FUELLING VALUES TO LIFE

PV GAS VUNG TAU TERMINAL

PORT INFORMATION AND REGULATIONS

Rev 04, issued Apr 2023

CONTENT

FOREWORD

PV GAS Vung Tau Terminal, or knows as Thi Vai Termial, is located in Latitude $10^0$31' N and Longitude $107^0$01' E, lies on the bank of Thi Vai river at Phuoc Hoa Ward, Phu My Town, about 41km from the center of Vung Tau City, Ba Ria Vung Tau Province, in south-east economic region of Viet Nam.

The Terminal is managed and operated by PVGAS Vung Tau Company, a subsidiary company of Petrovietnam Gas Joint Stock Corporation. The main facilities and cargoes transshipping through and services of the Terminal include:

- Receiving products such as: LPG, Condensate Dinh Co, Condensate NCS, Condensate HTMT which are transported to Terminal via 3 underground pipelines 24 km long from Dinh Co Gas Processing Plant and NCS Gas Processing Plant.
- Storing LPG, Condensate Dinh Co produced at Dinh Co Gas Processing Plant (GPP), Condensate NCS and Condensate HTMT produced at NCSP plant respectively in LPG and condensate tanks.
- Unloading and storing refrigerated/pressurized LPG cargo imported via tankers from foreign countries.
- Receiving and storage imported LNG, transfer to customer by pipeline and LNG truck from LNG receiving terminal and LNG storage tank capacity 1 MMTPA.
- Loading such products to tankers for exporting or domestic demands.
- Loading and unloading products such as VCM, Gasoline for Phu My Plastic and Chemical Company (AGC Viet Nam) and PVOIL Phu My respectively.
- Service supplying fresh water, nitrogen, food products...to vessels.

This Port information and regulation is intended as a reference document for the purpose of cargo handling and other services to Cargo and Ship Owners, Characters, Masters and crews of vessels and other interested parties, contracts at PV Gas Vung Tau Terminal.

Every vessel which arrives at PV Gas Vung Tau Terminal is required to be provided with a copy of this latest regulation and abide by this regulation until sailing away. This regulation does not replace official publications covering the Terminal which are issued by Vung Tau maritime administration and other local authorities.

DEFINITIONS AND ABBREVIATIONS

ABBREVIATIONS	Meaning
Acceptance	Ship is accepted to come alongside to PV Gas Vung Tau Terminals for cargo handling in a certain period or the ship has a "time charter party" or "voyage charter".
Agent	the Vessel's Agent licensed by the Viet Nam laws.
Ballast Water	means water taken into a vessel when partially loaded or not loaded to maintain suitable stability and reduce stresses to the hull structure.
BIQ	Barge Inspection Questionnaires issued by OCIMF as reference question for vetting barge.
Cargo Owner	the person or company that owns the cargo on the ships.
CCR	Centre Control Room of the Terminal.
Contracts	Service suppliers that provide services to the Terminal (maintenance, oil spill control, tug-boat…).
Draft	the depth below the waterline of the deepest part of the vessel
DWT	Death Weight Ton.
ETA	Estimated Time of Arrival of vessel.
ETB	Estimated Time of Berthing of vessel.
ETD	Estimated Time of Departure of vessel.
ERP	Emergency Response Plan.
Gas Free	A tank, compartment or container into which fresh air has been introduced in sufficient quantities to lower the level of any flammable, toxic, or inert gases to that required for a specific purpose e.g. hot work, entry, etc.
Gassing up	introducing LPG to tank of vessel with low flowrate to vaporize until get vessel desired concentration and ready to be loaded liquid LPG.
Hot work	work involving sources of ignition or temperatures sufficient to cause the ignition of a flammable gas mixture
ISGOTT	the International Safety Guide for Oil Tankers and Terminals.
LOA	Length over all of vessel.
LPG	Liquefied Petroleum Gas
Master	the master of the Vessel or, in his absence, his duly authorized chief officer.
Mooring	the system for securing a ship to a terminal. These are to be in accordance with the relevant OCIMF Mooring Equipment Guidelines.
Naked Lights	open flames, exposed incandescent material or any other unconfined source of ignition
NOR	Notice of Readiness for loading/unloading issued by Master of vessel or vessel's agent
Not accepted	that at inspection time the ship did not satisfy the technical and safety conditions and is rejected for berthing
OCIMF	the Oil Companies International Marine Forum which PNN is an official member
PVGAS	PetroVietnam Gas Joint Stock Corporation

PVGAS VT	PetroVietnam Gas Vung Tau Processing Company, a subsidiary company of PV Gas, the operator of the Terminal and LNG receiving terminal.
SIGTTO	The Society of International Gas Tanker and Terminal Operators .
Ship operator	the person or private company or stated-owned company whom are on behalf of ship's owners for operating the ship.
Ship Owner	the person or company that owns the ship
Ship Vetting	all activities including documentation checking, physical inspection to ensure that vessels satisfy the requirements of technical and safety for handling cargo at PVGAS Vung Tau Terminal.
The Terminal	PV Gas Vung Tau Terminal or Thi Vai Terminal
LNG Jetty or LNG receiving terminal	means the berth which is used to receive LNG from LNG carrier operated by PVGAS VT.
The Terminal management	The company or department of company who that manages and operates PV Gas Vung Tau Terminal.
The vetting policy	means all provisions and regulations of PV Gas Ship Vetting Policy.
The vetting team	inspector of PV Gas VT or the Terminal who is responsible for documentation checking, physical inspection and evaluating of the vetting result.
VIQ	Vessel Inspection Questionnaires issued by OCIMF as reference question for vetting vessel.
VPQ	means Vessel Particulars Questionnaires

PART I. GENERAL INFORMATION

1.1 DEVELOPMENT HISTORY

PV Gas Vung Tau Terminal has been designed and purpose built primarily as package 2 of the Gas Utilization Project II, Onshore Facility Project consists of 24 kms long transportation pipelines, storage of LPG and condensate and exporting port facilities for the products which are produced at Dinh Co Gas Processing Plant (GPP) and transported to the terminal for storage and export to domestic market by vessel.

The Terminal was put in operation on 1st October 2010 and officially announced its maritime operation on 09th February, 2001 by Decision No. QD 48/2001-CHHVN of Vietnam Maritime Administration.

On February 2013, the refrigerated LPG storage which was imported LPG from foreign countries for trading in domestic and exporting put in operation with capacity of 64,000 tonnes. At the moment, PV Gas Vung Tau Terminal is the biggest storage of LPG in Viet Nam.

LNG Jetty or LNG Receiving Terminal with a capacity of 1 million ton of LNG/year in phase 1, expected to put into operation in the 3th Quarter of 2023, and a capacity of 3 million tons of LNG/year in phase 2, expected to complete in 2024. LNG Thi Vai terminal is capable of receiving LNG vessels up to 100,000 DWT with main items of phase 1 including 01 full containment tank of 180,000 m3 and technology equipment designed according to the latest versions of Vietnamese and international standards.

1.2 CONTACT INFORMATION

Department	Communication	Email
1. PVGAS Vung Tau Company:	Tel: (+84.254) 3.833.622	
2. PVGas Vung Tau Terminal:		
Operation Manager		cuong.pnq@pvgas.com.vn
Port Facility Security Officer		huy.dq@pvgas.com.vn
Dispatching Team		ky.nd@pvgas.com.vn
Central Control Room *Note: 24/7 operation*	Tel: (+84)254 3894 346 VHF: Channel 16 UHF: Channel 6	ccr.tvt@pvgas.com.vn
Office (from 8:30 AM to 4:30 PM – Except Saturday, Sunday & holiday)	Tel: (+84) 2543 894 604	
3. Fire Fighting Response Team:		
24/7 Operation	Tel: (+84) 2543 894 346 UHF: Channel 6	
4. Oil Spill Prevention Service:		
Oil Spill Prevention Boat 24/7 operation	VHF: Channel 16	
5. Tug boat and canoe services (provided by the terminal):		

24/7 stand by	Tel: (084)254 3894 346 VHF: Channel 16 UHF: Channel 6	ccr.tvt@pvgas.com.vn
6. Ambulance service (provided by the terminal) :		
24/7 stand by	Tel: (084)254 3894 346 UHF: Channel 6	ccr.tvt@pvgas.com.vn

1.3 CARGOES AND SERVICES

- Receiving products such as: LPG, Condensate Dinh Co, Condensate NCS, Condensate HTMT which are transported to Terminal via 3 underground pipelines 24 km long, 6 inches from Dinh Co Gas Processing Plant and NCS Gas Processing Plant.
- Storing LPG, Condensate Dinh Co produced at Dinh Co Gas Processing Plant (GPP), Condensate NCS and Condensate HTMT produced at NCSP plant respectively in 33 LPG bullet vessels and 4 condensate tanks.
- Unloading and storing refrigerated/pressurized LPG cargo imported via tankers from abroad.
- Loading such products to tankers for exporting or domestic demands.
- Receiving and storage LNG via LNG Jetty, transfer to customer by pipeline and LNG truck.
- Loading and unloading products such as VCM, Gasoline for Phu My Plastic and Chemical Company (AGC Vietnam) and PVOIL Phu My respectively.
- Other services:
  - + Operation services: Unloading/loading and storage products such as oil & gas, chemical…
  - + Training services: Operation, Loading Master, security & safety…
  - + Marine services: Ship agent, tug boat, motor boat, ship vetting, oil spill, emergency response…
  - + Others services: Food & fresh water supplying, compressed air & nitrogen supplying, gassing up, security & safety…

1.4 GEOGRAPHICAL POSITION

The Terminal is located in Latitude $10^0$31’ N and Longitude $107^0$01’ E, along the bank of Thi Vai river at Tan Phuoc ward, Phu My Town, about 41km from the center of Vung Tau City, Ba Ria Vung Tau Province, in south-east economic region of Viet Nam.

It is contiguous to 965 Road at the north, Phu My Plastic and Chemical Company at East, PETEC at West, and Thi Vai river at South.

1.5 MARITIME LANE TO THE TERMINAL

Narrow passage to the Terminal from Vung Tau pilot station, Bien Dong Sea (front of beach-Vung Tau), through Ganh Rai Bay, to Thi Vai River, has total length of 31 km (from marking buoy No.0 to PVGas Terminal). The Terminal located along the bank of Thi Vai River, 02 km far upstream confluence of Cai Mep - Thi Vai - Go Gia River. The average depth of river is deeper than 14.0 meters and suitable for liquefied gas vessel with capacity of 150,000 DWT in transferring. The maritime public of lanes from Vung Tau Pilot Station to the terminal is as reference to Appendix 3 of this regulation.

ANCHORAGE AREA

Vessels are only allowed to anchor in the areas regulated in "Vung Tau Seaport Regulations" issued by Vung Tau Port Authority.

Go Gia river is the nearest anchorage position from the Terminal, about 02 nautical miles to the northern. The anchorage of the vessel at Vung Tau territorial water as reference to Appendix 2 of this regulation.

1.6 TERMINAL AREA

The Terminal area is considered to be in the Tropical Zone.

Land area: 44 hectares consisting of tanks, office building, control room, pipelines and equipment systems, utility systems, internal road…

Water area: About 1.000 meters along the river bank and 150 meters from water line to lane of river.

1.7 CLIMATE AND HYDROMETEOROLOGICAL CONDITIONS

1.7.1 Climate conditions

The climate is affected by typical Southern climate with two distinguished seasons. Rainy season starts from May till October with wind direction of South-West. Dry season goes from November to April with wind direction of North-East.

The annual average temperature is 27 ^{0}C. The difference in average temperature between the hottest month (April) and the coldest month (December) is from 4.0^{0}C. There is no considerable temperature variance between day and night.

Humidity changes by seasons. In rainy season, the average humidity is 86.6% (can reach to 90% in September). In dry season, the average humidity is 76% (can fall to 73% in March). The highest average humidity months are from August to October. The lowest average humidity months are from January to March. During the day, the humidity change is in the opposite of the temperature change. The lowest humidity is about at 1:00 PM – 2:00 PM, and the highest humidity is at 7:00 AM.

1.7.2 Windstorm

There are two main wind seasons in the coastal area of Vietnam North-East and South-West. The average wind speed is from 5 to 10 m/s and the maximum speed doesn't exceed 38 m/s. Storms rarely come to Vung Tau – Ho Chi Minh City area.

1.7.3 Rain

The rainy season in Vung Tau – Ho Chi Minh area is from May to October. The total average annual rainfall in Thi Vai area is about 2,007mm, of which 90% is in the rainy season. The maximum total average annual rainfall is 3,272mm (in 1952). The minimum average rainfall is from January to March, not exceed 10mm.

Fog is rare in Vung Tau area – average is about 11-12 days per year. However, the visibility is limited to 142 hours per year caused by rain.

Hydrograph mode in Thi Vai River follows hydrograph progress at East Sea nearby this area. The oscillation of water level and flow is irregular semidiurnal tide. The maximum water level is 182 cm, minimum is – 358 cm compare with Hon Dau system. Thi Vai River is tidal flow with the maximum surface flow speed is 2.5 m/s and the bottom flow speed is 1.25 m/s (in Phu My area). Strong flow in the flood-tide period is affected by bend topography of river making complicated flow. Refer to the Tide Table – Part: 2 Main Port that is annually issued by Vung Tau Port Authority.

The wave of Thi Vai River does not influence to the Terminal. The maximum wave height was observed is 1.2 m (in Go Gia area). Go Gia area is a naturally closed water and no strong wave. Because of such conditions, Go Gia area is an ideal anchorage for vessels that are waiting for calling by PV Gas Vung Tau Terminal.

1.8 TIME

1.8.1 Time Zone:

Local time: GMT + 7hrs

1.8.2 Working hours:

Working hours of office section and operation shift are as following:

- Office Staff: from 8:30AM to 4:30PM every day except Saturday, Sunday, and Viet Nam holidays.
- Office hours include 60 minutes for lunch from 12:00 to 13:00 LT.
- Operation Shift: operates on a 24/7 basis every day of the year.
- Terminal security: operates on a 24/7 basis every day of the year.

1.9 OFFICIAL LANGUAGE

The official language is Vietnamese and English. Consequently, personnel work on shipboard, shipping-agent staff … must be able to use Vietnamese or English as official communication

PART II. PORT FACILITIES

2.1 FIRE FIGHTING SYSTEM

The fire-fighting systems are equipped on the Jetty 1& 2, LNG Jetty with both water spray and foam spray. The monitors have 2 operating modes: fog spray and jet spray. At the outside edge of jetties, the water curtain spray nozzles are installed to separate ship from shore in case of fire. All of the remote-operated valves (ROV) of the fire-fighting system are controlled from the Fire Monitor. Furthermore, the Terminal is also equipped two fire-fighting trucks, fire-fighting pump, fixed foam tanks, foam trolley, powder truck, water nozzles, fire hoses system, portable fire extinguishers that are deployed at suitable positions.

2.2 WIND VELOCITY METER

The wind velocity meters are installed at three jetties. The wind velocity and direction are continuously displayed on the meters at three jetties. The data is continuously monitored by operator at Central Control Room (CCR).

2.3 MARITIME SIGNAL LIGHTING

The maritime signal lighting systems for the terminal are installed at mooring bollards in the upstream/downstream of Jetty 1, 2 & LNG Jetty.

2.4 CAMERA CONTROL SYSTEM

In the jetties and in the other areas of the Terminal are installed camera control television system (CCTV) to monitor operation activities, security and safety condition at the vessel and her surrounding areas.

The camera systems are recorded at all times.

2.5 BERTHING APPROACH SYSTEM

The system consists of ship's speed and berthing angle measuring equipment located at Jetty 1 & LNG Jetty and monitoring computer at Central Control Room that allows both Jetty operator and CCR's operator to continuously monitor during berthing/un-berthing activities of the vessel.

Two (02) monitor displays are installed at Jetty 1 & LNG Jetty to assists pilots and ship's crew by closely measuring the ship's speed and distance to the jetty.

2.6 MOORING SYSTEM

Mooring hooks is equipped at jetty which are enable vessels to be moored securely and safely under severe working conditions. The hooks have a quick release mechanism that allow Jetty's operator to facilitates the instantaneous disengagement of the mooring line from the vessel in case of emergency.

The hooks can be released manually by pushing a releasing button at the hooks or by activating remote control systems from the jetty monitoring house. The mooring hooks are approved by manufacturer and are available from 45 to 150 tones.

Specific functions at LNG Jetty:

There are 11 hooks fixed tension and release function is equipped and operated in accordance with international standards and the recommendations from OCIMF- Mooring Equipment Guidelines. The highest tension is 50% of MBL (minimum breaking load of mooring wire);

2.7 GANGWAY TOWER:

Gangway tower is installed at LNG Jetty only:

- Position: distance +19.6 m to upstream from vapor line;
- Highest from dock level: 26.177m CD;
- Lowest from dock level: 7.867m CD;
- Maximum upward: 32 degree, downward: -48.30 degree, turning movement: left/right: 15 degree;

2.8 SHIP/SHORE LINK COMMUNICATION:

Ship/shore link are provided by Trelleborg, SSL GEN 3 can be connected to two types of umbilical cables via the SSB (Fiber Optic, Electric). The SSL GEN 3 cabinet is the physical link between the ship side electrical connectors and the SSL cabinet functions. The primary function of the SSL GEN 3 in electric mode is to automatically route the various ESD and telecom from various ship side connectors to CCR.

The primary system utilized to establish a means of communication between the LNG Carrier and LNG Terminal will be either via:

- Fiber Optic link;
- Electrical link.

The Fiber Optic is utilized to transmit 4 channels of multiplexed communications between the Terminal and the LNG Carrier, together with Terminal-LNG Carrier and LNG Carrier-Terminal emergency shutdown (ESD) signaling. The electrical link shall transmit all of the above, but on a dedicated pair of wires per signal.

Terminal personnel and LNG Carrier's personnel will connect the Fiber Optic and/or electrical link as soon as the gangway has been set.

The Fiber Optic and/or electrical link will remain connected until the gangway is about to be removed prior to the LNG Carrier’s departure.

In the event of a failure of the communications system providing the ESD/data link, all discharge operations are to be suspended until the fiber optic or electrical link is re-established or until such time that agreed upon between the LNG Carrier and the Terminal Representative.

Prior to any LNG Carrier calling for the first time, Terminal will conduct a Ship/Shore Compatibility Study. During that study any problems associated with communications will be identified and steps will be taken with the LNG Carrier and the owner to ensure that an adequate and compatible communication link exists between LNG Carrier and Terminal.

2.9 JETTY SPECIFICATIONS

Jetty Specifications	Jetty No.1	Jetty No.2	LNG Jetty
Capacity (Summer DWT)	60,000 DWT	2,000 DWT	100,000 DWT
Maximum Ship's Overall Length	242 m	84 m	300m
Length of berth	140 m	30 m	496.6
Note: Length of berth is nominal and may not be available depending on vessels berthed at adjacent berths. Jetty arrangement is as reference to Appendix 4 of this regulation.			
Distance between 2 nearest fender	31.8 m	21 m	50m
Distance between 2 farthest fender	136 m		91m
Depth in front of berth	14 m	5.6 m	15.26 m
Approach trestles	100 x 7.5 m	70 x 7.5 m	100 * 7.0 m
LNG Unloading Arm/ Return Gas Arm			
Quantity			Unloading arm: 02 units Return Gas arm: 01 unit
Maximum operating flow rate			LNG Unloading Arm: 5500 m3/h/arm Return Gas arm: 11000 m3/h/arm
Design Pressure			Unloading Arm & Return Gas arm: F.V./1.7 MpaG
Design Temperature			Unloading arm & Return Gas arm: -170/65 ^{0}C
Liquid line's flanges			16 inches – ANSI 150#
Vapor return line's flanges			16 inches – ANSI 150#
Refrigerated LPG unloading arm:			
Quantity	02 units:	X	X
Distance to edge of berth floor	Min. 4.0 m – Max. 13.0 m	X	X
Maximum operating flow rate	2,400 m3/h	X	X
Maximum operating pressure	LDA-0201: 14.5 bar LDA-0301: 10.3 bar	X	X
Liquid line's flanges	12 inch – Ansi 150	X	X
Vapor return line's flanges	6 inch – Ansi 150	X	X
Pressurized LPG Loading Arms:			
Quantity	2 units: LDA-101/102	2 units: LDA-103/104	
Distance to edge of berth floor	4m (min) – 8m (max)	2m (min) – 6m (max)	
Maximum operating flow rate	750 m3/hr	750 m^3/hr	

Maximum operating pressure	LDA-101: 14.5 bar LDA-102: 10.3 bar	LDA-103: 14.5bar LDA-104: 10.3bar	
Liquid line's flanges	8 inch – ANSI 300#	8 inch – ANSI 300#	
Vapor return line's flanges	8 inch – ANSI 300#	8 inch – ANSI 300#	
The number of standby flexible hoses	1 liquid hose 1 vapor hose	1 liquid hose 1 vapor hose	
Condensate Loading Arm:			
	LDA-101/102 – as the above description	Loading by flexible hose, not use LDA	
Note: The above LDAs are equipped with an Emergency Realease System (ERS) including a PERC (Power emergency realease coupling) located between Double Block Valves (ERS valves). This equipment allows a quick disconnnection from the vessel without draining of the arm first in case of emergency such as vessel drifts, leakage of LPG, LNG.			
VCM Unloading Arm:			
Quantity	01	None	
Maximum operation flow rate	350 m3/hr		
Operating pressure	7 barg		
Liquid line's flange	6 inch – ANSI 150#		
Vapor return line's flange	3 inch – ANSI 150#		
The number of standby flexible hose	1 vapor hose 1 liquid hose		
Mooring and fender system:			
Bollards at berthing dolphin	2 x 150 tons 2 x 45 tons	4 x 45 tons 2 x 25 tons	02 QRH (2x75T) 02 QRH (2x150T)
Bollards at mooring dolphin	2 x 150 tons 4 x 100 tons	2 x 25 tons	07 QRH (3x150T)
Fender System	8 x Flat Cell Fender	2 x Flat Cell Fender	4 x Flat Cell Fender

The terminal management reserves the right, at its sole discretion, to change the above limitations at any time and without prior notice or consultation.

In addition to the physical limitations stated above, consideration must be given to the operating envelope of the loading arms and any other applicable operating limitations at jetty as specified in this regulation.

The terminal management accepts no responsibility for inability of vessels to connect to any shore appliance or loading arm.

2.10 WIND SPEED LIMIT

	LPG/VCM/Condensate vessel	LNG Carrier
Normal berthing/ unberthing	Under 10.7 m/s	
Stop loading/unloading	19 m/s	15 m/s
Arm disconnection	>19 m/s	>15 m/s
Unberthing (*)	20.7 m/s	> 18 m/s

(*) When a storm, tropical depression is forecasted to directly affect the area:

To promptly inform the ship's master about the development of the storm, tropical depression, safety condition for exploitation so that he / she can seek for safe anchorage or shelter.

2.11 UNDER KEEL CLEARANCE (UKC)

The required under keel clearance for vessels which are intended to come alongside at the Terminal as following, in minimum:

Jetty 1: LPG ship: UKC = 0.91 m; Condensate/Mogas ship: UKC = 0.81 m

Jetty 2: LPG ship: UKC = 0.55 m; Condensate/Mogas ship: UKC = 0.48 m

LNG Jetty: 10% of vessel draft.

Maximum draft with full loaded vessel is limited as following:

No	Ship tonnage (DWT)	Maximum length - LOA (m)	Maximum draft – full loaded (m)
1	Up to 1,000 DWT	70.0	5.0
2	1000 ÷ 2000 DWT	87.0	5.9
3	2001 ÷ 10000 DWT	140	7.9
4	10001 ÷20000 DWT	180	9.5
5	20001 ÷ 60000 DWT	242	13.0
6	60001 ÷ 100000 DWT	300	13.6

The limitations of berthing speed and angle are as following:

LNG Jetty:

Ship's Tonnage (DWT)	Berthing Speed (m/s)	Berthing Angle (max – degree)	Berthing Point
5,00 ÷ 1,000 DWT	0.25	10	1/4 LOA
1,001 ÷ 20,000 DWT	0.15	10	1/4 LOA
20,000÷ 60,000 DWT	0.15	10	1/4 LOA
60,001÷ 100,000 DWT	0.15	6	1/4 LOA

Jetty 1:

Ship's Tonnage (DWT)	Berthing Speed (m/s)	Berthing Angle (max – degree)	Berthing Point
5,00 ÷ 1,000 DWT	0.25	10	¼ LOA
1,001 ÷ 20,000 DWT	0.15	10	¼ LOA
20,000÷ 60,000 DWT	0.15	10	¼ LOA

Jetty 2:

Ship's Tonnage (DWT)	Berthing Speed (m/s)	Berthing Angle (max – degree)	Berthing Point
5,00 ÷ 1,000 DWT	0.25	10	¼ LOA
1,001 ÷ 2,000 DWT	0.15	10	¼ LOA

2.12 FRESH WATER

Fresh water is supplied at the jetty. The price is regulated by the implementation guideline of PVGAS as reference to Appendix 1 of this regulation.

Terminal doesn't carry out the services of sewage and rubbish so that before coming alongside, the ship should have the disposal plan.

2.13 MOTOR BOAT

Motor boat service is available at the Terminal. The price is regulated by the implementation guideline of PVGAS as reference to Appendix 1 of this regulation.

2.14 LOGISTICS SERVICE

The supply of provision for ship must be allowed by the Terminal and checked at the security gate based on packing list. If it is a foreign ship it should be accept by Customs Agency.

The motor boat come alongside the ship lie at terminal for supplying goods is strictly prohibited.

PART III. MARINE OPERATIONS FOR LNG

3.1 LNG CARRIER APPROVAL

Each LNG Carrier proposed for unloading at the PV Gas Vung Tau Terminal undergoes a quality assurance process. This comprises of an assessment of the LNG Carrier plus an assessment of the carrier's operator. The process steps are listed below (More details refer to *LNG Carrier Approval Procedure*):

- Step 1: Exchange Preparatory Information.
- Step 2: Ship/shore Interface Study.
- Step 3: Ship Safety Inspection.
- Step 4: Unloading Test and Approval.
- Step 5: Ship Approval on Follow-up.

3.2 PILOTAGE

Pilot is compulsory for LNG Carrier berthing and unberthing at the Terminal. Pilot is nominated by PVGAS Vung Tau who had extra – class and experienced for LNG, LPG vessel (there are two pilots required for LNG vessel).

Pilot Station is located at:

Points	Latitude Longitude	Longitude
N	10^0 15’25”	107^0 04’06”
M	10^0 15’25”	107^0 06’06”
O	10^0 13’56”	107^0 06’06”
P	10^0 13’56”	107^0 04’06”

LNG carrier that approaching pilot boat for embarking or disembarking pilots shall reduce to the minimum steerable speed, maintain communication with pilot boats on designated VHF channel, rig pilot ladders on the leeside of the vessel or as requested by the pilot for safe embarking or disembarking. Pilot ladders shall meet the standards as prescribed, well illuminated at night; watchman and life-saving appliances shall be arranged as prescribed.

Pilot landing area: In case of bad weather, the disembarkation of pilots can be made in the buoyed #4 with fully direction for Captain to pilot station area.

3.3 ANCHORAGE AND TURNING BASIN:

Anchorage area:

The anchorage area where vessels are waiting for navigating to the ports in region are managed by Vung Tau Maritime Port Authority, of which the anchorage areas H and I are satisfied with the waiting requirements of vessels over 80,000 DWT.

Turning Basin:

- Subject to the actual situation at the time (vessel arrival/departure, the hydro-meteorological conditions...) The Pilot will select the appropriate turning basin locations, agree with the Captain and submit them to the Maritime Port Authority for approval prior to action.
- The turning basins are in 02 locations:

+ Location TB1: water area at the confluence of Go Gia river – Thi Vai river (TB1, diameter D=600 m).

+ Location TB2: turning basin at the front water area of Ba Son Shipyard (TB2, diameter D=500 m).

+ Locations of the turning sites are as below:

No.	Turning site	VN2000 co-ordiantes		WGS-84 co-ordinates	
		X (m)	Y (m)	B (degree)	L (degree)
1	Go Gia river confluence (TB1)	1,163,808.175	610,637.695	$10^0$31'21.52"N	$107^0$0'45.36"E
2	The front water area of Ba Son shipyard (TB2)	1,166,355.781	611,578.567	$10^0$32'43.33"N	$107^0$1'16.58"E

3.4 MARITIME SIGNAL AND NAVIGATION SUPPORT SYSTEMS:

Maritime signal system

The maritime signal system on the navigation channel is satisfied with the navigating requirements of vessels and it is under good working conditions.

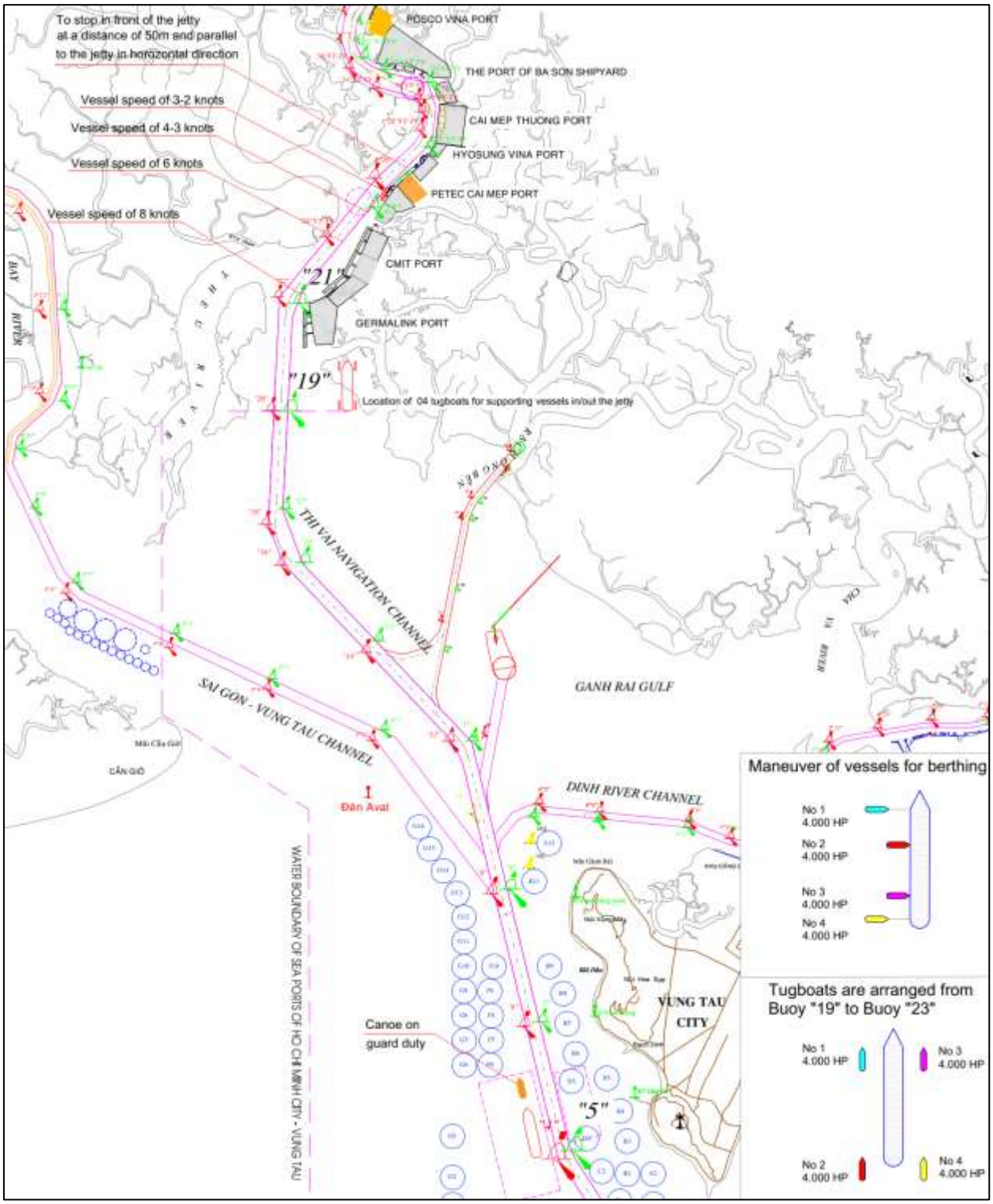
Other navigating support systems

- In the area, there is an existing Vessel Traffic Service (VTS) with 02 managing centers: 01 in Ho Chi Minh City and 01 in Vung Tau (at Nui Nho) which provide good support to the competent authorities for management of maritime activities in region.
- In the range from the Buoy "0" to PETEC Cai Mep jetty, there are currently 02 automatic Tide Gauges (Aval and Hoi Bai stations) providing real-time wind and water level data to provide information to the masters and pilot navigators when navigating the vessels.
- In the area, there are also 03 navigation channel management stations which are managed by the Southern Maritime Safety Corporation for the purpose of navigation safety in the region.
- The fleet of tugboats specializing in providing supports to the large vessels in region (specification, capacity and quantity), according to statistics, is completely met the requirements of providing tugboat services for 100,000DWT LNG vessels.
- Thus, the infrastructures of navigation channel in the area are sufficient and well-used to be met the maritime requirements for vessels, including LNG vessels of up to 100,000DWT operating at the PETEC Cai Mep jetty.

3.5 NAVIGATION AND BERTHING; FROM BUOY 0 TO PETEC BERTH:

- Navigation itinerary for vessels arriving at/departing from the jetty: Vessels navigate on the Vung Tau - Thi Vai navigation channel from the Buoy "0" to PETEC jetty and vice versa. The length of the navigation channel is 30.96 km.

- Time and mode of navigation of vessels on the channel:
  - + The vessels navigate on the channel and turn during the day-time (from 06 AM to 18 PM every day), in good weather conditions.
  - + The mode of vessel navigation on the channel is to minimize dodging in the diversion sites with other vessels with length LOA >180m at the buoys "17" & "19", at channel direction change area, to keep a safe distance from other vessels ahead and reawards in accordance with the safety conditions of vessels and under the guidance of the agency who supervises and coordinates the maritime navigation on the channel (VTS).
- The meteorological and hydrological conditions are applied in the navigation of vessels:
  - + Wind speed in normal (favorable) conditions: wind speed ≤ 20 Knots equivalent to the wind category 5 (Beaufort scale).
  - + Current speed: to be applied in water areas on the navigation channel with different characteristics:
    - Channel section from Buoy "0" to Buoy "15" : $V_{current} \leq 2.5$ Knots
    - Channel section from Buoy "15" to the upstream: $V_{current} \leq 1.5$ Knots
- In case the wind is over Category 5, before the vessel returns to the pilot area or before the vessel departures from the port, the captain/owner and the pilot guiding the vessel should coordinate in calculation and agreement of the proper time of arrival and departure for vessel navigating in/out the port (taking advantage of the time of calm water or slow current) so that the combined impact of the actual current and wind on the vessel is not greater than the combined impact of the wind and current as stated above.
- Navigating speed on the channel: The vessel navigating speed is in accordance with requirements of the Regulations of seaports in Ba Ria-Vung Tau province territory enclosed with Decision No.1242/QĐ-CVHHVT dated 15/7/2017 and Circular No.19/2013/TT-BGTVT dated 06/08/2013 promulgated by Ministry of Transport regarding the application of International rules on prevention vessel collisions on sea.



VESSEL TURNING

When a vessel turns at the confluence of Go Gia river – Thi Vai river

- To arrange 04 tugboats to assist in towing the vessel departuring from the jetty, navigating from the jetty to the turning basin. To arrange 01 tugboat at the bow, 01 at the stern and 02 on both sides of the vessel (please refer to the Chart below).

+ To use tugboat with high maneuverability (Azimuth tugboat,…).

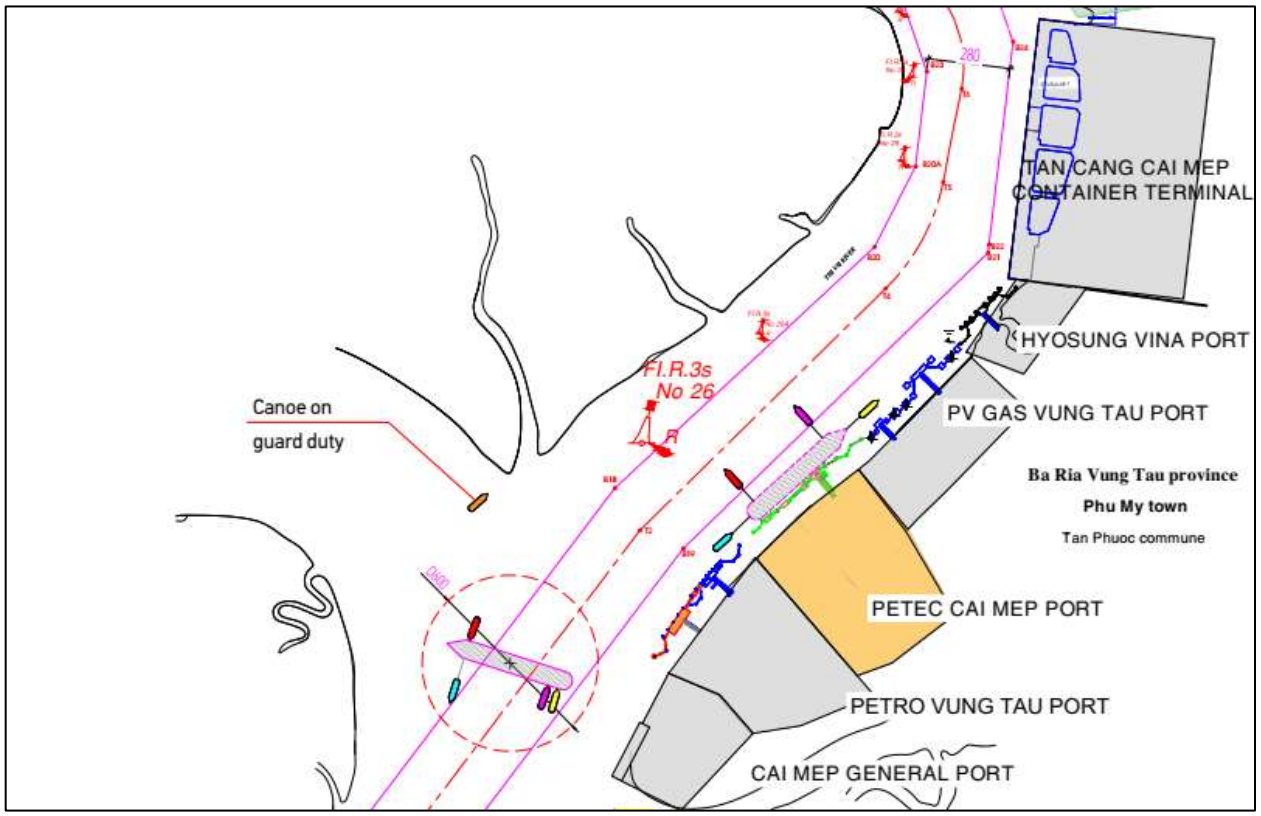
+ Minimum capacity of each tugboat is 4,000 HP.

- Hydro-meteorological conditions:

+ Wind speed Vwindmax : ≤ 20 knots (Categories 5, Beaufort).

+ Current speed: vcurrent ≤ 1.5 knots.

To arrange motor-boats to execute the duty of being ready to watch out to prevent small means of transport (e.g. fishing boats, small boats, others without AIS communication support...) from the upstream and downstream against navigating through the area where the LNG vessel is acting its turning.



When a vessel turns in the front water area of Ba Son Shipyard

- To arrange 04 tugboats to assist in towing the vessel departuring from the jetty, navigating from the jetty to the upstream and to the turning basin, including: 02 tugboats are ready to start their support for the vessel navigation, 02 remaining tugboats navigate as maneuvered and guided by the Pilot (please refer to the Chart below).

- In each specific situation, the position to readily start the towline ready or to untie the towline of tugboats will be discussed and agreed on the number of escort tugboats, the method, position and time of towline starting before the vessel arrives at the channel section where is required the use of the aforesaid tugboat.

- To arrange motor-boats to execute the duty of being ready to watch out to prevent small means of transport (e.g. fishing boats, small boats, others without AIS communication support...) from the upstream and downstream against navigating through the area where the LNG vessel is acting its turning.
- Hydro-meteorological conditions:
    + Wind speed Vwindmax : ≤ 20 knots (Categories 5, Beaufort).
    + Current speed: Vcurrent ≤ 1.5 knots.

BERTHING AND UNBERTHING AT PETEC BERTH:

- When a full-loaded vessel navigates to the jetty, it will be given a priority to berth on the starboard.
- All maneuvering of LNG Carriers proceeding to and within the Terminal shall be conducted with appropriate care and caution at a speed and in a manner that shall not endanger the safety of other vessels or Terminal.
- The berthing principle is to maneuver the LNG Carrier into a position parallel to the berth. With the LNG Carrier stopped in this position, the tugs will then push or pull the LNG Carrier onto the breasting dolphins.
- The communication channel (VHF) in the process of navigating the vessel is in accordance with the guidance of Vung Tau Maritime Port Authority.
- The Terminal is provided with a berthing aid and mooring line tension monitoring system with approach speed indicator display positioned on the Terminal.
- The meteorological and hydrological conditions are applied to the vessel when it turns, it is maneuvered to berth/leave the jetty:
- Wind speed in normal (favorable) conditions: Vwindmax ≤ 20 Knots (wind category 5, Beaufort Scale).
    + Current speed: $V_{current}$ ≤ 1.5 knots.
    + Berthing speed at the jetty: ≤ 0.15m/s, Berthing angle ≤ 6o.
- Priority is given to berthing against the current direction at the time.
- The tugboats are required:
    + To use tugboats with high maneuverability (Azimuth, Driver tractor stern…)
    + To use 04 Azimuth tugboats, minimum capacity of each ship is 4000HP.

3.6 TUG ASSISTANCE

TUG BOAT REQUIREMENT:

- To use tugboats with high maneuverability (Azimuth, Driver tractor stern…);

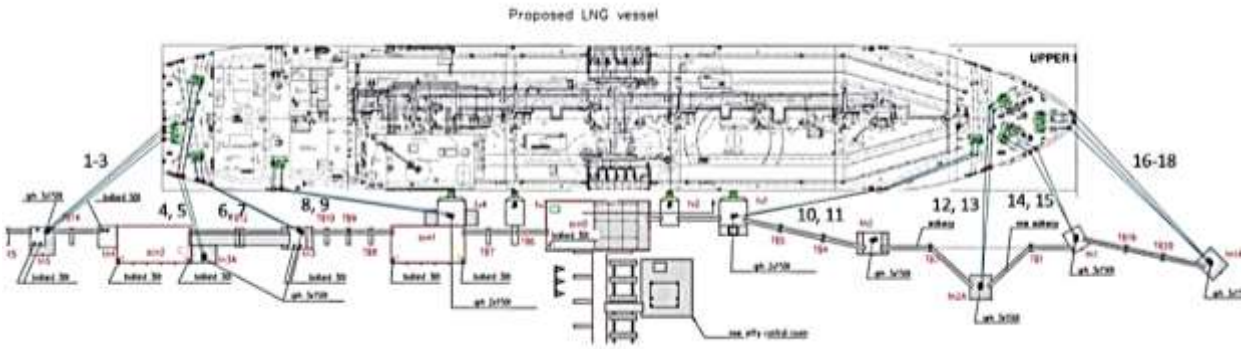
- Capicity of bollars pull: 50 Tones
- To use 04 Azimuth tugboats, minimum capacity of each ship is 4000HP.

SUPPORT TO NAVIGATION:

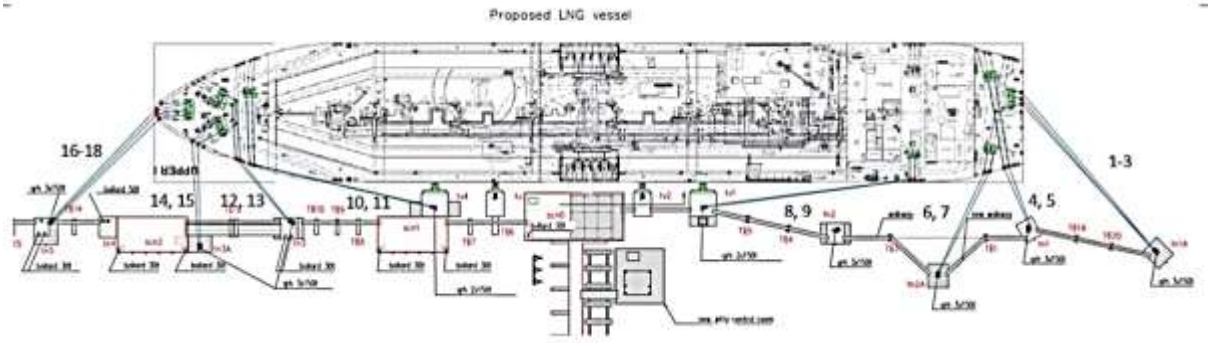
- Tugboats must be ready for towline to support the vessel from the buoys "21", "22" to the jetty.
- 01 motor-boat with high speed and maneuverability is arranged to guard and clear the channel (with the participation of Vung Tau Maritime Port Authority) from the buoy "5" on Vung Tau - Thi Vai channel to the jetty/turning basin and vice versa.
- As required by the cargo/vessel owner, the Captain and the Pilot agree to arrange 01 Azimuth tugboat to escort, ready to support the LNG vessel navigating from buoy "0" to the jetty and vice versa.
- There are 02 watch boat tugs (01 tug with 1200 Hp, 01 tug with 2000 HP) during berthing and unberthing.
- 02 mooring boats are used for transfer measeger lines and heaving lines.

3.7 MOORING ARRANGEMENT

- At the latest 24 hours prior to first arrival of the LNG Carrier, Mooring Master will forward the proposed mooring plan, via the Ship’s Agent, as established during the ship/shore compatibility studies. The mooring plan will include details of the number of mooring lines to be used.
- The minimum mooring line requirements for LNG Carriers are 18 lines. However, the Master should use all usable mooring lines and not hesitate to increase the number of mooring lines, if necessary;
- Number of mooring lines: A vessel uses 18 mooring lines, of which 07 stern lines, 07 head lines and 04 spring lines.



Layout of mooring lines when a vessel berths on the starboard (facing-in bow)



Layout of mooring lines when a vessel berths on the portside (facing-out bow)

3.8 MOORING OPERATION

Mooring lines are transferred one by one from LNG vessel to the corresponding mooring hook at the berth. Lines are tensioned after vessel torched mooring dolphin. The mooring crew on boat and the jetty should be equipped with proper PPE.

The LNG Carrier's crew deploys the mooring lines in accordance with the LNG Carrier's Master, Loading Master and Pilot's instructions and the agreed mooring plan.

When LNG Carrier came into a position parallel to the berth. The heaving line shall be sent to mooring boat and connecting to Terminal's message lines. Mooring lines shall be transferred to Quick release hook by capstans;

Mooring steps:

- Forward Spring lines;
- Aft spring lines;
- Forward & Aft breath lines;
- Head lines & Stern lines

3.9 CONTROL MEASURES DURING THE VESSEL BERTHS AT THE JETTY

- The vessels can moor, berth and operate at the jetty in the water areas where the jetty is approved and announced.

- It is required to coordinate and maneuver vessels navigating on the channel crossing PETEC jetty area at a speed of not more than 8 knots. In the case of large container vessels up to 160,000

DWT, it is required to keep a distance of 215m (from the nearest vessel side to the jetty border line) when the vessel navigates at speed of 10 knots, crossing PETEC jetty area.

- It is required to set up a monitoring system of mooring line tension, warning conditions and quick release of mooring system when a large container vessel up to 160,000 DWT navigates at a speed of 10 knots at the asymptote hydro-meteorological parameters and reaches the limited value of the mooring line system ($V_{wind} \leq 33.34$ knots ≈ 18.0 m/s, $V_{current} \leq 2.78$ knots ≈ 1.5 m/s).
- In case of unusual weather conditions with wind speed of over 18 m/s (Wind at Category 8), the vessel will stop pumping LNG and the Captain will be ready for the emergency process of moving out of the jetty.
- The distance of mooring and berthing between LNG vessel and other vessels of the same type on the berth line of PETEC jetty towards the fore and aft of the vessel is satisfied with the requirements of navigation (actualy distance is 81m).
- A safe water area is established within the vessel's area for guard warning: it is expected that the extent of established water area from the outer edge of the vessel's side to the right of the channel.
- Arrangement of tugboat on guard duty to carry out the following measures:
    + To communicate and contact with the VTS, the Pilot to guide the vessel navigating through the port area keeping a safe speed and distance;
    + The means of transport which are not on duty are not allowed to access the water area;
    + Heat source is not allowed to be used as the form of an open fire;
    + To coordinate in supporting the fire protection if required;
    + 01 tugboat is arranged to be on guard during the time of vessels' cargo handling at the jetty with a FiFi level 1 fire fighting system which is capable of reaching the top of the LNG vessel's storage tank.

3.10 MOORING LINES MONITORING

With respect to mooring plan while alongside, the LNG Carrier and her Master must ensure that:

- The LNG Carrier is safely moored all the time.
- LNG Carrier's port parallel body side to allow contact with 4 fenders at 100%
- A sufficient number of deck watch keepers are on duty to tend the mooring lines.
- Line tending operations are carried out as appropriate to ensure the LNG Carrier is held firmly alongside in its correct position with respect to the hard arms. Line tending checks also ensure that mooring lines do not become too slack or too taught.
- When the LNG Carrier is secure in the berth, the mooring winch brakes are properly hardened up and the winch is taken out of gear.

- All Terminal mooring hooks are equipped with load sensors and all measurement values are collected to the central control room of the Terminal for continuous monitoring.
- Line tension monitoring system has adjustable set points for slack, warning and high load which are during the berthing.

3.11 UNMOORING

Prior to the commencement of unmooring the LNG Carrier's Master/Ship's Agent ensures that the pilot is onboard and tugs, mooring boat/gangs are in attendance and ready to commence unmooring.

Unmooring operations are carried out by LNG Carrier's Master/Pilot instructions and all assisting services should follow the instructions.

Terminal Representative watch unmooring at jetty area.

3.12 STAND-BY TUG

While an LNG Carrier is alongside, one tug with appropriate power should be stand by at a distance of 10 min notice of arrival at jetty area.

The master of the tug should be ready for action at all times and keeps a listening on VHF Channel 16 while the LNG Carrier is alongside.

The tug should be fitted with fixed firefighting equipment meeting its Classification Society's highest fire-fighting standards.

3.13 EMERGENCY TOWING

While alongside the jetty, good quality fire wires are secured at both bow and stern of the LNG Carrier. Each wire has its towing eye.

PART IV. PORT RULES AND REGULATIONS

4.1. LAWS AND CONVENTIONS:

Applicable Law on which these Regulations are based on:

a) National Laws of Viet Nam, including but not limited to:

- Vietnam Maritime Code – 2015;
- Decree No. 136/2020/ND-CP dated November 24, 2020 of the Government detailing a number of articles and measures to implement the Law on Fire Prevention and Fighting and the Law Amending and Supplementing a Number of Articles of the Law on Fire Prevention and Fighting
- Decree No. 58/2017/ND-CP dated May 10, 2017 on guidelines for some articles of the Vietnam Maritime Code on management of maritime operations
- Decision 59/2005/QD-BGTVT on 21st November 2005 on Promulgating Regulations on Equipment for Maritime Safety and Sea Environment Pollution Prevention Installed on Board Vietnamese Seagoing Ships Operating on Domestic Routes;
- Circular No. 55/2019/TT-BGTVT dated December 31, 2019 on the list of certificates and documents of Vietnam's ships, public service ships, submarines, submersibles, floating docks, floating storage units and mobile offshore drilling units;
- Vung Tau Seaport Regulations issued by Maritime Administration of Vung Tau issued with Decision No. 1242/QĐ-CVHHVT on 25th July 2017 of Director of Maritime Administration of Vung Tau;

b) International Codes and Conventions:

- Vessels must observe the International Codes and Conventions for maritime transportation.
- International conventions for maritime of which Viet Nam is participating or recognizing for application.
- All ships that come alongside to do cargo/make services at port must comply with the requirements of the Maritime Law of Vietnam, the international conventions, standards of Vietnam, the technical requirements, safety of Vietnam's laws and PVGAS.

c) Application and amendment:

- The terminal management reserves the right at any time, to alter, change or amend any or all of the provisions contained in these regulations without prior notice.
- The terminal management shall have the right at any time to inspect the Vessel and all required certificates and documents to ensure compliance with this ship inspection guide.
- The terminal management shall, at its own discretion, have the right to suspend or cease operations and remove any Vessel from the terminal.
- Neither the terminal management nor its servants or agents (in whatsoever capacity they may be acting) shall be liable for any costs incurred by a Vessel, its Owners, Operators, Charterers or Agents as a result of a refusal to load or discharge all or part of the nominated shipment, delay to or suspension of loading, discharging or bunkering, or a requirement to vacate the terminal.

4.2. TERMINAL'S REGULATIONS

4.2.1. Accommodation Doors, Windows, and Portholes

All external doors, windows, and portholes are to remain closed during the Vessel's stay within the terminal.

The outermost doors to the accommodation block, engine room, and the motor room should preferably be fitted with self-closing devices. This regulation applies to LPG carriers, oil tankers and unloading VCM vessels.

4.2.2. Access to the terminal

Strictly access control to the terminal's area is enforced and no person may enter or leave the terminal without the authorized and/or relevant documentation.

People, transportation means, equipment, materials, goods come in/out of the Terminal with a particular reason and have to get permission (entry/exit permit/card) by the terminal management in writing and shall be monitored at the security gate.

People come in/out the Terminal must show ID card. Full registration document is required for transportation means. List of equipment, materials, goods must be submitted and they will be checked in detail.

4.2.3. Alcohol, Drugs, Weapon and Prohibited Items

Ship Owner/Operator must accept and apply Alcohol and Drug Policy in accordance with OCIMF "Guideline for the control of Drug and Alcohol".

Using weapons, smuggling, or trafficking in any prohibited article between vessels or between vessel's crew and shore personnel is strictly prohibited.

4.2.4. Agency Representation

In compliance with Viet Nam laws, all vessels calling at PV Gas Vung Tau Terminal are required to have agency representation. The agent shall be appointed by the Cargo Owner or by Ship/Shipowner or the terminal management.

For foreign ships, shipping-agent staff must be on board all the berthing time for contacting relevant parties and timely dealing with any arising issue.

4.2.5. Ballast, Oil Transfers and Pollution Prevention

The terminal does not currently have ballast or oily water reception facilities therefore all discharging ballast water is not allowed during berthing/un-berthing times.

The person in charge or responsible for the operation, works or location where such pollution occurs, shall immediately report the incident to Port Control by the most expeditious means available;

Immediate action must be taken to stop or minimize further pollution and contain or clean up any spillage of oil on the Vessel's deck or shore areas.

Failure to report a pollution incident is a serious offense and persons found contravening this requirement will be liable to heavy fines and prosecution in Viet Nam courts.

Vessels shall ensure that discharge of dirty ballast, bilges, slops, or other substances into water shall be in accordance with MARPOL 73/78, as amended from time to time, and is in any event totally prohibited within the confines of PVGAS Vung Tau Terminal. The vessel shall be fully and solely responsible for any consequences, penalties, or liabilities arising out of any failure to adhere to these requirements.

4.2.6. Cameras

The use of photographic equipment of any kind including cameras, video cameras, within the terminal's limits is strictly prohibited without the prior written permission of the terminal management and the applicant being in possession of a duly authorized Operational Photography Permit issued by Chief operation.

4.2.7. Communications

All communications between vessel and shore operator shall be in Vietnamese or English via walkie-talkie which provided by Terminal operator or by VHF channel 16 during the berthing time.

4.2.8. Emergency Precautions

For emergency precautions, and in case of emergency, the Master shall act in accordance with the relevant procedures of the Terminal and those agreed during the "safety meeting" before cargo handling.

4.2.9. Flags and Signals

When within the terminal's limits, from sunrise to sunset, all Vessels shall fly their national flag and the national flag of Viet Nam.

In addition, Vessels shall at all times, comply with the International Code of Signals and display flags, shapes, and lights as required by the International Regulations for the Prevention of Collision at Sea.

4.2.10. Gangway Requirements

Gangway: Ship must be self-equipped with gangway. Gangway must be in safe condition, well secured, and provided with handrail. Furthermore, safety net, lifebuoys, and good lighting should be deployed at gangway position.

Gangway shall be used at all times unless unavailable or unsuitable for the Vessel, at which time the Vessel is to provide a gangway.

At berths where no shore gangway is available, vessels are to provide safe means of access between shore and the vessel or in case of double banked vessels; the offshore vessel is to provide safe access between the vessels

Any gangway provided by any vessel should conform to this regulation with correctly rigged rails, embarkation steps, safety net, and appropriately positioned lifebuoy.

During the hours of darkness the access area on deck, and where possible, the length of the gangway should be floodlit.

A gangway and manifold watch shall be maintained at all times by competent shipboard personnel.

During the Vessel's stay alongside, notices and information shall be displayed at the gangway access area as required under this regulation.

4.2.11. Hot work Permits

Repair work - hot works as welding, cutting, rust removal …are not allowed when the ship is at the Terminal. Maintenance, repair, and ship cleaning are only conducted with the approval from Vung Tau Port Authority and the terminal management.

No welding or burning or flame cutting or brazing or grinding or any other such hot work which produces ignition sources including the use of Naked Lights may be only carried out on board any vessel within the terminal with the prior permission of the terminal management.

Hot Work Permits are issued by the terminal's chief operation and are valid for a maximum period of 24 hours.

Hot work onboard vessel shall observe all safety measures as contained in the vessel's ISM and any other safety procedure.

Any violation could result in the cessation of the cargo operations and the vessel requested to vacate the berth and being put to anchor pending a full inquiry. The Vessel will be responsible for all the costs and delays whatsoever resulting from such action.

Any hot work to be done ashore shall comply with procedures issued by the terminal management.

4.2.12. Immigration and Persons in Transit

Immigration and transit facilities for arriving and departing ships' personnel are available and can be handled efficiently through PV Gas Terminal to or from Tan Son Nhat Airport.

A minimum of 72 hours prior notice to the Vessel's Agent is normally required with full details of names, passport and seaman book for crew transits.

A Passport and Seaman's Book are mandatory in order to join a vessel.

4.2.13. Naked Lights

The use of Naked Lights within the terminal area is prohibited except:

Under a specific and detailed Hot Work Permit issued by the terminal management for such purpose, time and area.

In the designated places at the time that smoking is permitted.

4.2.14. Portable Electrical Equipment

Lights, portable electricity devices, electronic equipment used in danger-zone must be certified as fire/ explosion-proof. Those equipment are, but not limited to VHF walkie-talkie, receiver, mobile phone, torch, camera, non-fire/explosion proof devices deployed on board or in the danger zones that require socket connection for operation must be disconnected during loading/unloading process.

Shall not be used on board gas or liquid tankers, unless certified as Approved Equipment. Similarly, the use of portable electric lamps and equipment on wandering electric cables is prohibited in any cargo or adjacent ballast space, pump room, compressor room, cofferdam, bunker tank, hold or anywhere over the cargo tank.

4.2.15. Terminal Services

Only services provided or authorized by the terminal management shall be utilized within the terminal area. The use of the terminal's equipment, services and facilities s hall have priority over other third party equipment, services and facilities. Requests for the various services shall be made through the Vessel's Agent.

No third party services, equipment or facilities shall be allowed within the terminal area without the prior written approval of the terminal management having been obtained.

4.2.16. Port Charges

Port Charges are levied for the use of the Port facilities and the provision of services to the visiting vessels. Port Charges are payable in advance and according to the applicable charges as published and amended from time to time by the terminal management.

The Port charges can be obtained, upon request, through the Vessel's Agent or it can be directly done by contact with the terminal operator:

The terminal management reserves the right to issue the Port charges which will contain the terms and conditions and the scale of charges that shall apply for the use of premises, facilities, works, equipment and services within the Port.

The terminal management reserves the right to alter, change, or amend from time to time any or all charges, terms, conditions or interpretations contained in the Port charges with or without prior notice.

Fee for using jetty, mooring services, good moving through the port … will be paid in accordance with the implementation instruction of PVGAS as reference to Appendix 1 of this regulation.

After the job have been done cargo owner, ship (shipping Agent) confirm port charge and service fee using "Terminal Charge and Service Fee Declaration" form shall be provided by the Jetty operator.

4.2.17. Recreational Activities

Recreational activities such as running, walking, swimming, diving and fishing are not permitted within the terminal area. Persons in breach of this regulation are liable to face prosecution.

4.2.18. Responsibility for Damage to Facilities

All users of the Port, or their agents, contractors and subcontractors shall be responsible for any damage whatsoever and howsoever caused resulting from their use of berths, premises or any of the terminal facilities or of equipment provided by the terminal. Damage shall include any pollution or other forms of harm to the environment.

Terminal Management reserves the right to repair, or otherwise cause to be repaired, or remove pollution and/or rehabilitate the environment, any and all such remedial measures shall be at the expense of such users, agents, contractors or subcontractors.

Terminal Management shall require a suitable form of guarantee be furnished to cover the cost of repair, clean up or rehabilitation.

4.2.19. Reporting Operational failure

An operational failure on board a ship that could cause a hazard, damage or hindrance, shall be immediately reported to the terminal management.

4.2.20. Safety Drills/Exercises

Any Vessel wanting to lower their lifeboat(s) either partly lowering them from their stowed position or fully lowering them into the water while within the terminal area must first inform Chief operator.

Lifeboats may be disconnected from the falls to test the engine under the following conditions:

Testing may only be done before connection or after disconnection of loading & vapour arms,

May only be carried out during daylight hours,

Lifeboat shall not be taken more than 100m from the side of the vessel,

Port control shall be informed on completion of testing, once lifeboat is re-secured in position.

Prior to any such safety drills or exercises, vessel shall have approval from the responsible terminal operator. Such safety drills and exercises shall NOT be carried out during oil or gas loading operations.
Ship and related parties are responsible for cooperation in drilling exercise when requested by the Terminal.

4.2.21. Sea and Overboard Valves

Overboard discharge valves on the bilge and cargo systems shall be firmly closed and locked. Where the indicated valves are hydraulically powered then a suitable means of preventing accidental operation shall be arranged.

During the Vessel's stay in the Port all overboard discharge valves shall be monitored to ensure that no polluting substances are released.

Water discharges (e.g. cooling water) shall not be directed onto or over the jetty or dolphins. Where this cannot be achieved mechanically then suitable baffle boards must be rigged to the satisfaction of the terminal management.

4.2.22. Ship/Shore Co-operation - Vessel Alongside

While a Vessel is alongside at the berth:

The relevant End-User shall appoint and maintain at the Terminal, at all times, a sufficient number of qualified and experienced persons to monitor the progress of all operations onboard the Vessel and to ensure reliable communications are maintained with the Master and the terminal management.

The Master shall ensure that his staff who are charged with the responsibility of conducting or overseeing the cargo operations and related duties are qualified and competent, including the ability to communicate in English. Sufficient Vessel personnel shall be made available at all times to ensure that the terminal management requirements for safe and efficient operations and mooring practices are observed and that adequate ship/shore liaison is maintained. The Master and his delegated staff shall ensure that the instructions and requirements that may be imposed by the terminal management, pursuant to this regulation, are attended to and performed with reasonable dispatch and in an appropriate manner.

The mooring pattern shall be regularly monitored.

A pre-loading meeting shall be attended by the appropriate representatives from the Vessel, representatives from the relevant terminal, and a representative from the terminal management, to discuss:

- Ship/shore communications;
- Ship/shore safety checklist;
- Emergency procedures;
- Cargo handling plan;
- Bunker/ballast handling plan;
- Permit to work requirements;
- Any concerns or operational requirements.

An inspection of the Vessel will be carried out:

- To confirm compliance with the ship/shore safety checklist;
- In line with requirements of Port Regulations.

While the vessel is alongside, subsequent inspections may be carried out at any time by the terminal management.

4.2.23. Ship to Ship Transfer

No Ship to Ship Transfer will be permitted within the terminal area. Such transfers may only take place outside PV Gas Terminal Port Limits.

4.2.24. Shore Leave

During the berthing period at the Terminal, crew is limited to go onshore. In order to control the number of crew members go onshore, crew go to ashore have to get acceptance from Master in writing. Crew list have to send to the Terminal Central Control Room for confirmation before sending to the Terminal security gate.

In case crew member is a foreigner and go onshore or make crew change the exit/entry must be approved by Viet Nam Border Guard.

Security passes are required for all personnel proceeding ashore.

Shore leave can be arranged through the vessel's agent, including transport from and to the Vessel.

Shore passes are supplied by the Agent to the Master and shall be returned prior to sailing.

Crew come out/in the Terminal have to follow the route from jetty to the main gate where the security guards are always on duty (as per guiding line marked on the road).

Crew come out/in the Terminal is requested to dress and act in a good manner.

If the master goes ashore, the handover/authorization to the first officer must be made in writing and a copy have to send to the Terminal Central Control Room (CCR)

Entry/Exit time to/from the Terminal for crew is from 07:00 to 23:00 daily.

4.2.25. Smoking

PV Gas Vung Tau Terminal is a no smoking zone except for inside office building or designated area on board. Smoking anywhere else within the terminal area is prohibited.

4.2.26. Static Electricity

Condensates are classed as static accumulators. When loading this product the procedures as detailed in ISGOTT, Section 7.4 must be adopted.

Masters should encourage officers in charge of the loading of condensates to read, as a minimum, ISGOTT, Chapters 7, 20, and 21.

4.2.27. Internet and Telephone Services

Upon request and subject to availability at certain berths, telephone cards and/or internet can be provided onboard for the use of the vessel. Details are obtainable through the Agent.

4.2.28. Tug Requirements

In almost cases, ship is required to use tugboat to support ship during berthing/un-berthing at jetty. Capacity and number of tugboats are stipulated in the regulations of Vung Tau Port Authority. Ship owners should contact their appointed agent to confirm information of tugboat prior to come Vung Tau water. For the ships that have longest length less than 80m, depend on technical status and weather, tide condition… the terminal has the right to ask for tugboat for the ship to ensure the safe berthing/unberthing.

For safety reason, only one ship is arranged for berthing/unberthing at a time. In case there are many requests for berthing/unberthing the chief operation shall decide which one is the priority with 1st priority is LNG tanker, 2nd priority is refrigerated LPG vessel then smaller vessel.

The terminal's tug service is available at all times. Any request for the services or a stand-by tug or additional supporting tugs should be directed through "Terminal Dispatching Team" on VHF channel 16 or phone to CCR. The charges for tug services are published as reference to Appendix 1 of this regulation.

Tugboat for emergency situation that is arranged by cargo owner must be on duty for all the ship's berthing time and ready to approach to the ship within 5 minutes from receiving request for support.

When the breakdown causes an unsafe situation to the Terminal, the tugboat leased by PVGAS for emergency case may be used for emergency response. If the cause of incident did not come from the Terminal then the cargo owner/ship owner… has to bear the cost base on the rental rate agreed by PVGAS and the supplier of tugboat for the emergency service.

4.2.29. Ventilators and Air Conditioning Units

Intakes of central air conditioning or mechanical ventilation systems (fans) should be adjusted to prevent the entry of dangerous gases or vapor , if possible by the 'recirculation' of air within the enclosed spaces.

If, at any time, it is suspected that dangerous gas or vapor is being drawn into the accommodation, the central air conditioning and/or mechanical ventilating systems should be stopped and the intakes covered or closed.

4.2.30. Waste Disposal

Collection bins are available at the cargo and small craft berths for the collection of inert and domestic (non-hazardous) wastes.

Collection from the liquid product can be arranged through Agency.

Hazardous wastes are classified as those wastes, which by virtue of their concentration of constituents and characteristics (such as ignitibility, corrosiveness, reactivity, toxicity, radioactivity, etc) pose a hazard to human or environmental health and wellbeing if improperly managed. Hazardous wastes shall be kept onboard as there are currently no collection facilities within the terminal.

4.2.31. Custom Clearance

It is mandatory that all cargo, either import or export, shall be fully cleared through customs and any other required formalities completed before a vessel will be granted entry to the port.

Every vessel wishing to leave the terminal and proceeding to a destination outside Viet Nam shall obtain a Port Clearance issued by the terminal management.

A Port Clearance may be withheld from any Vessel by the Port Management for any violation to the provisions of the Laws and Regulations, or for any legal cause or restraint duly ordered by the Court in Viet Nam, or for non-payment of Port charges.

4.2.32. Required documentation

These documents is required to keep onboard at all times.

Bill of Lading (Import cargoes);

Shipping Document;

Ship must be under Protection and Indemnity Insurance with an International P&I Club. For domestic ships, the P&I liability is in accordance with the regulation of Viet Nam Ministry of Finance;

The vessel carries on board certificates as described in the Civil Liability Convention for Oil Pollution Damage or any Protocol thereto;

The vessel has in place insurance cover for oil pollution no less in scope and amounts than the highest available under the Rules of P&I Clubs entered into the International Group of P&I Clubs;

The vessel shall have on board at all time a valid ISM certificate (ISM means International Management Code for the Safe Operations of Ships and for Pollution Prevention) and the owner, before and during the voyage shall comply with requirement of the ISM;

The vessel shall be manned, operated and maintained so as to fully comply with:

- ✓ The standards set out in ISGOTT;
- ✓ Appropriate IMO recommendation;
- ✓ The OCIMF Guidelines for the Control of Drugs and Alcohols On-board ships, each as amended from time to time.

4.2.33. Ship Engine

Terminal only allows ship to arrive/departure to/from berth by the Terminal if the main engine and other equipment are in good condition and the ship is in normal position and other factors e.g. weather, hydrography, visibility are in favor condition for berthing/un-berthing.

Ship's main engine will only be tested before departing from the berth when LDA has returned to secure position and anchor **lines are well tightened.**

4.2.34. Mooring

Mooring staff will be arranged by the Terminal. Ship officer is required to give special attention to the mooring lines that are being stretched and all mooring staffs must be far away from the tow post;

Ship has to monitor and adjust fire wires in accordance to tide and cargo status;

Should not hesitate to increase the number of moorings line should they feel it is prudent to do so;

Mooring lines are to be in good condition. Coiled or flaked ropes should be turned up on the bitts in the 'figure of eight' style in accordance with OCIMF recommendation, where possible. Ropes turned up on the winch drum and backed up on bitts are not acceptable;

Mooring wires and ropes with dedicated winch drums must be spooled in the correct direction on the winch drum;

Mooring lines used in a common direction (head / stern /breast / springs) shall be of similar breaking strength, elasticity and material. Under no circumstances will a mixture of wire and synthetic ropes be accepted in a common direction or to the same Dolphin, except moorings which are additional to the indicated minimum requirements;

On completion of mooring, winches should be out of gear with the brakes 'hardened up'. Winches must NOT be left on 'automatic tension';

It is the Master's responsibility to ensure that:

Their Vessels are securely moored in line with the relevant mooring pattern detailed below and as applicable and with due regard to the current weather forecast;

A strict watch, of sufficient and proficient personnel, is maintained to ensure that moorings are tended, as required, to prevent slack or over taut lines, and undue movement of the Vessel;

Weather forecasts are monitored during the Vessel's stay alongside, and appropriate action taken in advance of deteriorating weather;

Regular checks of the moorings shall be undertaken by the shipboard personnel. The Master shall remain at all times responsible for ensuring the integrity of the Vessel's moorings;

Failure to adequately tend the moorings shall be considered a breach of the Port Regulations with consequent and appropriate action being taken by the terminal Management.

4.2.35. Fire Wires

During the vessels stay alongside, the fire wires should be positioned on bow and stern of ship. An end of the tow-line is well secured to tow-post of the ship and the other end is left free two (2) meters above the water surface. Tow-line for emergency situation must be long and strong enough for towing the ship with load and avoiding the influence of current, tide, and wind.

The wires must be made fast in the following manner:

The eye of the wire shall be lowered to the level of the sea, with the inboard end led directly through a fairlead to the bitts, or bollard, where the wire shall be made fast using a minimum of five turns,

There shall be no slack between the fairlead and the bollard.

A heaving line, or other comparable rope, shall be secured to the wire immediately inboard of the eye and hove up until the eye is positioned at a height of approximately three (3) meters above the level of the sea. The eye shall be maintained at that height at all times while the Vessel is alongside.

4.2.36. Pilotage

Pilot for berthing/unearthing is provided by Vung Tau Pilot Enterprises. Pilot regime is in accordance to regulations of Vung Tau Port Authority.

The master and pilot need to exchange with CCR information related to feature of the Terminal, the ship condition, specially, the factors affected to ship mobilization, ship readiness to ensure a safe berthing.

Pilotage is compulsory for all Vessels navigating within the terminal area except, at the sole discretion of the terminal management, the following may be exempted from having to have a Pilot onboard:

Vessels of less than 75 meters LOA who's Master holds a valid Pilot Exemption Certificate.

Supply Vessels authorized by the terminal management to use the Port as a regular base for their offshore operations and who's Master holds a valid Pilot Exemption Certificate.

All tugboats operating as such exclusively within the Port Area. Any other Vessel exempted by the terminal management.

Boarding Area - Vessels arriving from sea, which are required to take a pilot in compliance with this Direction, or otherwise require a pilot, shall take the pilot on board. Master's attention is drawn to the following:

There is no pilot boat or cutter stationed off the port.

Pilots work from the terminal's office and proceed to vessels by pilot boat, tug or motor car, as the needs dictate.

Vessels may board a pilot in other areas only if expressly directed to do so by the Port Management.

Pilot boats are blue hulled with white superstructure with "PILOT" in black letters plus a red/white "H" flag painted on the superstructure.

4.2.37. Oil Spill Control

Cargo owners of petrol/condensate tankers must deploy the oil spilling control service for whole of the time of ship loading/unloading

The oil spilling control service must ensure the availability of equipment, materials, manpower…to be mobilized to the Terminal water area within 5 minutes after receiving incident notice and provide quick and efficiency response.

4.2.38. Security information before ETA

If the ship come in from a foreign port at least 72 hours before ETA, security information and crew list must be sent to the Terminal.

4.2.39. ETA

ETA shall be given at least seven/three/two/one/half (7/3/2/1/0.5) days prior to the vessel berthing at PVGAS Vung Tau Terminal. Such ETAs should be addressed via the agent.

Within 2.0/1.0/0.5 hours prior to the arrival, Vessels or her agent have to contact "Terminal Dispatching or CCR" via VHF channel 16 and/or by telephone for information exchange about ship and berths.

The 72 hours ETA notice shall include the information as required in the relevant Pre-arrival Questionnaire referred to in "Arrival & Departure Check Lists" above.

For vessels operating within Vung Tau waters, pre-arrival notices are required to be sent to PV Gas Vung Tau Terminal via the vessel's agent, at least 24 hours prior to her arrival.

Pre-arrival notice is to be confirmed 4 hours prior to arrival.

Before arrival/departure at/from berth, VHF channel must be used by vessel and the terminal for exchange information about the technical and safety condition of the port/jetty. If vessel fails, for any reason, to give at least 24 hours prior notice of her arrival at PVGAS Vung Tau Terminal, the allowed time to PVGAS for loading/unloading pursuant to Notice of Acceptance shall be extended equal to the delay in giving such 24 hours notice, but in any cases not exceeding an additional 24 hours.

4.2.40. Notice of arrival

Ship agent keeps regular contact with ship owner/ship/cargo owner to inform the Terminal about ETA of the ship. If the ship arrives later than plan, ship agent has to inform the Terminal as soon as.

Ship agent/ship owner/cargo owner confirms the ship fully met the requirement on safety and technical condition; crew has been trained on safety; and commitment to pay the fees to the Port.

Notice of ship arrival will provide the following adequate information: name of the ship, her nationality, GRT, LOA, arrival water-line, type of cargo, cargo quantity, ETA, contact number of ship agent, and other information. Notice of arrival must be sent to the Terminal before ETA.

Crew list will be sent to Terminal by agent. For foreign ships, the security information must be submitted to the Terminal before arrival using "Ship Pre-Arrival Information" Form.

Base on safety and security status, technical condition, type and volume of cargo of the ship, and utilization of the Terminal … the Terminal keeps the right to refuse ship arrival for loading/unloading, or request the adjust the ship berthing plan.

4.2.41. Notice of acceptance

After receiving Export/Import Order and the latest notice of ship arrival from ship agents, depend on jetty condition and the fulfilment of the related procedures, the Terminal will send a notice of acceptance to ship agents and cargo owner clearly mention: name of ship, type of cargo, quantity, berthing jetty, ETA, ETB and other notices (if any). For the ship carrying imported/exported products, the Terminal will inform the ship's loading/unloading plan to customs.

4.2.42. Fulfilment of berthing procedure

Cargo owner, Ship's agent and related parties have to finish all procedures for goods and personnel and be ready at the Terminal at least 1 hour before ETB so that the loading/unloading can be carried right after ship berthing. The procedure includes but is not limited as follows:

"Notice of Acceptance " issued by PVGAS Vung Tau Terminal; Ship berthing permission issued by Vung Tau Port Authority; Notify Name, capacity, number of tugboat to the terminal; Customs clearance formality (for imported/exported goods); On duty Oil Spill Prevention Service;

Confirmation of paying all charges and fees as per regulated.

Ship must prepare her own equipment for loading/unloading before arrival at the Terminal: suitable flange, connector to the loading arm of the jetty, readiness of anchorage winch, emergency response equipment…and safety and security notices that are in compliance with the Terminal's regulations.

In case of late arrival of the ship that causes the effect to the operation of the Terminal and the cause is not the Terminal's fault, the Terminal has the right to refuse berthing and will not be responsible for any related loss/damage.

4.2.43. Pre-loading/Unloading meeting

Before loading/unloading activities, jetty operator, ship agent and relevant parties will join a meeting to discuss and agree on the key issues and ensure safety during the loading/unloading.

In the meeting, Ship must provide the Terminal the following formations:

- ✓ Ship's particulars & Crew list.
- ✓ Vessel experience factor of 03 (three) most recent shipments;
- ✓ Cargo storage diagram and plan of good loading/unloading. Ballast diagram and plan of using ballast.
- ✓ Ship's tank capacity (only use during loading/unloading).

Ship representative and the Terminal coordinate to check and make the agreement in writing on the following issues:

- ✓ "Ship/Shore Safety Checklist".
- ✓ Agreement on loading/unloading procedure between ship and shore. Agreement on communication signals in case: Emergency stop, Fire (on ship/shore), oil spill
- ✓ Inspection on cargo inventory on ship conducted by an independent party.
- ✓ Audit the readiness of the oil spill prevention service for petrol tanker. Audit the readiness of the tugboat for emergency case
- ✓ Other issues that need to pay attention.

4.2.44. Notice of readiness for loading/unloading

Captain sends the "Notice of Readiness - NOR" to the Terminal. NOR can be refused in case the Terminal discovers unsuitable conditions that affect to the readiness of the ship and the loading/unloading process.

4.2.45. Cargo handling requirements

Comply with the loading/unloading procedure was agreed in the Plan for Loading/Unloading.

During loading/unloading ship and shore keep regular communication on flow rate, temperature, pressure, cargo on board… and safety condition of the ship and status of loading/unloading equipment.

Ship and shore regularly follow up and check the items mentioned in the "Ship-shore Safety Checklist" and record the result in the "Ship-shore Safety logsheet" during loading/unloading.

4.2.46. Invoicing

Cargo invoice will be issued by the cargo owner.

Terminal charge, mooring service fee, fee for goods go through the port are in accordance with the regulation of Ministry of Finance and collection instruction of PVGAS and as reference to Appendix 1 of this regulation.

After finish loading/unloading ship (ship agent) confirms port charge and service fee using "Terminal Charge and Service Fee Declaration" form shall be provided by Jetty's operator.

4.2.47. Emergency Stop

Emergency case will be formed up as follows:

- ✓ Wind speed is over 18 m/s.
- ✓ Oil spill on board, pipeline broken or oil spill to the sea.
- ✓ Fire on ship/shore.
- ✓ Other incident that seriously impact on the safety of ship/Terminal.

When the emergency situation is announced ship must to stop the loading/unloading immediately and implement all measures to ensure the ship safety. LDA or flexible pipeline is ready for disconnect and the ship is ready for leaving the Terminal if required.
If it is necessary for ensuring safety for the ship and the Terminal the emergency disconnect of LDA will apply so that the ship can quickly leave the jetty.

4.2.48. Information in the emergency cases

The information about emergency case will be announced by the CCR via Public Announcement system, VHF, telephone so that ship, Terminal and related support parties to quickly implement and coordinate the activities as per emergency response procedure.

4.2.49. The readiness of the ship in emergency case

In emergency case ship can be requested to leave the jetty, therefore, Captain has to ensure that the main engine and other equipment are always in the ready condition for emergency response during the ship berthing for loading/unloading. The variance between bow/tail, the ship balance, and the force impacts to the ship must be in the safety range and do not limit the readiness of the ship.

Ship personnel must be available at all the time for cooperation with the Terminal in emergency response.

4.2.50. Emergency response procedure

In case of fire/oil spill on board the ship must to implement all necessary response measures in order to minimize the impact of the incident and immediately inform to the Terminal Coordinator. In case the ship cannot contact the CCR the ship emergency alarm must be activated:

- ✓ Fire on board or on the Terminal and activate Alarm System
- ✓ Stop loading/unloading.
- ✓ Close all isolation valves on the ship and terminal.
- ✓ Implement Emergency Response Plan Ready to disconnect LDA.
- ✓ Inform tugboat and be ready for leaving the Terminal Oil spill
- ✓ Stop loading/unloading; Close all isolation valves on the ship and terminal.

4.2.51. ETD / Shifting Notice

Two (2) hours before ETB, ship and Central Control Room exchange information about ship condition, condition of jetty equipment, and hydrographical condition to prepare for ship berthing.

All vessels shall, through their agents, provide notice of their ETD or shifting time at the latest when loading/discharge is 50% completed and shall regularly update such notice as and when it becomes apparent that the estimate has changed by more than 45 minutes.

4.2.52. Departure

Ship is only allowed to leave the Terminal from 5:00 to 18:00 daily and all time in case of having liquid and empty liquid respectively.

Leaving ship must comply with Viet Nam Maritime Law and regulations of Vung Tau Port Authority pilot regime, tugboat.

Ship must leave the Terminal not later than 1 hour from the end of loading/unloading except the loading/unloading finish at night and the ship is not allowed to go as per regulations of Vung Tau Port Authority.

In case of late departure of the ship that causes the effect to the operation of the Terminal and the cause is not the Terminal's fault, the Terminal has the right to refuse berthing and will not be responsible for any related loss/damage.

PART V: SHIP INSPECTION GUIDE

5.1 GENERAL INFORMATION:

The vessels which are used for purpose of cargo handling at PV Gas Terminals or intend to be chartered for cargo transportation for PVGAS subsidiary companies must be vetted in comply with the vetting policy.

To ensure good communication during berthing/un-berthing and cargo handling, all vessel' crews are mandatory requested to fluently use English or Vietnamese.

Vetting organization is an independent party which has function and responsible to conduct ship inspection in accordance with PVN's policy.

Applying VIQ question issued by OCIMF for inspecting vessels which has capacity equal or above 5000 DWT.

Applying BIQ question issued by OCIMF and is corrected to comply with regulation of Viet Nam Register for inspecting vessels and barges operating coastally or inland water which has capacity under 5000 DWT.

5.2 SCOPE OF APPLICATION:

The PV Gas ship vetting policy shall be applied for:

- Ships come alongside for cargo handling at PVGAS Vung Tau Terminal or other terminals owned and/or had shares by PVGAS.
- Ships are managed and/or operated by PVGAS or be chartered by PVGAS and its subsidiary companies for transportation, floating storage or cargo operation.

5.3 RESPONSIBILITIES:

5.3.1 Terminal Management:

Coordinate with Cargo owner and related parties (if any) to schedule carry out a ship vetting.

To be responsible for documentation checking, physical inspection ships intend to come alongside PVGAS Terminals including but not limited to:

- The ships which come at the first time or periodically (according to article 4.5.1 of Part IV of this regulation)
- The ships which have changed the Ship owner.
- The ships which intend cargo handling after dry-dock.
- The over 20 years old ships which is extended to be expand the charter contract.
- With refrigerated LPG vessels, LNG carriers are subject to only result of documentation checking that such vessels can be consider to accept in fully accordance with all provisions and regulations of the vetting policy.
- With the ships are managed by foreigner's company that its measuring equipment is verified and calibrated in accordance with normal international practice and standard: Ship owner have to provide the internal calibration/verification recorder which is done by their trained ship's staff.

- Review ship's documents provided by cargo owner/ship owner prior to carry out the physical inspection as reference to "Inspection checklist" in the "Ship Vetting Guide".
- Review, evaluate and notice the result of ship vetting to cargo owner or ship owner or ship owner's representative in writing.
- Carry out the unscheduled physical inspection.
- Maintain, save and update ship/barge's documents, ship/barge vetting reports/data.

Terminal's recommendation/suggestion serves as a foundation that helps cargo owners in ship selection for safe, effective and convenient loading/unloading.

If the assigned ship's DWT is higher than designed capacity of the jetty, the Terminal will inform cargo owner the maximum amount of cargo which will be allowed for loading/unloading at the Terminal after consideration of technical specifications of the ship. To ensure a safe loading/unloading, the Terminal and the ship should agree on critical points in the loading/unloading plan.

5.3.2 Cargo Owner or Charterer:

Cargo owners are responsible for inspection and selection of the ship that meet safety requirements and technical conditions for loading/unloading before sending it to the Port to ensure safe and effective loading/unloading.

For the ships that are first time selected go arrive at the Terminal, cargo owners have to provide the ship information ("Form C" for LPG, VCM and "Questionnaire 88" for fuel and condensate), SIRE report (Revised Ship Inspection Report) of third party and the list of ship certificate status to the Terminal so that the real ship checking by the Terminal will be arranged 15 days before the day the ships come in for loading/unloading.

To schedule carry out ship physical inspection and inform the schedule to cargo owner and/or Terminal operator and related parties (if any).

Review ship's documents provided by ship owner or its representative prior to carry out the physical inspection.

Consider to charter if and only vessels which are in comply with safety and security requirements of International Maritime Conventions, Vietnam Laws and the Vetting policy.

Regularly follow and observe Ship Owner to correct the recognized findings of the Ship vetting and review the validity of ship's certificates and licenses.

During the period of the acceptance of the ship, whenever there is any change in certificates, licenser, crew and equipment which was listed in the last vetting report, Cargo Owner or Charterer promptly notice to Terminal Operator before the ship is going to come alongside for cargo handling.

Co-ordinate with Terminal operator, Charterer, Ship owner and/or its representative in carrying out Ship vetting.

5.3.3 Ship Owner and/or its representative:

Fully provide ship's technical and safety documentations...to Cargo owner and Charterer and Terminal operator for reviewing at least 15 days in advance of the ship vetting.

Report the special survey and/or ship inspection reports which are inspected by third party to Cargo owner and Terminal operator for reviewing before conducting a ship vetting.

Inform list of ships to be carried out ship vetting and their anchorage positions to relevant parties at least 3 days in advance of physical inspection. Arrange transportation means for Ship vetting team.

For voyage charter, Ship owner have to provide ship's technical and safety documentations at least 3 days in advance prior to ship's arrival at PV Gas Terminal.

Take full responsibility for rejecting berthing by Terminal operator due to lack of documentation, security and safety equipment and its actual condition don't not meet the vetting policy.

Correct the recognized findings of the ship vetting prior to Terminal Operator's next decision.

Regularly review, update, extend the validity of certificates and licenses. During the period of the acceptance of the ship, whenever there is any change in certificates, licenser, crew and equipment which was listed in the last vetting report, Ship Owner and/or its representatives promptly notice to Terminal Operator and Cargo Owner before the ship is going to come alongside for cargo handling.

Co-ordinate with Terminal operator, Charterer, Cargo Owner in carrying out Ship vetting. Ensure best technical and safety condition for ship berthing/un-berthing and during cargo handling.

Take full responsibility for the legality of ship legal documents on marine safety and environmental pollution and protection in accordance with the Maritime Code of Vietnam.

Maintain ship's equipment in good conditions.

In case of expiration of and/or having changing in the certificates and/or licenses, Ship Owner must supplement to Terminal Operator before ship's arrival otherwise she will be rejected for berthing.

5.4 EVALUATE SHIP'S CONDITION:

5.4.1 Evaluation data:

The following factors shall be taken under consideration for evaluation of ship's condition:

- The information which is provided from VPQ (Vessel Particulars Questionnaires).
- The information which is collected from various sources such as class survey of register, special survey another terminal's vetting.
- Latest Ship vetting's reports and its correction actions.
- Latest Ship inspection report which is carried out by third independent party (if any).
- SIRE report from OCIMF database which is uploaded to the database not than 03 month (if any).
- The result of documentation checking and physical inspection which is carried out by the vetting team as reference to Appendix 5 of this regulation.

5.4.2 Evaluation result:

Base on evaluation result of such data, PVGAS will conclude:

- Acceptance: The ship is accepted to come alongside PVGAS Terminals for cargo handling for a certain period.
- Reject: It means that at the time of ship vetting, the ship did not satisfy the technical and safety conditions. The rejected ship could be re-vetted whenever all recognized findings of the previous ship vetting were fixed and informed Terminal Operator in writing.

In some special cases, PV GAS may consider accepting the ship for cargo handling once time or being chartered for a single voyage without ship vetting but the ship has to comply with all safety requirement stated by Vietnamese law. Terminal Operator will request Ship owner some more additional safety measures during the whole of period that the ship is in berthing at the terminal or being chartering for this voyage.

The accepted ship has to maintain its technical and safety condition as the report of the latest ship vetting. Otherwise, subject to actually unsafe and technical condition of the ship, Terminal Operator has the right to reject such ship to berth at its terminal. Any cost and indirect loss caused by the reject shall be count for Ship owner.

5.5 VALIDITY OF THE ACCEPTANCE

5.5.1 Ship age and validity of ship acceptance:

The ship which is accepted by Ship vetting team, the validity of ship acceptance or “Accepted” shall be as following:

- Vessels under 20 years: The maximum acceptable is 12 months.
- Vessels from 20 to 30 years: The maximum acceptable is 09 months.
- Vessels from 30 to 35 years: The maximum acceptable is 06 months. However, the vessels come alongside Terminal less than 03 times/year only the maximum acceptable of 03 months (not apply for vessels which is foreigner’s flag).

The terminal management reserves the right at any time, without prior notice, to alter, change or amend the validity of ship acceptance or “Accepted”.

The terminal management shall have the right at any time to inspect the Vessel and all required certificates and documents to ensure compliance with this ship inspection guide.

5.5.2 Validity Ceases:

The validity of ship acceptance will be automatically ceased in the following cases:

- Changing in ship owner. However, if the ship does not change in her managing company, she can be considered to be as “Accepted” by PV GAS.
- Changing in Ship Class, P&I Club, Ship Operator and main technology system of the ship which may affect the safety conditions and/or structure of the ship.
- Ship is involved in any incidents; being capture by port authorities; reports of serious non-conformities regarding ship safety by terminals; or a legal case regarding ownership status of the ship.

5.6 INFORMATION SHARING:

To save expense and time of ship owners and ship operators, PV Gas and Terminal Operator agree to use the ship inspection report shared by international organizations and Oil Major Companies such as Ship owners who joined OCIMF/CDI and/or ships have been inspected and accepted by the third parties which are member of PVN if the validity of ship acceptance is available not than 03 month.

5.7 MINIMUM SAFETY REQUIREMENT:

In addition to the general requirements, in order to meet the technical and safety of cargo handling in PV Gas Terminals or being chartered by PV Gas subsidiary companies, each ship type has to meet following specific technical standards.

5.7.1 Closed Cargo Operation

The ship storing and transporting of evaporation or toxic cargoes have to operate at all times in strictly comply with the "Closed Cargo Operations" procedure, as defined by the latest edition of ISGOTT. The small ship could not operate in the procedure must be accepted by the Terminal operator.

5.7.2 Cargo tanks and process pipe line

The ship is over 15 years old, Cargo s Owner and/or Ship owner have to provide further documents as below:

- The ultrasonic thickness measurement (UTM) testing result of cargo tank, cargo pipeline for ship carries pressurized product as VCM, LPG.
- The ultrasonic thickness measurement (UTM) testing result of processing pipelines for ship carries reformate, gasoline, condensate.

5.7.3 Ship measuring equipment:

Ship cargo measuring equipment such as pressure gauges, temperature gauges, level gauges have to periodical calibrate/verify by third parties in comply with International standard and/or Viet Nam regulation.

5.7.4 Vapor return systems:

Ship vapor return system is always available and ready for operation if it is required by Terminal operator.

5.7.5 Inert Gas:

All ships by statutory requirement must to be equipped with Inert Gas System (IGS) must ensure that the system is fully operational. Crude oil tankers and tankers carrying evaporation cargo must be equipped with IGS. Requirements for gas carries and chemical tankers are defined in IMO Code.

5.7.6 Age of ship:

The age of ship has huge impact to its technical conditions so that PVGAS don't accept any ship over 35 years which is Vietnam's flag and over 30 years which is foreigner's flag (from date of keel laid).

Subject to the ship's age and the register's regulation, the ship must have Condition Assessment Scheme (CAS) report with oil tanker and Condition Assessment Programme (CAP) report with Gas carrier issued by Classification Society which is not more than 3 years from the date of class survey.

New building ships and/or ships which are just completed dry-dock…only consider carrying out a ship vetting if she is already accepted by Classification Society.

5.7.7 Manning and Certification:

All ship's officers must hold valid certificate of competency and training certificate in accordance with STCW training standard.

All ship's officers must hold special training certificate for handling dangerous cargoes in accordance with STCW training standard.

There must be 4 senior officers holding valid certificates in accordance with STCW training standard.

All officers and crews on board must have adequate certificates in accordance with the size of ship and the cargo carried as required in STCW.

Training program/drill for oil spill on board must be maintained in all time. Training and drill handbook must be available on board.

5.7.8 Officers Matrix

Requirements for marine ship's officers are as following:

- For Master and Chief Officer: At least 5 years seagoing service on tankers.
- For Chief Engineer and Second Engineer: At least 5 years seagoing service on oil tankers.
- For Master and Chief Officer: At least 3 years being senior officers on oil tankers.
- For Master and Chief Officer of LPG/LNG carriers: At least 2 years being senior officers on similar type of carrier.

5.7.9 International Ship and Port Facility Security Code (ISPS)

PV Gas Vung Tau Terminal is ISPS compliant and all vessels calling at the port must meet the requirements as stated in the International Code of the Security of Ships and Port Facilities and the relevant amendments to Chapter XI of SOLAS (hereinafter called ISPS Code).

The vessel shall, when required, submit a Declaration of Security (DOS) to the appropriate authorities prior to arrival at the PVGAS Vung Tau Terminal.

Notwithstanding any prior acceptance of vessel by PVGAS, if at any time prior to the arrival of the vessel at PVGAS Vung Tau Terminal, the vessel ceases to comply with the requirements of ISPS code PVGAS shall have the right not to berth such nominated vessel at PVGAS Vung Tau Terminal. PVGAS shall not be liable to Ship Owner for any loss or damage incurred by Ship Owner arising out of or in connection with PVGAS's rejection of the Ship.

5.8 RE-VETTING:

The ships that were rejected due to mot meet vetting policy requirements will carry out re-vetting once the ship owner completely corrects all findings that recognized in the latest vetting report and send the letter of correction actions to Terminal Operator and Ship Vetting Team.

Ship re-vetting plan will be notice to Ship owner by Ship Vetting Team.

APPENDIX 1: PORT CHARGES

All port charges are subject to be updated from time to time.

a) Berthing & un-berthing charges:

The following charges shall apply to all vessels using the terminal services excepting any vessel which are hired by PVGAS as long-term contract.

These following charges are just for reference and the terminal management shall, at its own discretion, have the right to change the port charges any time without notice in advance to Ship Owner and other customer.

No	Description	Charges in VNĐ/each berthing (domestic operation)	Charges in USD/each berthing (international operation)
1	Vessel up to 500GT	240,000.0	22.00
2	501 – 1,000 GT	440,000.0	36.00
3	1001 – 4,000 GT	560,000.0	60.00
4	4,001 – 6,000 GT	760,000.0	80.00
5	6,001 – 10,000 GT	1,160,000.0	90.00
6	Over 10,001 GT	1,960,000.0	120.00

b) Port dues with vessel:

For domestic operation:

- Vessel which carry out loading or unloading cargo: 6.750 VNĐ/01 meter of length of berth as shown at Item 2.7 of this regulation/01 hour;
- Minimum dues for vessel with loading/unloading cargo is 2.000.000 VND/each berthing;
- Vessel which do not carry out loading or unloading cargo: 7.980 VND/01 meter of length of berth as shown at Item 2.7 of this regulation/01 hour;
- Minimum dues for vessel without loading/unloading cargo is 2.250,000 VND/each berthing.

For international operation:

- Vessel which carry out loading or unloading cargo: 0.3 USD/01 meter of length of berth as shown at Item 2.7 of this regulation/01 hour;
- Minimum dues for vessel with loading/unloading cargo is 90 USD/each berthing;
- Vessel which do not carry out loading or unloading cargo: 0.35 USD/01 meter of length of berth as shown at Item 2.7 of this regulation/01 hour;
- Minimum dues for vessel without loading/unloading cargo is 100 USD/each berthing.

c) Fresh water supply:

For domestic operation: 30,000 VNĐ/m3 of fresh water.

For international operation: 4.0 USD/m3 of fresh water.

d) Gassing-up and gas free:

To be updated from time to time.

e) Food products transportation:

To be updated from time to time.

f) Motor boat charges:

To be updated from time to time.

g) Tug boat charges:

To be updated from time to time.

APPENDIX 2: VUNG TAU ANCHORING AREA

A. ANCHORING AREA:

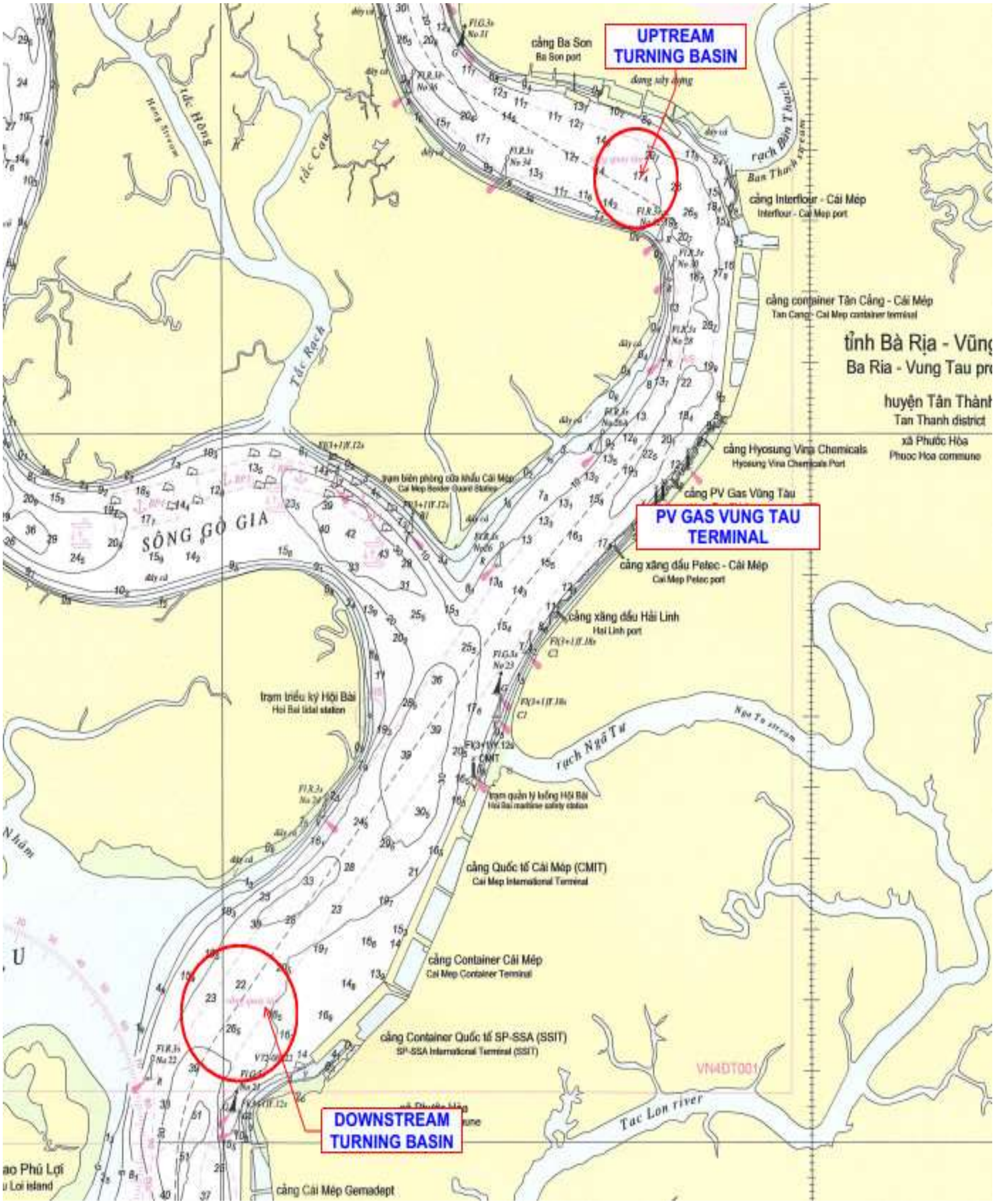
Anchoring locations were positioned on nautical chart 1016 published in Taunton, United Kingdom in March 1993 and 2nd edition published in 07/2004. The waters area designated to each anchoring position is limited by a circle of a radius of from 275m to 600m, with the circle's center at the co-ordinates as follows:

FOR SHIP OR BOAT UP TO 3000 DWT							
Anchoring Position	**Co-ordinate (N/E)**	**Depth (m)**	**Radius (m)**	**Anchoring Position**	**Co-ordinate (N/E)**	**Depth (m)**	**Radius (m)**
A1	10°19’07”2 107°04’19”7	6.6	275	B6	10°21’07”2 107°03’28”7	9.1	275
A2	10°19’29”2 107°04’19”7	14.2	275	B7	10°21’24”2 107°03’16”7	11.6	275
A12	10°23’31”2 107°03’03”7	9.9	275	B8	10°21’41”2 107°03’13”7	13.7	275
B1	10°19’05”8 107°04’01”0	10.6	275	B9	10°22’01”2 107°03’03”7	12.8	275
B2	10°19’29”2 107°04’00”7	8.4	275	C2	10°19’31”2 107°03’41”7	10.9	275
B3	10°19’53”2 107°04’00”7	10.3	275	D3	10°19’55”2 107°03’30”7	11.5	365
B4	10°20’15”2 107°03’56”7	11.0	275	D4	10°20’15”2 107°03’30”7	12.5	275
B5	10°20’39”2 107°03’45”7	7.2	275	D5	10°20’37”2 107°03’19”7	13.0	275
FOR SHIP OR BOAT UP TO 10.000 DWT							
Anchoring Position	**Co-ordinate (N/E)**	**Depth (m)**	**Radius (m)**	**Anchoring Position**	**Co-ordinate (N/E)**	**Depth (m)**	**Radius (m)**
G1	10°19’07”2 107°01’51”7	5.5	365	G9	10°21’43”2 107°02’02”7	8.0	275
G2	10°19’27”2 107°01’51”7	6.2	365	G10	10°22’01”2 107°02’02”7	10.0	275
G3	10°19’57”2 107°01’51”7	8.0	365	G11	10°22’19”2 107°02’02”7	12.0	275
G4	10°20’15”6 107°01’51”7	7.5	275	G12	10°22’37”2 107°02’02”7	15.0	275
G5	10°20’31”2 107°02’00”7	8.0	275	G13	10°22’54”5 107°01’55”7	12.5	275
G6	10°20’49”1 107°02’00”7	6.5	275	G14	10°23’11”1 107°01’45”7	6.6	275
G7	10°21’07”2 107°00’02”7	8.4	275	G15	10°23’27”2 107°01’35”7	6.9	275

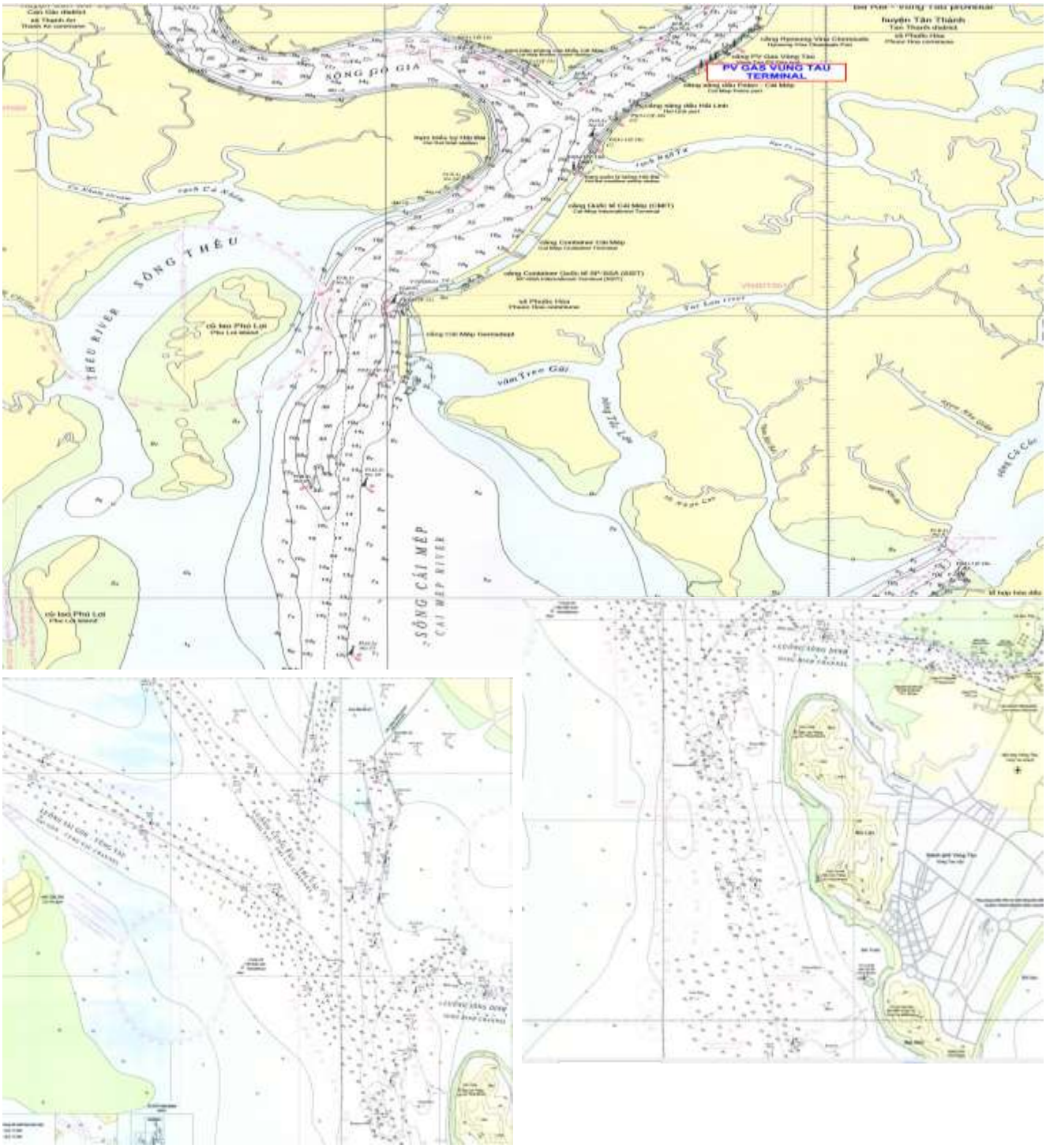
G8	10°21'25"2 107°02'02"7	8.0	275	G16	10°23'43"2 107°01'27"7	7.2	275
FOR SHIP OR BOAT UP TO 50.000 DWT							
Anchoring Position	**Co-ordinate (N/E)**	**Depth (m)**	**Radius (m)**	**Anchoring Position**	**Co-ordinate (N/E)**	**Depth (m)**	**Radius (m)**
F6	10°20'49"2 107°02'19"7	15.0	275	F10	10°22'01"2 107°02'22"7	17.5	275
F7	10°21'07"2 107°02'20"7	17.0	275	B11	10°23'03"2 107°02'52"7	16.0	275
F8	10°21'25"2 107°02'20"7	20.0	275	B12	10°23'21"2 107°02'40"1	20.0	365
F9	10°21'43"2 107°02'19"7	18.4	275	H14	10°16'48" 107°01'45'	11.6	450
H04	10°16'28" 107°03'12"	14.6	450	H06	10°16'42" 107°02'14"	12.5	450
H05	10°16'35" 107°02'43"	13.6	450				
FOR SHIP OR BOAT UP TO 80.000 DWT							
Anchoring Position	**Co-ordinate (N/E)**	**Depth (m)**	**Radius (m)**	**Anchoring Position**	**Co-ordinate (N/E)**	**Depth (m)**	**Radius (m)**
H10	10°14'05" 107°02'07"	13.4	500	H21	10°14'19" 107°00'31"	10.1	500
H15	10°16'54" 107°01'02"	11.3	500	H22	10°14'52" 107°00'31"	11.9	500
H16	10°16'21" 107°01'03"	16.6	500	H23	10°15'24" 107°00'31"	14.1	500
H17	10°15'48" 107°01'03"	16.8	500	H24	10°15'57" 107°00'31"	15.3	500
H18	10°15'16" 107°01'03"	15.2	500	H25	10°16'31" 107°00'31"	16.6	500
H19	10°14'43" 107°01'03"	13.0	500	H26	10°17'03" 107°00'31"	11.7	500
H20	10°14'10" 107°01'03"	11.8	500				
FOR SHIP OR BOAT UP TO 100.000 DWT							
Anchoring Position	**Co-ordinate (N/E)**	**Depth (m)**	**Radius (m)**	**Anchoring Position**	**Co-ordinate (N/E)**	**Depth (m)**	**Radius (m)**
H01	10°14'15" 107°03'08"	15.6	550	H11	10°14'38" 107°01'58"	14.5	550
H09	10°14'27" 107°02'33"	15.1	550	H12	10°15'27" 107°01'50"	18.0	550
				H13	10°16'05" 107°01'50"	17.9	550
FOR SHIP OR BOAT UP TO 160.000 DWT							
Anchoring Position	**Co-ordinate (N/E)**	**Depth (m)**	**Radius (m)**	**Anchoring Position**	**Co-ordinate (N/E)**	**Depth (m)**	**Radius (m)**
H02	10°15'08"	20.2	600	H07	10°15'55"	17.7	600

	107^{0}03'06"				107^{0}02'27"		
H03	10^{0}15'47" 107^{0}03'06"	18.0	600	H08	10^{0}15'16" 107^{0}02'27"	18.8	600
Anchoring Position	**Co-ordinate (N/E)**	**Depth (m)**	**Radius (m)**	**Anchoring Position**	**Co-ordinate (N/E)**	**Depth (m)**	**Radius (m)**
I1	10^{0}11'36.37" 107^{0}02'36.15"	15.96	550	I11	10^{0}13'26.99" 107^{0}00'56.34"	14.24	425
I2	10^{0}11'24.58" 107^{0}01'57.34"	14.24	550	I12	10^{0}12'56.05" 107^{0}00'56.25"	14.24	425
I3	10^{0}12'02.01" 107^{0}01'57.46"	13.72	550	I13	10^{0}12'23.26" 107^{0}00'56.78"	14.24	425
I4	10^{0}12'14.85" 107^{0}02'35.74"	16.04	550	I14	10^{0}11'52.38" 107^{0}00'56.83"	14.24	425
I5	10^{0}12'50.41" 107^{0}03'40.24"	14.57	425	I15	10^{0}11'22.45" 107^{0}00'56.89"	14.24	425
I6	10^{0}13'19.70" 107^{0}02'40.33"	13.85	425	I16	10^{0}11'37.73" 107^{0}00'30.22"	14.24	425
I7	10^{0}13'48.99" 107^{0}02'40.43"	14.07	425	I17	10^{0}12'08.98" 107^{0}00'30.32"	14.24	425
I8	10^{0}12'35.37" 107^{0}01'57.56"	14.57	425	I18	10^{0}12'40.53" 107^{0}00'30.42"	14.24	425
I9	10^{0}13'04.66" 107^{0}01'57.66"	13.36	425	I19	10^{0}13'11.14" 107^{0}00'30.52"	14.24	425
I10	10^{0}13'33.95" 107^{0}01'57.75"	12.81	425	I20	10^{0}13'42.69" 107^{0}00'30.62"	14.24	425

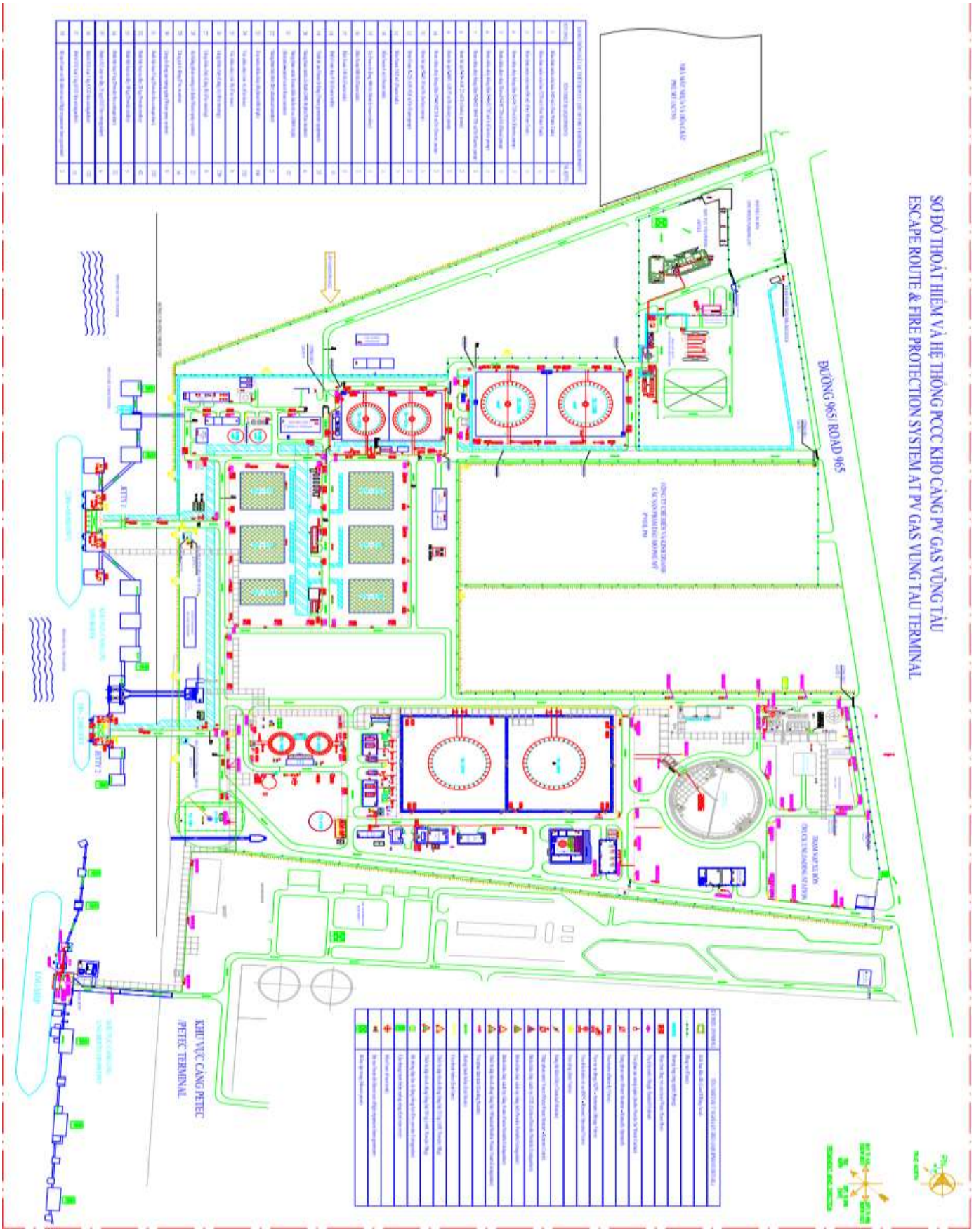
B. TURNING BASIN:


UPTREAM
TURNING BASIN
PV GAS VUNG TAU
TERMINAL
DOWNSTREAM
TURNING BASIN
cảng Ba Son
Ba Son port
cảng Interflour - Cái Mép
Interflour - Cai Mep port
cảng container Tân Cảng - Cái Mép
Tan Cang - Cai Mep container terminal
tỉnh Bà Rịa - Vũng
Ba Ria - Vung Tau pr
huyện Tân Thành
Tan Thanh district
xã Phước Hòa
Phuoc Hoa commune
cảng Hyosung Vina Chemicals
Hyosung Vina Chemicals Port
cảng PV Gas Vũng Tàu
cảng xăng dầu Petec - Cái Mép
Cai Mep Petec port
cảng xăng dầu Hải Linh
Hai Linh port
SÔNG GÒ GIA
trạm triều ký Hội Bài
Hoi Bai tidal station
trạm quản lý luồng Hội Bài
cảng Quốc tế Cái Mép (CMIT)
Cai Mep International Terminal
cảng Container Cái Mép
Cai Mep Container Terminal
cảng Container Quốc tế SP-SSA (SSIT)
SP-SSA International Terminal (SSIT)
cảng Cái Mép Gemadept
Tac Lon river
rạch Ngã Tư
Nga Tu stream
rạch Bến Thạch
Ben Thach stream
Tắc Rạch
tắc Cau
tắc Hống
VN4DT001

APPENDIX 3: VUNG TAU MARITIME LANES

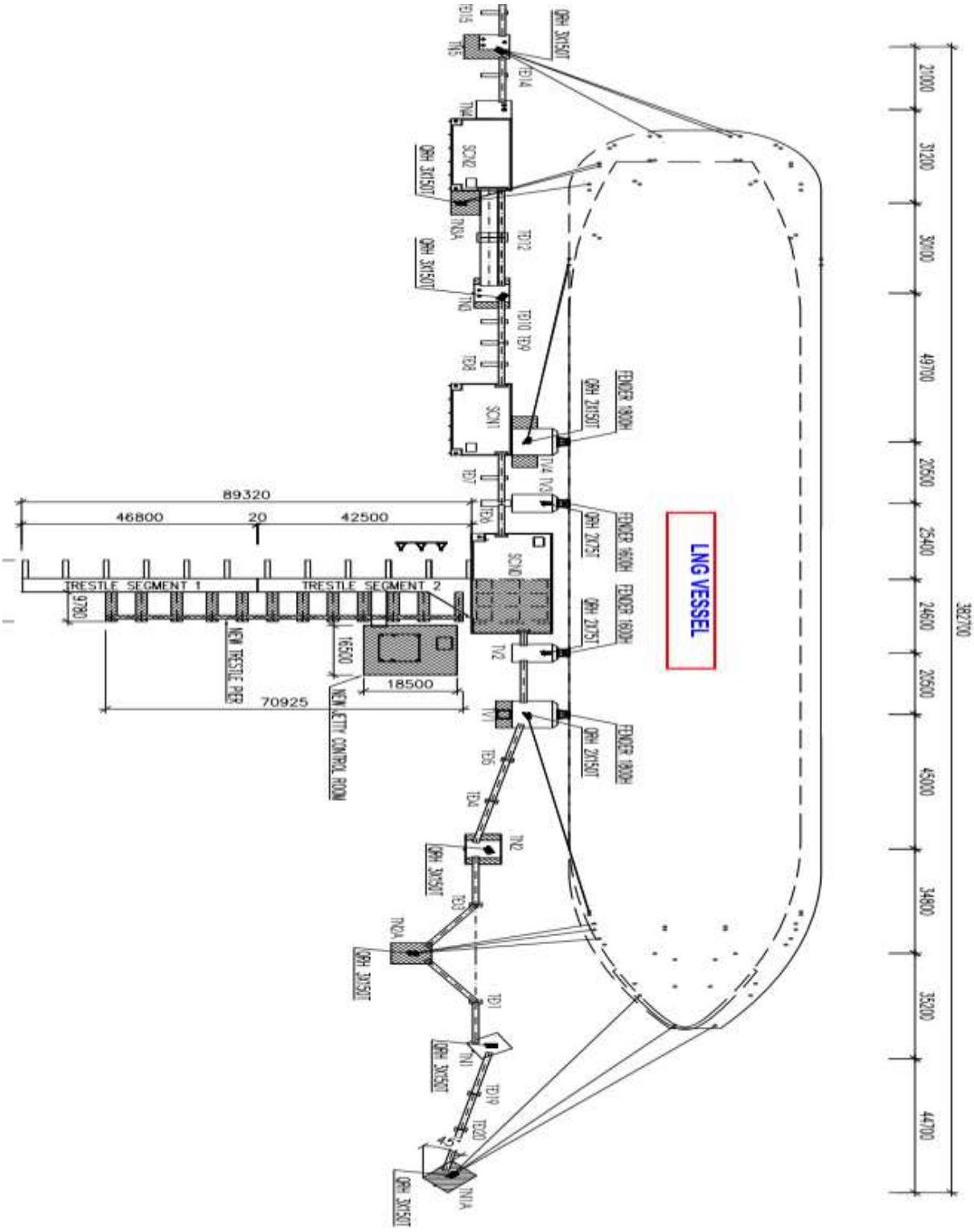


APPENDIX 4: EMERGENCY EXIT PLAN

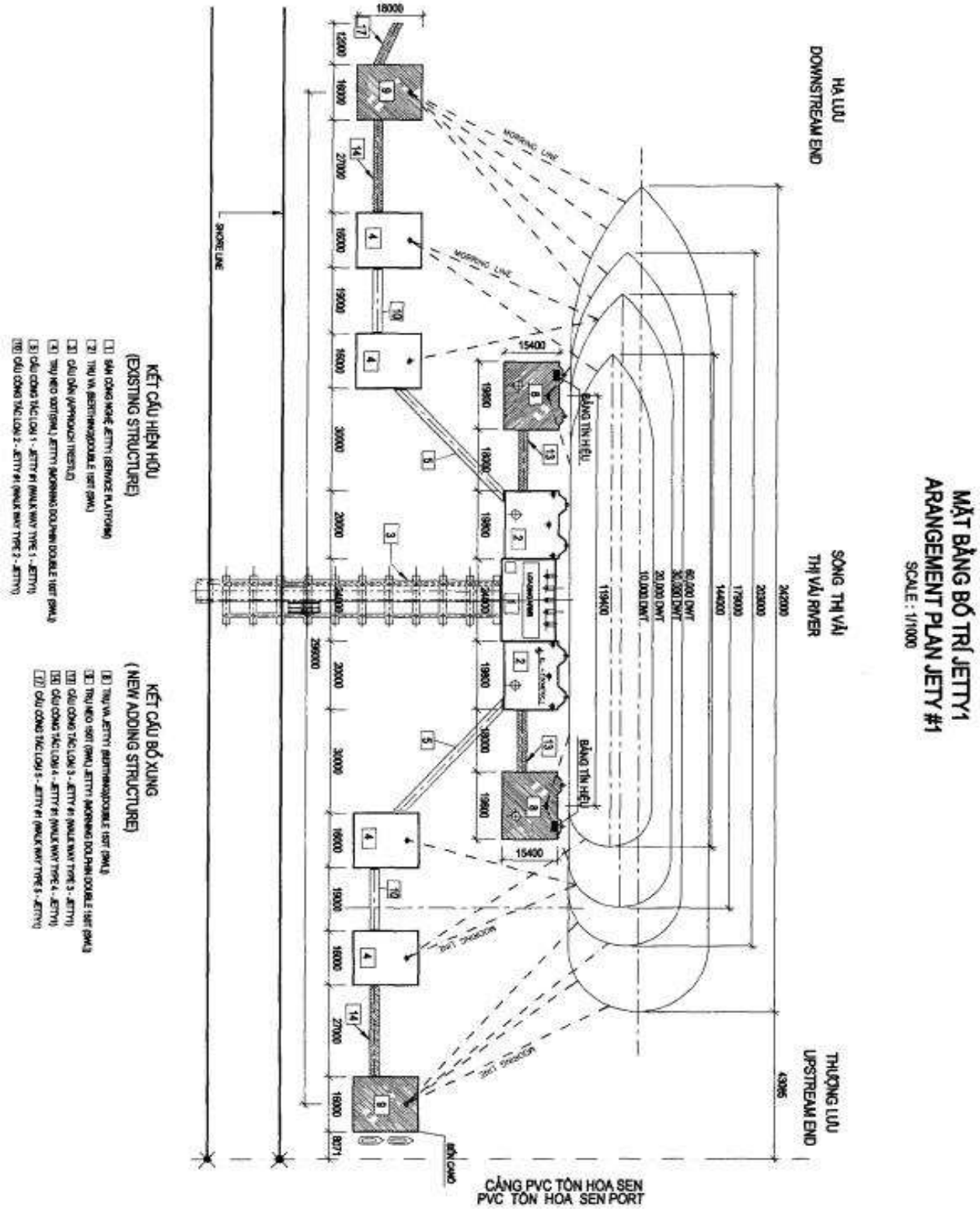


APPENDIX 5: JETTY MOORING ARRANGEMENT

LNG JETTY:



JETTY 1:


MẶT BẰNG BỐ TRÍ JETTY1
ARRANGEMENT PLAN JETY #1
SCALE : 1/1000
HẠ LƯU
DOWNSTREAM END
SÔNG THỊ VẢI
THỊ VẢI RIVER
THƯỢNG LƯU
UPSTREAM END
CẢNG PVC TÔN HOA SEN
PVC TON HOA SEN PORT
KẾT CẤU HIỆN HỮU
(EXISTING STRUCTURE)
KẾT CẤU BỔ XUNG
(NEW ADDING STRUCTURE)