, special, consequential, punitive or incidental damages arising directly or indirectly out of an act or omission of SRC in allowing the Vessel to use the Fixed Jetty ; and

(ii) to indemnify SRC against all claims, demands, actions or proceedings (including but not limited to claims, demands, actions or proceedings in respect of demurrage) which may be brought against SRC arising out of the use of the Fixed Jetty by the Vessel.

Dated this .....day of ..... 20.....

Signed: .....

Master

m.t./s.s.: .....

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|---|--------------------------|
| Prepared By: Marine Superintendent                                  | Approved By: OMA Manager |
| Procedure Title : <b>Appendix VII : Ship Shore Safety Checklist</b> |                          |

Appendix VII

**SHIP/SHORE SAFETY CHECK LIST**

**INTERNATIONAL SAFETY GUIDE FOR OIL TANKERS AND TERMINALS**

**The Ship/Shore Safety Check-List**

Ship's Name \_\_\_\_\_

Berth \_\_\_\_\_ Port \_\_\_\_\_

Date of Arrival \_\_\_\_\_ Time of Arrival \_\_\_\_\_

| Part `A` -- Bulk Liquid General -- Physical checks |  |      |          |      |                            |
|--|--|------|----------|------|----------------------------|
| No   | Bulk Liquid -- General   | Ship | Terminal | Code | Remarks                    |
| 1  | There is safe access between the ship and shore.   |      |          | R    |                            |
| 2  | The ship is securely moored.   |      |          | R    |                            |
| 3  | The agreed ship/shore communication system is operative.   |      |          | A R  | System :<br>Backup System: |
| 4  | Emergency towing-off pennants are correctly rigged and positioned.   |      |          | R    |                            |
| 5  | The Ship's fire hoses and fire-fighting equipment are positioned and ready for immediate use.  |      |          | R    |                            |
| 6  | The terminal's fire-fighting equipment is positioned and ready for immediate use.  |      |          | R    |                            |
| 7  | The ship's cargo and bunker hoses, pipelines and manifolds are in good condition, properly rigged and appropriate for the service intended |      |          |      |                            |
| 8  | The terminal's cargo and bunker hoses or arms are in good condition, properly rigged and appropriate for the service intended.             |      |          |      |                            |
| 9  | The cargo transfer system is sufficiently isolated and drained to allow safe removal of blank flanges prior to connection.                 |      |          |      |                            |
| 10   | Scuppers and save-alls on board are effectively plugged and drip trays are in position and empty.  |      |          | R    |                            |
| 11   | Temporarily removed scupper plugs will be constantly monitored.  |      |          | R    |                            |
| 12   | Shore spill containment and sumps are correctly managed  |      |          | R    |                            |
| 13   | The ship's unused cargo and bunker connections are properly secured with blank flanges fully bolted.                                       |      |          |      |                            |
| 14   | The terminal's unused cargo and bunker connections are properly secured with blank flanges fully bolted.                                   |      |          |      |                            |

|                  |               |          |         |
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|---|--------------------------|
| Prepared By: Marine Superintendent                                  | Approved By: OMA Manager |
| Procedure Title : <b>Appendix VII : Ship Shore Safety Checklist</b> |                          |

| No | Bulk Liquid -- General   | Ship | Terminal | Code | Remarks    |
|----|--|------|----------|------|------------|
| 15 | All cargo, ballast and bunker tank lids are closed.  |      |          |      |            |
| 16 | Sea and overboard discharge valves, when not in use, are closed and visibly secured.   |      |          |      |            |
| 17 | All external doors, ports and windows in the accommodation, stores and machinery spaces are closed. Engine room vents may be open. |      |          | R    |            |
| 18 | The ship's emergency fire control plans are located externally.  |      |          |      | Location : |

**If the ship is fitted, or is required to be fitted, with an inert gas system (IGS), the following Points should be physically checked :**

| No | Inert Gas System   | Ship | Terminal | Code | Remarks |
|----|--|------|----------|------|---------|
| 19 | Fixed IGS pressure and oxygen content recorders are working.                                     |      |          | R    |         |
| 20 | All cargo tank atmospheres are at positive pressure with oxygen content of 8% or less by volume. |      |          | P R  |         |

**Part `B' -- Bulk Liquid General -- Verbal Verification**

| No | Bulk Liquid -- General  | Ship | Terminal | Code | Remarks |
|----|---|------|----------|------|---------|
| 21 | The ship is ready to move under its own power.  |      |          | P R  |         |
| 22 | There is an effective deck watch in attendance on board and adequate supervision of operations on the ship and in the terminal. |      |          | R    |         |
| 23 | There are sufficient personnel on board and ashore to deal with an Emergency.   |      |          | R    |         |
| 24 | The procedures for cargo, bunker and ballast handling have been agreed.   |      |          | A R  |         |
| 25 | The emergency signal and shutdown procedure to be used by the ship and shore have been explained and understood.                |      |          | A    |         |
| 26 | Material Safety Data Sheets (MSDS) For the cargo transfer have been exchanged when requested.                                   |      |          | P R  |         |

|                  |               |          |         |
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| Prepared By: Marine Superintendent                                  | Approved By: OMA Manager |
| Procedure Title : <b>Appendix VII : Ship Shore Safety Checklist</b> |                          |

| No | Bulk Liquid -- General   | Ship | Terminal | Code | Remarks                               |
|----|--|------|----------|------|---------------------------------------|
| 27 | The hazards associated with toxic substances in the cargo being handled have been identified and understood. |      |          |      | H2S Content :<br><br>Benzene Content: |
| 28 | An International Shore fire connection has been provided.  |      |          |      |                                       |
| 29 | The agreed tank venting system will be used  |      |          | A R  | Method:                               |
| 30 | The requirements for closed operations have been agreed.   |      |          | R    |                                       |
| 31 | The operation of the P/V system has been verified.   |      |          |      |                                       |
| 32 | When a vapour return line is connected, operating parameters have been agreed.                               |      |          | A R  |                                       |
| 33 | Independent high level alarms, if fitted, are operational and have been tested.                              |      |          | A R  |                                       |
| 34 | Adequate electrical insulating means Are in place in the ship/shore connection.                              |      |          | A R  |                                       |
| 35 | Shore lines are fitted with a non return valve, or procedures to avoid back filling have been discussed.     |      |          | P R  |                                       |
| 36 | Smoking rooms have been identified and smoking requirements are being observed.                              |      |          | A R  | Nominated smoking Rooms:              |
| 37 | Naked light regulations are being observed.  |      |          | A R  |                                       |
| 38 | Ship/shore telephones, mobile phones and pager requirements are being observed.                              |      |          | A R  |                                       |
| 39 | Hand torches (flashlights) are of an approved type.  |      |          |      |                                       |
| 40 | Fixed VHF/UHF transceivers and AIS equipment are on the correct power mode or switched off..                 |      |          |      |                                       |
| 41 | Portable VHF/UHF transceivers are of an approved type.   |      |          |      |                                       |
| 42 | The ship's main radio transmitter aerials are earthed and radars are switched off.                           |      |          |      |                                       |
| 43 | Electrical cables to portable electrical equipment within the hazardous area are disconnected from power.    |      |          |      |                                       |
| 44 | Window type air conditioning units are disconnected.   |      |          |      |                                       |

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| Prepared By: Marine Superintendent                                  | Approved By: OMA Manager |
| Procedure Title : <b>Appendix VII : Ship Shore Safety Checklist</b> |                          |

| No | Bulk Liquid -- General  | Ship | Terminal | Code | Remarks   |
|----|---|------|----------|------|---|
| 45 | Positive pressure is being maintained inside the accommodation, and air conditioning intakes, which may permit the entry of cargo vapours, are closed.                      |      |          |      |   |
| 46 | Measures have been taken to ensure sufficient mechanical ventilation in the pumproom.   |      |          | R    |   |
| 47 | There is provision for an emergency escape.   |      |          |      |   |
| 48 | The maximum wind and swell criteria for operations have been agreed.  |      |          | A    | Stop cargo at: .....<br>Disconnect at: .....<br>Unberth at: ..... |
| 49 | Security protocols have been agreed between the Ship Security Officer (SSO) and the Port Facility Security Officer (PFSO), if appropriate.                                  |      |          | A    |   |
| 50 | Where appropriate, procedures have been agreed for receiving nitrogen supplied from shore, either for inerting or purging ship's tanks, or for line clearing into the ship. |      |          | A P  |   |

**If the ship is fitted, or is required to be fitted, with an inert gas system (IGS) the following Statements should be addressed :**

| No | Inert Gas System  | Ship | Terminal | Code | Remarks |
|----|---|------|----------|------|---------|
| 51 | The IGS is fully operational and in good working order.   |      |          | P    |         |
| 52 | Deck seals, or equivalent, are in good working order.   |      |          | R    |         |
| 53 | Liquid levels in pressure/vacuum breakers are correct.  |      |          | R    |         |
| 54 | The fixed and portable oxygen analysers have been calibrated and are working properly.  |      |          | R    |         |
| 55 | All the individual tank IG valves (if fitted) are correctly set and locked.   |      |          | R    |         |
| 56 | All personnel in charge of cargo operations are aware that, in the case of failure of the inert gas plant, discharge operations should cease and the terminal be advised. |      |          |      |         |

|                  |               |          |         |
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| Prepared By: Marine Superintendent                                  | Approved By: OMA Manager |
| Procedure Title : <b>Appendix VII : Ship Shore Safety Checklist</b> |                          |

| No  | Crude Oil Washing   | Ship    | Terminal | Code | Remarks |
|---|---|---------|----------|------|---------|
| <b>If the ship is fitted with a Crude Oil Washing (COW) system, and intends to crude oil wash, the following statements should be addressed :</b> |   |         |          |      |         |
| 57  | The Pre-Arrival COW check-list, as contained in the approved COW Manual, has been satisfactorily completed.                     |         |          |      |         |
| 58  | The COW check-list for use before, during and after COW, as contained in the approved COW manual, are available and being used. |         |          | R    |         |
| <b>If the ship is planning to tank clean alongside, the following statements should be addressed: *Delete Yes or No as appropriate.</b>           |   |         |          |      |         |
| No  | Tank Cleaning   | Ship    | Terminal | Code | Remarks |
| 59  | Tank cleaning operations are planned during the ship's stay alongside the shore installation.                                   | Yes/No* | Yes/No*  |      |         |
| 60  | If `yes', the procedures and approvals for tank cleaning have been agreed.  |         |          |      |         |
| 61  | Permission has been granted for gas freeing operations.   | Yes/No* | Yes/No*  |      |         |

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| Prepared By: Marine Superintendent                                  | Approved By: OMA Manager |
| Procedure Title : <b>Appendix VII : Ship Shore Safety Checklist</b> |                          |

**SAFETY MANAGEMENT**

**DECLARATION**

We, the undersigned, have checked the above items in Parts A and B, and where appropriate Part C or D, in accordance with the instructions, and have satisfied ourselves that the entries we have made are correct to the best of our knowledge.

We have also made arrangements to carry out repetitive checks as necessary and agreed that those items with code 'R' in the Check-List should be re-checked at intervals not exceeding \_\_\_\_\_ hours.

If to our knowledge the status of any item changes, we will immediately inform the other party.

| <b>For Ship</b> | <b>For Shore</b>        |
|-----------------|-------------------------|
| Name _____      | Name _____              |
| Rank _____      | Position or Title _____ |
| Signature _____ | Signature _____         |
| Date _____      | Date _____              |
| Time _____      | Time _____              |

**Record of repetitive checks :**

|                     |  |  |  |
|---------------------|--|--|--|
| Date:               |  |  |  |
| Time:               |  |  |  |
| Initials for Ship:  |  |  |  |
| Initials for Shore: |  |  |  |

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| Prepared By: Marine Superintendent                           | Approved By: OMA Manager |
| Procedure Title : <b>Appendix VIII : Safety Requirements</b> |                          |

Appendix VIII

## Safety Letter

Company \_\_\_\_\_  
 Terminal \_\_\_\_\_  
 Date \_\_\_\_\_

The Master SS/MV \_\_\_\_\_  
 Port \_\_\_\_\_

Dear Sir,

Responsibility for the safe conduct of operations while your ship is at this terminal rests jointly with you, as Master of the ship, and with the responsible Terminal Representative. We wish, therefore, before operations start, to seek your full co-operation and understanding on the safety requirements set out in the Ship/Shore Safety Check-List, which are based on safe practices that are widely accepted by the oil and tanker industries.

We expect you, and all under your command, to adhere strictly to these requirements throughout your ship's stay alongside this terminal and we, for our part, will ensure that our personnel do likewise, and co-operate fully with you in the mutual interest of safe and efficient operations.

Before the start of operations, and from time to time thereafter, for our mutual safety, a member of the terminal staff, where appropriate together with a Responsible Officer, will make a routine inspection of your ship to ensure that elements addressed within the scope of the Ship/Shore Safety Check-List are being managed in an acceptable manner. Where corrective action is needed, we will not agree to operations commencing or, should they have been started, we will require them to be stopped.

Similarly, if you consider that safety is being endangered by any action on the part of our staff or by any equipment under our control, you should demand immediate cessation of operations.

**THERE CAN BE NO COMPROMISE WITH SAFETY**

Yours Faithfully  
 For: **SINGAPORE RENINING COMPANY PRIVATE LIMITED**  
 JURONG ISLAND

\_\_\_\_\_  
 (TERMINAL REPRESENTATIVE)

Please acknowledge receipt of this letter together with a softcopy of latest SRC Terminal Information & Regulations Booklet (TIRB), as per website: [www.src.com.sg/Download/SRCTIRBVLCCJETTY1.pdf](http://www.src.com.sg/Download/SRCTIRBVLCCJETTY1.pdf) and confirm that I understand and accept its contents.

Signed: \_\_\_\_\_  
 ( Master)

SS/MV: \_\_\_\_\_

Date/Time: \_\_\_\_\_

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Prepared By: Marine Superintendent

Approved By: OMA Manager

Procedure Title : **Appendix IX : MPA Port Marine Circular on Pollution of the Sea**

**Appendix IX**

MARITIME AND PORT AUTHORITY OF SINGAPORE

**PORT MARINE CIRCULAR  
NO. 35 OF 1997**

3 Jul 97

To: Shipping Community

**PREVENTION OF POLLUTION OF THE SEA ACT, 1990  
PROHIBITION OF DISCHARGE OF OIL OR OILY MIXTURES OR NOXIOUS  
LIQUID SUBSTANCE OR A MIXTURE CONTAINING LIQUID SUBSTANCE FROM  
SHIPS IN SINGAPORE WATERS**

1. Port Circular No.64 of 1988 is cancelled. This is a reproduction of the circular with amendments.

2 We wish to remind all owners, masters and agents of ships of their obligation under the Prevention of Pollution of the Sea Act, 1990, to ensure that no oil or an oily mixture is discharged from their vessels into Singapore waters Under section 7(1) of the Act, if any unlawful discharge of oil or an oily mixture occurs from any ship into Singapore waters, the master, the owner and the agent of the ship shall each be guilty of an offence and shall each be liable on conviction to a fine of not less than \$500/- and not more than \$500,000/- or to imprisonment for a term not exceeding 2 years or to both.

3 Owners, masters and agents of ships are also reminded that they are also to ensure that no noxious liquid substance, or of a mixture containing a noxious liquid substance, being a substance or mixture carried as cargo or part cargo in bulk is discharged into Singapore waters. Under section 10(1) of the Act, if any unlawful discharge of a noxious liquid substance, or of a mixture containing liquid substance, being a substance or a mixture carried as cargo or part cargo in bulk, occurs from any ship into Singapore waters, the master, the owner and the agent of the ship shall each be guilty of an offence and shall each be liable on conviction to a fine not exceeding \$10,000/- or to imprisonment for a term not exceeding 2 years or to both.

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Prepared By: Marine Superintendent

Approved By: OMA Manager

Procedure Title : **Appendix IX : MPA Port Marine Circular on Pollution of the Sea**

4 If they intend to discharge any oil or an oily mixture or noxious liquid substance or of a mixture containing liquid substance, they should use the facilities approved by the Authority.

5 If any oil, oily mixture or noxious substance is discharged from any ship in Singapore waters or into any part of the sea or waters outside Singapore waters and the oil, mixture or substance subsequently flows or drifts into Singapore waters, the owner of the ship shall be liable for the costs of any measures reasonably taken by the appointed authority after the discharge for the purpose of removing it and for preventing or reducing any damage caused in Singapore by contamination resulting from the discharge.

6 Where the Port Master has reasonable cause to believe that any oil, oily mixture or noxious liquid substance has been discharged into the sea, he may detain the ship from leaving port until the owner of the ship deposits with the Authority a sum of money or furnishes such security which would, in the opinion of the Port Master, be adequate to meet the owner's liability incurred for the cleaning operations mentioned in paragraph 5 above.

7 We urge the owners, masters and agents of all vessels to comply with the provisions of the Prevention of Pollution of the Sea Act, 1990, and to co-operate in helping to keep the marine environment clean.

HILBERT FERNANDEZ

for PORT MASTER

MARITIME AND PORT AUTHORITY OF SINGAPORE

TEL NO. 3252473

FAX NO.3252484

PMC35-97

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| Prepared By: Deputy Terminal manager   | Approved By: Terminal Manager |
| Procedure Title : <b>Appendix X : TIRB Acknowledgment of Receipt by Master</b> |                               |

**Appendix X**

The Master

m.t./s.s. : .....

Port : VLCC Jetty 1 Jurong Island, SINGAPORE

Dear Sir,

The Terminal Information and Regulation Booklet (TIRB) is intended to acquaint owners, charterers, agents and masters of vessels with the facilities and services available at the VLCC Jetty 1 Jurong Island at Selat Sinki and the conditions subject to which such facilities and services are rendered.

Although the information contained in the Booklet is accurate at the date of issue, it is not intended in any way to replace other relevant and appropriate official publications. Singapore Refining Company Privated Limited, which operates the Jetty, cannot be held responsible for any errors or omissions contained therein.

It is to be further noted that your vessel shall have the capability of full readiness to manoeuvre at short notice. Immobilization of engines is not permitted while at the Jetty.

Please acknowledge receipt/awareness of a softcopy of latest SRC Terminal Information & Regulations Booklet (TIRB), as per website: [www.src.com.sg/Download/SRCTIRBVLCCJETTY1.pdf](http://www.src.com.sg/Download/SRCTIRBVLCCJETTY1.pdf) and confirm that I understand and accept its contents.

**Signed:** .....  
**Master**

**m.t./s.s. :** .....

**Date:** ..... **Time:** .....

Yours faithfully,

TERMINAL REPRESENTATIVE  
For:SINGAPORE REFINING COMPANY PRIVATE LIMITED

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|  |                               |
|--|-------------------------------|
| Prepared By: Deputy Terminal manager                         | Approved By: Terminal Manager |
| Procedure Title : <b>Appendix XI : High H2S Cargo Letter</b> |                               |

### High H2S Cargo Letter

The Master  
M.T./S.S. : .....  
Port : VLCC Jetty 1 Jurong Island, SINGAPORE

Dear Sir,

It has been brought to our attention that your cargo, due to be discharged at Jurong Island VLCC Jetty 1, contains what we consider to be high levels of Hydrogen Sulphide (H2S).

In order to ensure this cargo is discharged in a safe manner, we must insist that while alongside there are no vapour emissions from your ship’s tanks.

To prevent the release of crude vapour, which may contain H2S, please ensure that on arrival:-

1. Manifold blanks have been removed and the manifold connection flanges are well ventilated.
2. All cargo tanks are at minimum Inert Gas pressure.

While alongside please ensure:-

3. No venting and/or sampling of the cargo tanks takes place.
4. All ullaging and sounding of cargo tanks will be carried out via fixed automatic gauging equipment or through vapour locks with dedicated gauging equipment.
5. Where there are more than one cargo to discharge, the cargo with the highest H2S content is usually discharged first However the sequence of cargo discharge shall be subjected to change and to be confirmed by receiving refinery when ship is alongside.
6. Maintain cargo tank pressures below the PV valve settings, to prevent venting due to over pressuring of the cargo tanks.
7. Where required, the ballasting of cargo tanks should be synchronized with the cargo discharge rate and inert gas supply in such a way that no excessive pressure is built up in the tanks.

The above conditions will be included in a ‘High H2S Cargo Checklist’ which you will be required to complete during the ship / shore conference.

Yours faithfully,

TERMINAL REPRESENTATIVE  
For: SINGAPORE REFINING COMPANY PRIVATE LIMITED

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