This handbook is issued to serve as the main guide in the conduct of marine operations at Shell Tabangao Refinery. All terminal personnel and vessels calling at this Terminal are required to comply with the guidelines contained within.
Document Title: Port and Terminal Information Handbook
Document Reference:
Document Controller:

<table>
<thead>
<tr>
<th>Issue Date</th>
<th>Amended Section / Page No.</th>
<th>Details of change</th>
<th>Approved by</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 May 08</td>
<td>Entire Document</td>
<td>New Edition</td>
<td>R. Alivio</td>
<td>DMA/5_MF</td>
</tr>
</tbody>
</table>

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Reviewed by: Zubair Ali Khan - DSA/65

Approved by: Rebecca Alivio - Refinery Manager
INTRODUCTION

This handbook is issued for information and guidance and contains the essential requirements for an efficient and safe marine operation at Shell Tabangao Refinery.

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**LIST OF ABBREVIATIONS**

ASA American Standards Association  
B/L Bill of Lading  
CoBRA Coastal Shipping and Barge Risk Assessment  
COW Crude Oil Washing  
ESD Emergency Shutdown  
ETA Estimated Time of Arrival  
GRT Gross Registered Tons  
H₂S Hydrogen Sulphide  
HHW High High Water  
IGS Inert Gas System  
IMO International Maritime Organization  
IPIECA International Petroleum Industry Environmental Conservation Association  
ISGOTT International Safety Guide for Oil Tankers and Terminals  
OCIMF Oil Companies International Marine Forum  
KL Kiloliters  
LOA Length Overall  
LOP Letter of Protest  
LPG/PLPG Liquefied Petroleum Gas / Pressurized LPG  
MF/HF Medium Frequency / High Frequency  
MLLW Mean Low Low Water  
MSDS Material Safety Data Sheet  
NAMRIA National Mapping and Resource Information Authority  
OMA Oil Movements Assistant  
P2P Product to Product  
PAGASA Philippine Atmospheric, Geophysical and Astronomical Services Administration  
PCG Philippine Coast Guard  
PEL Permissible Exposure Limit  
PIC Person in Charge  
PPA Philippine Ports Authority  
PPE Personal Protective Equipment  
PSPC Pilipinas Shell Petroleum Corporation  
SAFE Ship Assessment for Employment  
SBT Segregated Ballast Tanks  
SDWT Summer Deadweight Tonnes  
SIGTTO Society of International Gas Tanker and Terminal Operators  
STEL Short Term Exposure Limit  
UHF/VHF Ultra High Frequency / Very High Frequency  
UKC Under Keel Clearance  
VLCC Very Large Crude Carrier
EMERGENCY PROCEDURES

Any vessel on charter to Shell and/or proceeding to any Shell Terminals are required to give prompt notice of:

- Personnel injury
- Vessel grounding
- Collision
- Fire or Explosion
- Cargo contamination or Internal loss of cargo
- Oil Spillage
- Breach of hull
- Damage to any terminal
- Situations with the potential to become more serious
- Any requests for assistance

Incident Notification should be made per Charterer’s instructions. (For PSPC chartered vessels, notify PSPC Supply - Operations)

TERMINAL EMERGENCY CONTACTS

In addition to the above, one of the following Terminal numbers should be advised of an incident that occurs while alongside or in the approaches to Shell Tabangao Terminal.

<table>
<thead>
<tr>
<th>Primary</th>
<th>Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil Movements Control Room</td>
<td>VHF Ch 71 / Call &quot;Shell Tabangao&quot; +63 43 7234321 loc 380</td>
</tr>
<tr>
<td>Jetty Operator</td>
<td>VHF Ch 71 / Call &quot;Jetty 1&quot; +63 43 7234321 loc 341</td>
</tr>
<tr>
<td>Jetty Operator</td>
<td>VHF Ch 71 / Call &quot;Jetty 2&quot; +63 43 7234321 loc 342</td>
</tr>
<tr>
<td>Jetty Operator</td>
<td>VHF Ch 71 / Call &quot;Jetty 3&quot; +63 43 7234321 loc 343</td>
</tr>
<tr>
<td>Jetty Operator</td>
<td>VHF Ch 71 / Call &quot;Jetty 4&quot; +63 43 7234321 loc 413</td>
</tr>
</tbody>
</table>

LOCAL AUTHORITIES EMERGENCY CONTACTS

Local authorities may be contacted on the following VHF Channels.

<table>
<thead>
<tr>
<th>Call sign</th>
<th>VHF Channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Batangas Coast Guard&quot;</td>
<td>VHF Ch 16</td>
</tr>
<tr>
<td>&quot;Batangas Pilot&quot;</td>
<td>VHF Ch 69 / 16</td>
</tr>
<tr>
<td>&quot;Batangas Port Authority&quot;</td>
<td>VHF Ch 16</td>
</tr>
<tr>
<td>&quot;By Tugs Name&quot;</td>
<td>VHF Ch 71 / 69</td>
</tr>
<tr>
<td>&quot;By Agency Name&quot;</td>
<td>VHF Ch 71</td>
</tr>
</tbody>
</table>
EMERGENCY NOTICE FOR SHIPS

IN CASE OF EMERGENCY DO NOT HESITATE TO RAISE THE ALARM

TERMINAL EMERGENCY SIGNALS

♦ FIRE : Terminal Horn - 30 seconds duration

♦ MAJOR EMERGENCY : Terminal Horn - 10 seconds on, 10 seconds off (6 times)

♦ ALL CLEAR : Terminal Horn - 10 seconds duration

VESSEL EMERGENCY SIGNAL

♦ FIRE & EMERGENCIES :

1.) Sound one or more blasts on the ship’s whistle, each blast of not less than 10 seconds duration supplemented by a continuous sounding of the ships general alarm system.

2.) Advise the emergency to the Terminal by calling on VHF Channel 71 call sign “Shell Tabangao.”

BARGES EMERGENCY SIGNAL

♦ FIRE & EMERGENCIES : By verbal advice over the radio.

VESSEL ACTION

Emergency on YOUR VESSEL:

♦ Sound the vessel alarm as per above.
♦ Attend to the emergency and prevent it from escalating.
♦ Inform the Terminal on VHF radio as per above.
♦ When necessary, cease all operations, inform Jetty Operator, when agreed close all appropriate valves and disconnect loading arms and hoses.
♦ When necessary and after discussion with the refinery, bring engine to standby and prepare to unberth.

Emergency on ANOTHER VESSEL / TERMINAL:

You will be advised by the Terminal, and when necessary you will be instructed to:
♦ Cease all cargo operations and close all appropriate valves.
♦ Standby to disconnect loading arms and hoses.
♦ Bring the engine to standby and prepare to unberth.
TERMINAL EMERGENCY PROCEDURES

In case of any emergency, transfer operations are to be ceased immediately and equipment secured as appropriate.

Necessary notifications are to be made.

Emergency Response is to be mounted by the vessel per their procedures and by Terminal per their Emergency Response Plans.

*In all Cases - Ensure that Personnel Safety is the first priority.*

Brief reference of emergency response details from the Terminal Manuals -

**Oil Spills -**
- Drain lines and Loading arms into containment systems. Stop any spill to water.
- Make external and internal notifications.
- Respond per Spill & Facility Emergency Response Plans for Marine Operations Spills/Leaks.

**Fire/Explosion -**
- Shut down transfer operations.
- Sound fire alarm; notify Fire Dept. Follow Emergency Response Plan for Fire/Explosion.
- Make external and internal notifications.
- Eliminate fire source if possible.

**Personnel Injury -**
- Cease transfer Operations
- If prudent - Remove injured party to safe location. Give First aid.
- Make external and internal notifications. Follow Emergency Response Plan for Medical Emergency.
- Get medical assistance to injured person(s).

**Severe Weather Conditions -**
- Terminate transfer operations.
- Secure transfer valves and disconnect hoses.
- Comply with Weather Limitations notice.

**Terrorist Activity -**
- Terminate Transfer Operations.
- Secure the area.
- Follow Facility Response Plan.
- Make external and internal notifications.
GENERAL TERMINAL INFORMATION

LOCATION

The ports of Batangas are situated mostly at the north and east coast of Batangas Bay. The harbor limit is bounded by the line connecting Cazador Point (Lat 13°41.2'N Long 120°53.3'E) and Matocco Point (Lat 13°38.3'N Long 121°02.2'E). The main port is situated at Sta. Clara, Batangas City or at Latitude 13° 45.7'N and Longitude 121°02.6'E. There are 4 government ports (Batangas City, Bauan, Anilao and Mainaga) and 22 private ports including the Shell Tabangao Terminal. Shell operates four tanker berths located south of the main port of Santa Clara or at Latitude 13°43.7' N and Longitude 121°03.6'E.

Shell Tabangao Terminal and all its tanker berths including the anchorage areas are shown in British Admiralty Chart no. 3558 and in the local chart NAMRIA 4256.

Batangas, Philippines is on Eastern Standard Time, which is eight hours ahead of Greenwich Mean Time (GMT +8).

DESCRIPTION

The terminal operate 3 jetties for domestic and international vessels and 1 island berth for VLCC’s:

Jetty 1 - is a typical jetty consisting of a concrete working deck with 2 mooring buoys on each end for the breastlines and head/sternlines. The spring lines are usually secured from the working deck. This jetty is mainly used for loading of domestic tankers used for distribution of oil products in the outports.

Jetty 2 - is a typical jetty consisting of a concrete working deck with 2 mooring buoys on each end for the breastlines and head/sternlines. The spring lines are usually secured from the working deck. The mooring lines could be adjusted to the position of the bollards depending on the size of the vessel. This jetty is mainly used for loading/discharging of product export/import including Butane and Propane import and LPG mix export by international vessels.

Jetty 3 - is a T-Head jetty consisting of a concrete working deck with 2 mooring dolphins on each end connected by walkways. The spring lines are usually secured from the working deck. This jetty is mainly used for loading of domestic tankers used for distribution of oil products in the outports.

Jetty 1, 2 and 3 can be accessed from the Refinery through a concrete trestle approach, this roadway interconnects near the jetty gate of the refinery.

Jetty 4 - is a sea island berth designed for very large crude carriers. The berth consisting of a concrete working deck with a breasting dolphin and 3 mooring dolphins on each end. The dolphins are fitted with quick release mooring hooks. This jetty is mainly used for receiving crude oils.

The tide varies within +1.5m and -0.5m from Mean Low Low Water (MLLW). The tide most prevalent in Batangas area is semi diurnal, tide changes twice in a day. In the harbour the specific gravity of the dock water is 1.024.

CARGO TRANSFER FACILITIES AND MAXIMUM RECEIVING RATES

<table>
<thead>
<tr>
<th>Cargo</th>
<th>Jetty 1</th>
<th>Jetty 2</th>
<th>Jetty 3</th>
<th>Jetty 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Imports</td>
<td>2500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butane</td>
<td>2500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propane</td>
<td>2500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bitumen</td>
<td>500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crude Oil</td>
<td></td>
<td></td>
<td></td>
<td>15000</td>
</tr>
<tr>
<td>Nido &amp; Matinloc Crude</td>
<td></td>
<td></td>
<td></td>
<td>1500</td>
</tr>
</tbody>
</table>

The maximum discharge pressure allowed at the shore manifolds is 10.3 kg/cm².
PORT & BERTH RESTRICTIONS/ MAXIMUM & MINIMUM VESSEL CRITERIA

Berthing and unberthing can be carried out 24 hours a day. Loading and discharging operations are possible at any time.

Relevant criteria for each of the berths follow:

• Berth 1: "Jetty 1"
  Maximum Displacement : 15,700 Tons
  Maximum Draught     : 11.6 meters
  Water Depth     : 13.1 meters
  Maximum LOA     : 240.0 meters
  Manifold Height above waterline
    Products & Bitumen : 1.6 - 16.0 meters
    Pressurized LPG    : 1.6 - 8.20 meters

• Berth 2: "Jetty 2"
  Maximum Displacement : 134,300 Tons
  Maximum Draught     : 13.8 meters
  Water Depth     : 15.3 meters
  Maximum LOA     : Product 280.0 meters / LPG 232.0 meters
  Manifold Height above waterline
    Fuel Oils (Boom 1 & 3) : 4.6 - 16.0 meters
    White Products (Boom 2 & 4) : 2.0 - 19.0 meters
    PLPG and Semi-Ref LPG    : 1.6 - 8.20 meters
    Refrigerated Propane & Butane : 7.8 - 19.7 meters
  Note: Semi-Ref LPG loading arm decommissioned.

• Berth 3: "Jetty 3"
  Maximum Displacement : 25,400 Tons
  Maximum Draught     : 7.50 meters
  Water Depth     : 9.00 meters
  Maximum LOA     : 200.0 meters
  Manifold Height above waterline : 2.6 - 12.8 meters

• Berth 4: "Jetty 4"
  Maximum Displacement : 362,900 Tons
  Maximum Draught     : 22.0 meters
  Water Depth     : 23.5 meters
  Maximum LOA     : 348.0 meters
  Manifold Height above waterline : see below particulars
    Crude      : 4.6 - 29.6 meters
    Pressurized LPG : 1.6 - 9.10 meters

UNDER KEEL CLEARANCE

Under Keel Clearance of 1.0 meter is required at all times while at the Terminal and its approaches.

ANCHORAGES & WAITING AREAS

The anchorage areas are shown in British Admiralty Chart no. 3558 and in the local chart NAMRIA 4256. Anchorage "A", "B", "C" and "D" are bounded by the following coordinates:

1. Lat 13°44.1'N, Long 121°02.8'E
2. Lat 13°43.8'N, Long 121°02.2'E
3. Lat 13°45.6'N, Long 121°01.2'E
4. Lat 13°45.9'N, Long 121°01.8'E
Anchoring and fishing is prohibited all around the jetties outwards extending up to 500 meters. Use of anchor for mooring may be allowed but not within the area onshore of the imaginary line connecting the northern tip of Jetty 2 and southern tip of jetty 4 due to the presence of a submarine pipeline.

**PILOTAGE / MOORING BOATS / TUGS**

Pilot Station is located in Latitude 13°44.5’ N Longitude 121°01.2’ E or 2.7nm NW of Shell Tabangao Refinery. Pilotage is compulsory. The pilot is called using the international marine VHF channels 16 and 69. Where the ship's freeboard is greater than 9 meters, pilots require the pilot ladder to be supplemented with the accommodation ladder.

Batangas pilots usually boards at the anchorage, vessels are berthed with the assistance of the tugs. Pilot services is available 24/7, including Sundays and Holidays.

Mooring gangs and mooring boats are obtained in advance of the ship's arrival by the ship's agent. The accredited contractor carries out the moorings for all berths.

There are tugs available to assist during berthing/unberthing operations. A private company operates these tugs. Number of tugs required to assist depends on the size of the vessel and it is determined during the pre-arrival meeting in which the agent is required to attend.

In the event of an emergency, tugs may be summoned via the pilot office using VHF channels 69 and 71.

The requirement for standby tugs applies when:

a) LPG Refrigerated ship is loading or discharging at Jetty 2.

b) An ocean going tanker is loading or discharging at any of the Jetties.

c) At any other time as instructed by the Terminal (i.e. first time callers, weather conditions, vessel immobilization, etc).

The standby tug shall remain in the immediate area of the jetties and available for use in berthing/unberthing ships in emergency. The tug shall at all times set their radio monitoring at VHF Channel 71 and 16.

The standby tug should have capabilities for fire fighting, pollution combating as well as capability to assist in immediate evacuation of the ship in case of emergency.

The standby tug must be suitable for use in Shell Terminals.

**MINIMUM MOORING ARRANGEMENT**

<table>
<thead>
<tr>
<th>Vessel size (SDWT)</th>
<th>No. of Tugs</th>
<th>Bollard Pull (tonnes)</th>
<th>Mooring lines</th>
<th>Mooring boat</th>
<th>Mooring gang</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min</td>
<td>Max</td>
<td>BHP</td>
<td>Rope/size</td>
<td>Wire/size</td>
</tr>
<tr>
<td>&lt;1k</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>2-2/40</td>
<td>NA</td>
</tr>
<tr>
<td>1k - &lt;6k</td>
<td>1</td>
<td>2</td>
<td>1,200</td>
<td>15 - 35</td>
<td>2-2-2/40</td>
</tr>
<tr>
<td>6k - &lt;20k</td>
<td>2</td>
<td>2</td>
<td>2,400</td>
<td>35 - 50</td>
<td>2-3-2/55</td>
</tr>
<tr>
<td>20k - &lt;40k</td>
<td>2</td>
<td>3</td>
<td>4,500</td>
<td>50 - 70</td>
<td>2-3-2/55</td>
</tr>
<tr>
<td>40k - &lt;60k</td>
<td>3</td>
<td>3</td>
<td>6,000</td>
<td>70 - 135</td>
<td>2-3-2/64</td>
</tr>
<tr>
<td>60k - &lt;120k</td>
<td>3</td>
<td>4</td>
<td>8,500</td>
<td>135 - 165</td>
<td>4-3-2/64</td>
</tr>
<tr>
<td>&gt;120,000</td>
<td>4</td>
<td>5</td>
<td>10,000</td>
<td>165 - 215</td>
<td>4-3-2/80</td>
</tr>
</tbody>
</table>

Note:
- Mooring Gang:  1S = 1 Foreman + 4 men  / 1L = 1 Foreman + 6 men
- Mooring line size: diameter in millimetres
- All mooring wires should have rope tails
Mooring Diagrams

**JETTY 1** (Maximum 12,000 DWT - Mooring Ropes)

*Side view*

*Top view*

**JETTY 2** (Maximum 100,000 DWT - Mooring Wires)

*Side view*

*Top view*
PRE-ARRIVAL COMMUNICATIONS (International Trading Vessels)

The estimated time of arrival (ETA) of international ships has to be sent to the terminal through ship's agent 72, 48, and 24 hours before arrival. Vessel have to call their Agents on VHF Channel 71 upon arrival at the harbor limits to advise on time of arrival at the anchorage area near Santa Clara Port for entry formalities as well as booking for Pilot and tug services if berthing on arrival. The ship should also call Shell on VHF Channel 71 with call sign “Shell Tabangao” to advise arrival and verify berthing prospects.

The following pre-arrival information should be sent to Shell Tabangao Terminal by all international trading vessels through their Agent at least 48 hours prior to arrival:

A) Vessel’s Name and IMO Number
B) Port of Registry
C) Estimated Time of Arrival at the Batangas Bay Anchorage Area.
D) Length Over-all
E) Arrival draft & displacement.
F) Departure draft & displacement.
G) Maximum draft expected during cargo handling.
H) Manifold configuration from forward to aft.
I) Minimum and maximum freeboard measured from center of manifold to water surface while alongside.
J) If loaded, type of cargo and stowage plan.
K) Amount of each cargo and preferred order of all cargo to be loaded or discharged.
L) If cargo or cargo tank vapor contains toxic substances such as Hydrogen Sulphide (H₂S) and/or Benzene, state contents in ppm.
M) Any defects of hull, machinery or equipment that could adversely affect safe operations or delay commencement of cargo handling. If any, give details.
N) If fitted with an Inert Gas System, confirm that the ship’s tanks are in an inert condition and that the system is fully operational.
O) If crude oil washing is to be employed, confirm that the pre-arrival checklist has been satisfactorily completed.
P) Confirm vessel has received a copy of the Port and Terminal Information Handbook - Shell Tabangao Refinery, 2008 Edition and complies with all relevant requirements noted.

Upon receipt of the above information, the Terminal will provide the following relevant port information as soon as practicable.

1) Depth of water on the assigned Jetty at chart datum (i.e. MLLW).
2) Maximum permissible draught alongside.
3) Availability of tugs and mooring craft together with any terminal requirements on their usage.
4) Which side to be moored alongside and mooring requirements.
5) Number and size of loading arm and hose connections.
6) Inert gas requirements for cargo measurement.
7) Closed loading requirements.
8) Arrangement of gangway landing space or availability of terminal access equipment.
9) Any restrictions on crude oil washing procedures, tank cleaning and gas freeing, that are applicable.
10) Advice on environmental criteria and other restrictions applicable to the berth.

11) Security levels in effect within the port.

Upon arrival at the anchorage area, the port authorities and ships agent will board all foreign ships and conduct entry formalities. The boarding authorities will include representatives from the Bureau of Customs, Immigration, Coast Guard and Quarantine. Custom guards will remain on board after the ship has cleared until it departs Batangas.

PRE-ARRIVAL COMMUNICATIONS (Locally Trading Vessels)

The estimated time of arrival (ETA) of local ships are to be given regularly on a daily basis through Supply Operations and/or directly to Shell Tabangao Terminal at the following contact numbers:

<table>
<thead>
<tr>
<th>Duty Oil Movement Assistant (OMA)</th>
<th>+639209508326</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duty Marine</td>
<td>+639209144197</td>
</tr>
</tbody>
</table>

The following information should be sent to Shell Tabangao Terminal by all locally trading vessels 24 hours prior to arrival or at the earliest opportunity if voyage is less than 24 hours.

A) Vessel’s Name
B) Estimated Time of Arrival at the Batangas Bay Pilot Station.
C) Arrival draft & displacement / Departure draft & displacement.
D) Maximum draft expected during cargo handling.
E) Manifold configuration from forward to aft.
F) Minimum and maximum freeboard measured from center of manifold to water surface while alongside.
G) If loaded, type of cargo and stowage plan.
H) Amount of each cargo and preferred order of all cargo to be loaded or discharged.
I) If cargo or cargo tank vapor contains toxic substances such as Hydrogen Sulphide (H₂S) and/or Benzene, state content in ppm.
J) Any defects of hull, machinery or equipment that could adversely affect safe operations or delay commencement of cargo handling. If any, give details.
K) Confirm vessel has received a copy of the Port and Terminal Information Handbook - Shell Tabangao Refinery, 2008 Edition and complies with all relevant requirements noted.

ENVIRONMENTAL CONDITIONS

Tides and Current

The tide varies within +1.5m and -0.5m from Mean Low Low Water (MLLW). The tide most prevalent in Batangas area is semi diurnal, tide changes twice in a day.

Climatic and Weather Conditions

Typhoon season begins in June and last up to November. Summer months begins in February up to May. The wind direction changes from Southwest during the months of around June up to September, to Northeast beginning October up to around February. March to May normally has variable winds. From time to time-strong squalls can be experienced which may last for a few hours to a few days particularly during the months of May to June.
Weather Restrictions

The following criteria have been agreed with the Pilots as being the limits acceptable for the berthing of vessels in Shell Tabangao Terminal:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind</td>
<td>Less than 19.0 knots</td>
</tr>
<tr>
<td>Swell or Wave heights</td>
<td>Less than 2.0 meters</td>
</tr>
<tr>
<td>Visibility</td>
<td>At least 0.5 nautical miles</td>
</tr>
</tbody>
</table>

For vessels already alongside, the following restriction applies:

<table>
<thead>
<tr>
<th>Action</th>
<th>Wind speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop cargo operations</td>
<td>&gt;19.0 knots</td>
</tr>
<tr>
<td>Disconnect cargo arms and hoses</td>
<td>21.0 knots</td>
</tr>
<tr>
<td>Unberth</td>
<td>21.0 knots (for Local Vessels &amp; Barges)</td>
</tr>
<tr>
<td></td>
<td>24.0 knots (for International Vessels)</td>
</tr>
</tbody>
</table>

These criteria should not prevent vessel Master, or responsible Ship Officers from taking measures that, in his opinion, are the best actions to remove the cause of emergency, and to protect human lives, property, and the environment.

Weather precautions

In order to minimise the danger posed by severe weather conditions, the following precautions should be observed:

- No berthing is allowed during electrical storm. For vessels already alongside, cargo operations must be stopped and if necessary, preparations made to unberth.
- When public storm warning signal number 1 is raised over Batangas area, berthing/unberthing of ships will be advised by the Terminal.
- When public storm warning signal number 2 or higher is raised over the Batangas area, no berthing is allowed.
- For ships alongside when signal number 2 or higher is declared, cargo transfer operations must be stopped and upon Terminal advise, vessels to unberth.
- At such times as operations are suspended due to weather, all tank openings and cargo valves shall be closed.
- Weather bulletins/storm warnings issued by the Philippine Atmospheric Geophysical and Astronomical Services Administration or PAGASA shall be used as a basis for marine related weather decisions.
- Final responsibility for the safety of the ship and her cargo rests with the vessel Master and in case of emergency such as severe weather conditions, none of these regulations should prevent the master or responsible ship officer from taking measures that in his opinion, are most effective to protect human lives, property and the environment.

FACILITIES AT BERTH

Slop / Dirty Ballast / Oily Waste Reception

There is a facility for receiving slops in Jetty 1 and Jetty 3 (local tanker berths). However, a full test of the slop sample needs to be done prior to the receiving. The amount of slops to be received will be depending on the available ullage in shore slop tank.
Availability of Bunkers

Bunkering facilities are available at all berths except for Jetty 4.

Availability of Fresh Water

Fresh water is not available at the Terminal.

Garbage Reception

Garbage reception facility is not available at the Terminal. Batangas port has an approved contractor, Golden Dragon International Terminals Inc., by arrangement through agents garbage can be collected while vessel is at anchor.

Arrangement for Receiving Stores

The handling of vessel’s store and general cargo is not permitted during cargo transfer operations. Stores barge are not allowed to come alongside the vessel to deliver stores when alongside at the Terminal. Hand carried stores may be taken onboard subject to the usual security checks.

Tank Cleaning / Purging / Gas Freeing

Tank cleaning/washing, purging and gas freeing operations are not permitted during vessel’s stay alongside.

TERMINAL ACCESS AND VISITOR SECURITY

Personnel Access

For entry and exit from the berthing facility, crewmembers may pass through the Refinery main gate then to the jetty gate or vice versa. However, the vessel master must submit a crew list to the Refinery Main Gate before they are allowed to pass through the terminal. Crewmembers passing through the terminal must pass only using authorised terminal vehicles and proceed directly to the main gate.

The terminal reserves the right to refuse entry for any personnel transiting the terminals.

Terminal provides transportation to and from the jetties at the following times:

<table>
<thead>
<tr>
<th></th>
<th>Arrives</th>
<th>Departs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Gate</td>
<td>0700H</td>
<td>0710H</td>
</tr>
<tr>
<td>Jetty 1</td>
<td>1305H</td>
<td>1310H</td>
</tr>
<tr>
<td>Jetty 2</td>
<td>1315H</td>
<td>1320H</td>
</tr>
<tr>
<td>Jetty 3</td>
<td>1325H</td>
<td>1330H</td>
</tr>
<tr>
<td>Main Gate</td>
<td>0735H</td>
<td>1335H</td>
</tr>
</tbody>
</table>

Transport service route will be starting from the Refinery main gate to jetty 1 - jetty 2 - jetty 3 then back to the main gate. Service boat from Jetty 4 docks at Jetty 1 landing area.

Ship’s crew going ashore must advise the Jetty Operator not later than 15 minutes before the transport service departs from the main gate. Personnel entering the Terminal must be at the main gate before the scheduled departure times.

No other transportation services will be provided apart from the schedule listed above, except for Clearing Officers on official business.
Unauthorized or Intoxicated Persons

Unauthorized, disorderly or intoxicated persons shall not be allowed in the terminal or on any vessel alongside.

Visitors will only be allowed on board a vessel with the knowledge and approval of the terminal representative. Visitors transiting through the terminal or visiting a vessel at the terminal are required to comply with all terminal regulations contained within this.

Ship visitors, unless on Shell official business or escorted by a Shell staff, are the responsibility of the ship’s master who shall ensure that the waiver to gain access at the terminal is signed prior to entering the main gate. Visitors below 12 years old are not allowed on any tanker vessel alongside at the Terminal.

Vehicles

Vehicles utilising the jetty parking area should park properly at designated parking areas. Their vehicles should be facing towards the shore ready for immediate evacuation. The vehicle doors should be unlocked and the keys left in the starter but the engine and everything else is switched off.
SHELL TERMINAL REGULATIONS

GENERAL SAFETY AND EMERGENCY

APPLICABILITY
Except as otherwise provided, these regulations apply to all tanker vessels hereinafter referred to as 'vessel', calling at Shell Tabangao Terminal, hereafter referred to as 'terminal'.

The Terminal receives vessels alongside on the understanding that operations will be conducted safely and expeditiously and that jetties will be vacated as soon as practicable after operations have been completed.

SAFETY/ ROLES AND RESPONSIBILITIES
Responsibility for the safe conduct of operations whilst a ship is at this terminal rests jointly with the Master of the ship (ship officer) and a responsible terminal representative (shore officer).

IN AN EMERGENCY, NONE OF THESE REGULATIONS SHOULD PREVENT THE MASTER OR RESPONSIBLE SHIP OFFICER FROM TAKING MEASURES THAT HE DEEMS ARE NECESSARY FOR THE SAFETY OF THE VESSEL AND CREW.

CONDITIONS OF VESSEL ACCEPTANCE
Vessels are accepted at the terminal on the understanding that operations will be conducted in accordance with all applicable legislation, together with practices contained in relevant codes of practice, in particular, the guidance contained within the latest edition of the International Safety Guide for Tankers and Terminals (ISGOTT).

Vessels found deficient on arrival may be subject to refusal until the deficiencies have been satisfactorily rectified.

EMERGENCY ACTIONS
On arrival, discuss with the shore officer actions to be taken in the event of an emergency. This shall include procedures to be followed and means of communications as stated in the handbook.

MINIMUM NUMBER OF CREW
There must be sufficient qualified crewmembers onboard at all times for vessel operations and/or berth evacuation in the event of an emergency.

SAFETY EQUIPMENT:
Vessels must have all Life Saving and Fire Fighting equipment in good working condition and available for immediate use. For tanker vessel, fire-fighting equipment will include the following:

a) Two fire hoses, fitted with adjustable 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 foam or dry chemical type, placed near the vessel’s manifold.

c) An International Shore Fire Connection clearly marked and available for use.

d) The vessel lifeboat shall be rigged, ready for immediate use as means of escape in an emergency.
e) A pilot ladder or accommodation ladder shall be rigged on the seaside of the ship ready for immediate lowering as means of escape in an emergency.

Barges need to comply with all of the above, as applicable.

Vessels staff must acquaint themselves with the safety arrangement ashore, particularly with the following:

a) Location of Fire Alarm
b) Location of Fire Extinguishers
c) Location of Cargo Emergency Stops and Shut down systems.

NOTICES ON THE TANKER

On arrival at the terminal, a tanker should display notices at the gangway in appropriate languages stating:

![WARNING]

NO NAKED LIGHTS
NO SMOKING
NO UNAUTHORISED PERSONS
NO USE OF MOBILE PHONES WITHOUT MASTER’S PERMISSION

Alternative wording containing the same warnings may also be used. Shore personnel should observe these requirements when onboard the tanker.

VESSEL STATE OF READINESS

While alongside the terminal, a tank vessel must at all times be able to move under its own power at short notice. If, for any reason, the vessel cannot comply with this requirement, the terminal representative must be advised immediately.

EMERGENCY SHUT DOWN

For LPG vessels, the ship shall provide the shore with ESD control button prior to product receiving. This button is to be used by shore personnel when an emergency arises and should preferably be routed along shore. Upon activation, this emergency control button shall automatically shut down the product compressor and raise the alarm of the ship. The port should also be equipped with ESD and breakaway coupling.

VESSEL SUITABILITY

Any vessel calling at the Terminal must be cleared under the applicable Shell Quality Assurance process (SAFE or COBRA).

The Terminal receives a vessel alongside with the understanding that the ship is in all respects ready to discharge cargo safely and efficiently; that the ship is capable of operating within the physical limitations of the berth dimensions, maximum draft, UKC and hose manifold operating envelopes.
SAFE ACCESS

The Ship and Shore officer should ensure that Safe Access is rigged and maintained throughout the vessels stay at the terminal. The vessel is required to provide a suitable gangway to enable safe access between ship and shore with a Safety net rigged under to span any opening to the water below. Handrails /ropes must be provided on both sides and maintained taut. A person should be on watch in the vicinity of the gangway, especially when persons are embarking or disembarking.

Any alternative arrangements should be used only following a Risk Assessment to ensure Safe Access is always maintained.

ALCOHOL/DRUGS

Masters are advised that operations will cease when the actions of a person or persons involved in operations are not under proper control as a result of the use of alcohol, drugs and/or fatigue.

Access to the jetty restricted area for persons similarly suspected of being affected by alcohol/drugs will be denied.

CRAFT ALONGSIDE

No craft is permitted to come alongside or remain alongside a vessel without the prior permission of the terminal representative. Should a craft be given permission to come alongside, personnel on board it must be instructed regarding safety regulations.

ENTRY INTO ENCLOSED SPACES

As a matter of general policy, any personnel entry into enclosed spaces on a vessel alongside a terminal is prohibited unless necessary for the safety of the vessel and terminal.

In certain trades tank entry may be required, for example, to check on tank preparation prior to loading particularly sensitive cargoes. Such tank entry should only be undertaken following recognised enclosed space entry procedures that include the issue of a written permit (ISGOTT recommendations refer). The terminal representative must be provided with a copy of the certificate confirming the suitability of the tank for entry.

MAINTENANCE AND REPAIR WORK

Readiness of vessel’s engines and Safety equipment is to be maintained at all times when at the terminal.

Major planned repair work is not permitted while alongside the terminal. Other repairs may be permitted on a case-by-case basis and may only commence once approval has been obtained from the terminal representative.

Any repair involving hot work and welding shall not take place without the prior written permission of the terminal representative.

PROTECTIVE CLOTHING AND EQUIPMENT

Vessel personnel on board must adhere to the following minimum dress code while alongside a Shell terminal:

- Long pants
- Suitable shoes, preferably safety shoes or boots with steel toe cap (sandals or similar footwear are prohibited)
- Shirt with sleeves
- Approved life jacket or buoyant work vest when working aboard a barge without safety rails, or when working outboard of any safety rails.
Personnel engaged in vessel operations are actively encouraged to utilise PPE to the fullest during transfer, hose handling and mooring/unmooring operations. This includes the wearing of hard hats and safety goggles.

Attention must be given to the need for additional PPE when handling certain hazardous cargoes. In such circumstances, splash protective eye wear, face masks, chemical suits, rubber boots and gloves, respirators or fresh air breathing apparatus should be considered for use, as appropriate.

**HOT WORK**

No hot work is permitted while vessel is alongside at the berth.

The use of power-driven or manually operated devices, capable of producing sparks, is prohibited in the cargo area, cargo tanks, fuel tanks, cargo pumprooms or enclosed spaces immediately above or adjacent to cargo tanks, such as cofferdams. No chipping or other activities likely to produce sparks shall be permitted in these areas.

**MOORING**

All vessels must be securely moored alongside with sufficient ropes and/or wires in accordance with minimum mooring requirements established by the terminal.

The effectiveness of the mooring system is dependent upon the sum total of all the mooring lines and therefore moorings must be properly tended throughout the vessel’s stay.

The use of ‘mixed mooring’, e.g. synthetic fibre ropes and steel wire ropes in the same service (Breast lines or Springs etc.) are not allowed. Lines in the same service should be of similar material. In this context, it should be noted that moorings constructed of High Modulus Polyethylene (HMPE) have the same extension characteristics as wire and may be used in the same service.

Moorings are statistically the most dangerous operations causing personnel injury. Lines can part or inadvertently release and ‘snap back’, causing release of the static energy stored in the taut line. All personnel must stay well clear of danger areas when lines are under tension.

**GARBAGE**

No garbage or refuse of any kind shall be dumped overboard from any vessel moored at the terminal. Vessel-generated domestic garbage should be collected in suitable containers.

**SMOKING**

Smoking is strictly prohibited on vessels alongside except under controlled conditions in specifically designated areas, not having doors or ports that open directly onto the cargo deck. Smoking is prohibited on board any unmanned tank barge while at or in the vicinity of the terminal.

Smoking in the terminal is only permitted in designated smoking areas. Designated smoking areas should be conspicuously marked.
SOURCES OF IGNITION
The carrying and use of matches, lighters or other sources of ignition, which includes battery-operated equipment and cameras, is prohibited within the terminal and on the deck of vessels alongside.

PORTABLE ELECTRICAL EQUIPMENT
All flashlights used shall be of a safe type, which is approved by a competent authority.
The use of portable electrical equipment on wandering leads is prohibited in hazardous zones during cargo transfer operations. The equipment should be disconnected from power and preferably removed from the hazardous zone.
Only cellular phones and pagers of an intrinsically safe type are permitted to be used on the deck of vessels while alongside a terminal.

CARGO OPERATIONS

PRE TRANSFER CONFERENCE & CHECKLIST
Before operations begin, the persons in charge of the transfer operations for vessel and shore (Ship & Shore Officer) must conduct a Pre Transfer conference. As part of this conference they should jointly conduct and inspection and complete the latest edition of the ISGOTT Ship/Shore Safety Checklist.
The shore officer, together with a responsible ship officer, will inspect the ship prior to start of operations, and from time to time thereafter at intervals not exceeding 6 hours, to ensure that the questions on the Ship/Shore Safety Checklist can be answered in the affirmative.
Where corrective action is needed, the terminal may not agree to operations commencing or should they have been started, may require them to be ceased. Similarly, if the master considers that safety is endangered by any action on the part of his or Terminal staff, he should request operations be ceased until the situation is rectified.

VESSEL INFORMATION
To facilitate pre transfer formalities, the vessel should have the following documentation readily available on arrival at the terminal:
- Cargo stowage plan
- Cargo Loading/ Discharge Plan
- Other relevant information should be readily available, such as tank cleaning records, list of previous cargoes carried and vessel experience factor calculations.

DUTY PERSONNEL REQUIREMENTS
During the transfer of oil and/or hazardous material to or from a vessel, both the vessel and the dock are required to have a person-in-charge (Ship Officer & Shore Officer). It is required that a Ship Officer is designated for each vessel involved in a transfer. The PIC must be physically on board the vessel during all stages of the transfer operation. If the PIC needs to leave the vessel for any reason, he must be properly relieved by a qualified tanker man or the transfer must be halted.

WATCH SCHEDULE
The watch schedule for vessel personnel should be arranged to minimise fatigue. Working hours should be recorded to ensure that they do not exceed STCW 95 limits.
Watch handovers involving the person-in-charge should be scheduled so as not to take place during critical phases of the transfer operation, such as ‘topping off’ etc.
CARGO PUMPROOMS
Cargo pumprooms should be well ventilated and gas free before arrival at the terminal. While alongside, the ventilation system shall be kept running and the pumproom kept free of cargo vapors. Atmosphere must be checked to ensure safe conditions are maintained.

ACCOMMODATION DOORS AND PORTS
All external doors and portholes shall be closed during operations. Accommodation boundary doors should preferably be fitted with self-closing or other control devices but at no time should they be locked.

ACCOMMODATION VENTILATION AND AIR CONDITIONING
The intakes of central air conditioning or mechanical ventilation systems should be adjusted to prevent the entry of petroleum vapors, if possible, by re-circulation of air within the accommodation spaces.
Window-type air conditioning units that are not certified, as safe for use in the presence of flammable gas or which draw in air from outside the accommodation, must be electrically disconnected and any external vents or intakes closed.

COMMUNICATIONS
Clear communications must be agreed and established between the Ship and Shore representatives. Identification of the name of ship should always be included in ship to shore voice communications to avoid misunderstanding.
In case of breakdown of communication, cargo operations should be ceased until communication is restored.

MAIN TRANSMITTING AERIALS
Radio transmissions on medium (MF) and high frequency (HF) during transfer operations are potentially dangerous and therefore are strictly prohibited while alongside. The main and reserve transmitting antenna shall be earthed while at the terminal.

USE OF VHF AND SATCOM WHILE ALONGSIDE
Transmissions on permanently installed VHF/UHF equipment are acceptable provided the power output is reduced to one watt or less.
Portable VHF/UHF equipment of an approved type may be used for intra-ship and ship/shore communications.
Satcom equipment may be used while alongside the terminal unless specifically prohibited under local regulations.

FLAME SCREENS/ DECK OPENINGS
All deck openings, tank hatches, butterworth plates, sounding pipes, etc., are to be kept closed while alongside the terminal unless properly fitted with a flame screen.
During cargo transfers, the cargo tank venting system as designed for the particular vessel shall be used. If necessary, ullage ports or other gauge points may be opened for short periods to enable ullaging or sampling to be undertaken.
SCUPPERS/ DRAINS
Before any transfer of cargo, ballast, slops or bunkers takes place, deck scuppers and drain holes in savealls and drip trays must be suitably plugged. If local regulations permit, accumulated water may be drained off as required and scupper plugs replaced immediately after the water has been run off. Oily water should be transferred to a slop tank or other suitable containment and it is recommended that a portable pump be rigged ready for this purpose. Air-operated pumps, such as Wilden pumps, must be securely grounded to the vessel’s structure to prevent the generation of electrostatic charges.

DISCHARGE CONTAINMENT/DRIP PANS
Drip pans, manifold drip trays and other containment shall be kept empty while the vessel is alongside a terminal. Plugs and valves shall be properly secured.

CARGO TRANSFER RATES
The maximum allowable loading rates shall be established and agreed by Ship & Shore officers during the pre-transfer conference. Rates shall be established for initial loading and will take into account the need for precautions when handling grades defined as static accumulators. Procedures for final topping-off will also be agreed.

CHECKS ON QUANTITIES TRANSFERRED
Preferably every hour, and in any event, at least every two hours, the vessel should provide the terminal representative with information regarding the amount of cargo that has been discharged or loaded. The terminal will provide the vessel with comparable shore figures. If the exchange of information reveals a sudden or significant difference between the terminal and vessel figures on quantities transferred, operations should be stopped until a satisfactory explanation can be found.

MAXIMUM CARGO TANK FILLING LEVEL
The maximum cargo tank filling level shall not exceed any of the following limits:
- six inches below the deck;
- 98 percent of tank capacity; or
- three inches below the setpoint of the overfill control system for a tank barge.

SUSPENSION OF OPERATION AND REMOVAL OF VESSEL ALONGSIDE
The Terminal reserves the right to suspend operations and/or require removal of vessel alongside the jetties for:
- Infringement, disregard or breach of all applicable regulations.
- Defects in the vessel, and/or her equipment, manning or operations, which in the reasonable opinion of the terminal representative present a hazard to premises, personnel, environment, or operations.
- Operational performance that fails to utilise satisfactorily the available terminal facilities and thereby, in the reasonable opinion of the terminal representative constitutes an unacceptable constraint to terminal operations.

TANK BARGE GAUGE POINTS
The appropriate tank opening or fitting to be used for custody transfer measurement should be identified as the ‘gauge point’ and the corresponding reference height (the total height between the rim of the ullage port and the striking plate at the bottom of the tank) shall be clearly marked.
INSULATION MEANS BETWEEN SHIP AND SHORE
To provide effective electrical isolation between the ship and shore, terminal systems are provided with insulating flanges. The use of bonding cables is not permitted.

With the protection provided by insulating flanges, the use of cathodic protection systems for vessel and jetty structures may be continued while a vessel is alongside.

TRANSFER MANIFOLD AND CONNECTIONS
Every mechanical loading arm or cargo hose must be properly supported to ensure that flange connections are not subjected to undue strain. In all cases, the points of connection between the vessel’s manifold and the cargo transfer arm or hose must be completely over the manifold containment or drip tray.

All flanged connections must be fully bolted with a bolt in every hole.

The loading arm or hose must be blanked as soon as it is disconnected from the manifold. Manifold connections not in use are to be kept fully blanked with blind flanges, gaskets and a bolt in every hole.

MATERIAL SAFETY DATA SHEETS (MSDS)
An MSDS or Cargo Information Card should be available on request from the supplier of the product, i.e. a vessel loading cargo should receive the information from the terminal and a vessel discharging cargo should, if requested, provide an MSDS to the terminal.

SPECIFIC CARGO TRANSFER PROCEDURES

TANK CLEANING
No tank cleaning operations shall be conducted alongside a terminal without prior approval of the terminal representative.

CRUDE OIL WASHING
Crude Oil Washing (COW) will normally be allowed on properly equipped vessels, where applicable. The Master shall obtain permission from the terminal representative prior to or upon arrival and shall comply with any local terminal regulations established for COW operations.

HANDLING STATIC ACCUMULATOR CARGOES
The precautions described in ISGOTT shall be adhered to when loading, ullaging or sampling cargoes defined as static accumulators in non-inerted tanks. This will include controls on initial flow rates and restrictions on the use of metallic dipping, ullaging or sampling equipment.

INERT GAS OPERATIONS
As a general policy, it is required that if a vessel is equipped with an inert gas plant, it should be used. Inert gas operation should be conducted in accordance with procedures contained in the vessel’s IGS manual. The terminal representative may require random checks to be made to verify the oxygen content in cargo tanks prior to commencement of transfer operations.
PROCEDURES FOR HAZARDOUS CARGOES

BENZENE

Benzene is a known hazard in Petroleum. In the event that airborne concentrations of benzene are likely to exceed accepted exposure limits (PEL of 0.5ppm and STEL of 2.5ppm) within any area, the area should be designated a ‘regulated’ area. It is the responsibility of the vessel to establish and clearly mark regulated areas with warning signs and to limit access only to authorised personnel.

Ullaging and gauging should be undertaken through vapor lock valves.

An approved respirator must be used at all times when exposure limits are likely to be exceeded, for example, when sampling cargo, making or breaking cargo connections, opening a cargo tank or transferring cargo when tanks are vented at less than 12 feet above the working deck.

Impervious gloves and tight-fitting goggles or a facemask shall be worn during sampling, making or breaking a cargo connection and when gauging a tank through a restricted gauging tube.

HYDROGEN SULFIDE

Hydrogen sulphide (H₂S) may be present in significant concentrations in crude oils. It can also be encountered in refined products such as naphtha, fuel oil, bitumen and gas oil and in the vapor spaces of tanks that have previously contained such cargoes. Vessels should be aware of the potential presence of H₂S and should adopt appropriate monitoring procedures. Any exposures to concentration above 5ppm should not be permitted without proper respiratory protection in the form of a supplied-air respirator or self-contained breathing apparatus.

Information on the presence of H₂S must be exchanged during the pre-transfer conference. The vessel owner/operator or vessel PIC must inform the facility PIC if the previous cargo contained, or was suspected to contain, H₂S.

Handling of cargo containing H₂S of more than 5ppm gas concentration should be guided by the "Procedures for Handling of Cargo with H₂S (>5ppm) at Shell Tabangao Marine Terminal.”