PETROBRAS TRANSPORTE S.A.
TRANSPETRO

PORT INFORMATION

Terminal
RIO GRANDE

1st edition

SUMMARY

1

INTRODUCTION

This Port Information is prepared by Petrobras Transportes S.A. (Transpetro), which operates the Marine Terminal of Rio Grande – Oprig, in the Port of Rio Grande.

This publication has the purpose of providing the users, agents, authorities, owners, freight forwarders and captains of ships some information about the facilities of the Tanker Terminal of Rio Grande (Rio Grande – Oprig), administratively subordinated to Petrobras & Petrobras Transporte S.A., and provide them with detailed data about communications, safety requirements, berthing and cargo movement, as well as other issues equally important.

The tanker Pier is used mainly for receiving oil and by-products and for bunkering ships, also receiving chemical products.

The information in this publication come from trustworthy sources and, as much as possible, is accurate. However, neither Petrobras, nor Transpetro, its employees or representatives can offer guarantee or assume any responsibility for the contents of its text or for what was omitted from the text.

Additionally, this information aims at complementing, and never superseding or changing, any national or international legislation, instructions, guidance or official publications. Consequently, its contents must not be taken into account when it opposes to any of the items specified above.

The operation of ships in this Terminal must comply with recommendations from the International Safety Guide For Oil Tankers Terminals (Isgott), conventions of IMO,

Transpetro Manual, and rules from authorities established, including the ones from the Port of Rio Grande.

The Port Information has versions in Portuguese and English languages.

The Terminal holds itself the right to change any of its operational features herein presented.

Petrobras will be pleased to receive any suggestions, corrections or recommendations on the subjects herein covered, aiming at improving the information. Petrobras/Transpetro will appreciate any critics or suggestions to be forwarded to them.

Supplementary copies of this publication may be obtained from the administration of the Tanker Terminal of Rio Grande.

When finding any information that must be updated, please call the Terminal Management or Petrobras/ Petrobras Transportes, as follows:

Gerência do Terminal de Rio Grande
Av. Maximiano da Fonseca, s/n – 2ª secção da Barra
Zip Code: 96204-020 – Rio Grande – RS – Brazi
Phone: (55 53) 3234 32 00
Fax: (55 53) 3234 3215

Petrobras Transporte S.A. – Transpetro
Av. Presidente Vargas, nº 328 / 9º andar – Centro
Zip Code: 20091-060 – Rio de Janeiro – RJ – Brazil
Phone: (55 21) 3211-9085
Fax: (55 21) 3211-9067

The most recent version of this Port Information can be obtained on the following address: (**www.transpetro.com.br**)

This exchange of information aims at operating the terminal in a safe and efficient manner.

2

DEFINITIONS

ANP – Agência Nacional do Petróleo (National Oil Agency) – Agency that regulates the movement of oil and by-products in Brazil.

Beaufort scale – Scale that measures wind intensity from the sea conditions.

BP (Bollard Pull) – Static Traction.

BTX – Benzene, Toluene, Xylene.

Bunker – Maritime fuel for ships.

CIS – Signal International Convention.

COW (Crude Oil Washing) – cargo tank cleaning on Ship, with the product it carries.

CRE (ERC) – Emergency Response Center.

Dry tide – A condition in which the tide reaches the minimum level at a given time of the year.

Fepam- Fundação Estadual de Proteção Ambiental (State Environmental Protection Foundation) – Licensing organ for the facilities.

Gangway ladder – Straight metallic structure, with side stanchions and handrails. The steps are self-leveled according to the inclination and provide an anti-slipping floor. It is installed in parallel with the ship's hull side, from a retractile platform fastened to the deck.

Giaont – Safety Surveyor Staff.

Harbor Master – Maritime Authority.

Ibama – Instituto Brasileiro do Meio Ambiente (Brazilian Institute for the Environment) – Federal Licensing Organ.

IMO – International Maritime Organization.

Isgott – International Safety Guide for Oil Tankers and Terminals.

ISPS – International Ship and Port Facility.

NT – Tanker.

NPCP – Rules and Procedures of the Harbor Master.

Pilot – A professional properly qualified and authorized by the Maritime Authority for performing maneuvers.

Pilot Ladder – Flexible ladder made with ropes and wooden and/or rubber steps, according to rule 17 chapter 5 of the SOLAS convention.

SIGTTO – Safety International Gas Tanker Terminal Operations.

Slop – Residue tank.

Solas – Safety of Life at Sea – International Convention for safety of life at sea.

Squat Effect – Increase of a ship draft due to the increase of the displacement speed.

SUPRG – Superintendência do Porto do Rio Grande (Superintendence of the Port of Rio Grande), Port Authority.

Syzigy tide – A condition in which the tide reaches the maximum level at a given time of the year.

VTS (Vessel Traffic Service) – Traffic Service to the Ship.

ETA – Estimated Time of Arrival.

LCP – Local Contingency Plan.

SPM (Single Point Mooring) – Single buoy or single point mooring.

DWT – Deadweight Tonnage.

VHF (Very High Frequency) – Radio frequency used in maritime operations.**VTS (Vessel Traffic Service)** – Serviço de Tráfego para a Embarcação.

3

CHARTS AND REFERENCE DOCUMENTS

Information on the Terminal may be obtained in the following publications.

3.1 Charts

Charts 2100, 2101, 2110, 2112 and 2140.

Area	Chart Number
	Brazil (DHN)
(Anchorage & Port Approach)	2,101
(Mouth of the Port and Channels)	2,100

3.2 Other Publications

Type/subject	Editor or Source
NORMAM- MARITIME AUTHORITY RULES FOR VESSEL TRAFFIC AND LAYOVER IN WATERS UNDER NATIONAL JURISDICTION. NPCP	Brazilian Navy DPC
Regulation for Exploring the Port of Rio Grande	SUPRG

4

DOCUMENTS AND INFORMATION EXCHANGE

The listed and legal items, in compliance with the entire legislation in force due to the operation, must be arranged by the Terminal or the Ship, as indicated on the table.

Information	Prepared by:			Delivered to			Comments
	Terminal	Ship	Both	Terminal	Ship	Both	
Before arrival							
Estimated Time of Arrival (ETA) and ship information		X		X			As per Appendix E
Essential Terminal information	X				X		As per Appendix D
Before cargo or Bunker transfer							
Details about on-board cargo/slop/ballast		X		X			As per Appendix F
Copy of cargo Statement document – BL/Manifest		X		X			
Mandatory legal and commercial documents		X		X			

continue

Information	Prepared by:			Delivered to			Comments
	Terminal	Ship	Both	Terminal	Ship	Both	
Before cargo or Bunker transfer (continuation)							
Essential operating information (fill in locally).	X				X		As per Appendix F
Ship/Shore Safety Checklist			X			X	As per Isgott Appendix F
During cargo or Bunker transfer							
Repeat Ship/Shore Safety Checklist			X			X	As per Isgott Appendix A
After Cargo or Bunker Transfer, before Departure							
Statement of Cargo Movement		X		X			

5

DESCRIPTION OF THE PORT AND ANCHORAGE AREA

5.1 General Description

Located at 32 degrees 07 minutes and 20 seconds South latitude and at 52 degrees 05 minutes and 36 seconds Greenwich West longitude. It is the most meridional sea port in Brazil, located on the West bank of the North Channel, which is the natural drain for the entire hydrographic basin of Laguna dos Patos.

Rio Grande is the most important of the three Organized Ports in the State, as the single maritime port, with privileged natural characteristics, capable of being rationally developed, in conditions to serve long run navigation, which requires good depths.

The geographic location of the Port of Rio Grande, through Nautical Charts, is made by chart 2.101, from the Diretoria de Hidrografia e Navegação (Directorate of Hydrography and Navigation), of the Brazilian Navy.

The approach to the port of Rio Grande must be object of increased attention from the navigator, since its coast is shallow and without natural incidents, with incidence of mists and hazes. The proliferation of banks and rocky ledges is noticed both on north and south of the bar. It is advised that the navigator continuously use echo-bathymeter, especially when navigating under haze or mist.

5.2 Location

5.2.1 Coordinates

The location of buoy 1 of the access channel is given by coordinates:

→ Latitude = 32°12'04" S
→ Longitude. = 052°03'00"W

5.2.2 General geographic location

The Tanker Pier is located in the south of the State of Rio Grande do Sul, at the Port of Rio Grande.

5.3 Approaching the Terminal

5.3.1 General description

It is not recommended that ships larger than 15,000 DWT remain within the 15-m isobath. Ships with size larger than 20,000 DWT must keep their track in over 30-m deep locations, until the bar points are recognized, and then they can approach the channel.

The most noticeable points of the port of Rio Grande are the silos of New port and of the Wheat and Soy Terminal, the CEEE tower, the Barra lighthouse, the tower of former Atalaia and the radio lighthouse tower Rio Grande (RG).

The navigator coming from the south will see more clearly the cathedral, the Cassino Bath Resorts, the radio lighthouse tower Rio Grande, the Barra lighthouse and, specially, the lighthouses Mostardas and Conceição, with respective ranges of 40 and 15 miles.

Approaching the bar during bad weather must occur with the help of the radio lighthouse Rio Grande (RG) and of the racon of the Barra lighthouse (K).

There is also another aid for accessing, since the Pilotage has in its facilities a tower for monitoring the ship movements, up to 40 miles away from the bar of the port of Rio Grande.

Located on the east bank of the channel of access to the port, the tower is 25-meter high, enabling tracking visually and via radar. It is equipped with radar with video plotter, enabling the simultaneous plotting of 12 targets.

The tower also has three VHF radios, fax, conventional and cellular telephones, and there is operator service available 24 hours a day throughout the year.

During bad weather, when the Pilot cannot anchor the boat for embarking on the ship, the boat hoists the CIS signal, "I have a pilot on board, follow the waters." In this case, the ship shall approach the beacon signaled channel and, when arriving inside the jetties, the Pilot will embark.

Ships with little machine power will have difficulty in approaching this bar when the wind is quadrant N.

The access channel signaled on chart 2101 is a 200 to 300-meter wide stretch of the Tanker Pier, directed on the general direction N-S. Starting on the light buoys 1 and 2, it has an extension of approximately 9 miles up to the area named Foxtrot and with axle of 250 to 500 meters of jetty W and 500 to 750 meters of jetty E. It is dredged to the depth of 12.10 meters up to the terminal. It has 17 light buoys.

The maximum draft for access to the Tanker Pier is of 40 feet on the South End and 33 feet on the North End and Barge Pier.

As with the towers and lighthouses aforementioned, recognizing the bar, when the navigator comes from any direction, is also aided by the super port facilities.

Approaching via radar is precarious, due to the lack of good reflection obstacles.

It is recommended the continuous use of the echo-bathymeter for controlling the space.

There is also another aid for accessing, since the Pilotage has in its facilities a tower for monitoring the ship movements, up to 40 miles away from the bar of the port of Rio Grande.

Located on the east bank of the channel of access to the port, the tower is 25-meter high, enabling tracking visually and via radar. It is equipped with Furuno radar with video plotter, enabling the simultaneous plotting of 12 targets.

The tower also has three VHF radios, fax, conventional and cellular telephones, and there is operator service available 24 hours a day throughout the year.

5.3.1.1 Characteristic points

The following points help approaching and anchoring on the bar and inside the port:

- **Barra Lighthouse** (32° 07' 10" S – 052° 04' 65" W) - metallic trunking tower, with black and white horizontal stripes, hiding light on the altitude of 32 meters with range of 30 M and racon Morse code letter K. Near the lighthouse there is a noticeable quadrangular tower, from the former Atalaia.
- **Molhe Leste Lighthouse** – 4 miles S from the Barra lighthouse, a quadrangular, white tower on reinforced concrete, with flashing light in the altitude of 13 meters and range of 8 miles, located in the end of the E jetty of the access channel.
- **Molhe Oeste Lighthouse** – 0.4 Ma West from the Molhe Leste lighthouse, a triangular, white tower over reinforced concrete base, with flashing light in the altitude of 10 meters and range of 11 M, located at the end of the W jetty of the access channel.

→ **Rio Grande Radio lighthouse tower** – 2.3 M NNW from the Molhe Oeste lighthouse, a metallic tower in truss with fixed light in the altitude of 76 meters and range of 10 M.

→ **Embratel Tower** – (32 °02' 00" S – 052° 05' 96' W) – white cylindrical tower, 63-meter long and peculiar fixed light on the top. It has indirect light with fluorescent lamp, which produce a strong light, visible at 20 M of distance.

5.3.2 Anchorage areas

Name or Number	Minimum Depth in feet	Notes
Alfa Area	40	Only Daytime anchoring
Echo Area	30	–
Area Golf I, II, III*	22	–

* Subject to changes by authorities.

5.3.3 Navigational Aids

The port has tug and boat services.

The access and navigation channel is signaled.

There are signaling lighthouses at the bar mouth.

There are 24 tugs, with capacity between 325 HP and 4,400 HP.

Companies: Rio Grande Marítima, Wilson Sons, CNL, Metalnave and F. Andreis.

There is a floating shear with capacity of 100 tonnes.

5.3.4 Port limits

By the Administrative Rule 1011, of 12/16/93, from the Ministry of Transports, the area of the Organized Port of Rio Grande was determined, comprised: of the terrestrial port facilities on the right bank of the North Channel, from the rooting of the Molhe Oeste up to the West end of the Sanitation Docks, including. The Old Port, the New Port and the Fourth Bar Section are part of this area, encompassing the entire dock, inner harbors, piers, storage areas, yards, buildings in general, internal tracks of road and railway circulation, terrains throughout these marginal stretches and nearby, belonging to the Union, incorporated or not to the Asset of the Port of Rio Grande, or under its custody and responsibility, as well as in the right bank of the North Channel, the navy terrains and its attachments, from the rooting of the Molhe Leste to the parallel 32º South.

Also on the waterside protection and access infrastructure, comprising, in addition to the Molhe Oeste and Molhe Leste, the anchorage areas, evolution basin, access channel and areas near it, up to the banks of terrestrial facilities of the Organized Port, as

previously defined, existing or that may be built and maintained by the Port administration or other organ from Public Authorities.

5.3.5 Port control or VTS

The traffic control service is currently performed by the Barra Pilotage, which can be contacted via radio on channels 16 or 9, or also via telephone number (55 53) 3231-2233.

5.3.6 Pilotage

The pilotage at the port of Rio Grande is:

→ **Mandatory:** for foreign ships; Brazilian oil tankers, propane tankers and ships carrying explosive cargo in any gross tonnage value; other Brazilian ships with gross tonnage value superior to 500; and foreign fishing boats;

→ **Optional:** for Brazilian ships with gross tonnage value up to 500; Brazilian or foreign leased maritime supporting vessels that operate in the port of Rio Grande, provided that they are commanded by a Brazilian maritime professional or have a Brazilian maritime professional with category Nautical Officer or Cabotage Master on their crew; and ships from any nationality, in movements throughout the docks under rope, for change of berthing.

The mandatory pilotage zone has frontiers the pilot embarking and disembarking point, at the bar, and the berthing point, on the port docks or terminals.

The request for Pilot must be made by the ship agent or via Junção Rádio coast station (PPJ), usually at least four hours beforehand and specifying the time of arrival.

The Association of Pilots of Barra do Rio Grande is headquartered at rua Gomes Freire, 742, telephone number (55 53) 32312233, and keeps permanent monitoring via maritime VHF radio, channel 16.

The Pilot embarking point is marked on Nautical Chart 2101 and has the following coordinates:

→ Latitude: 32°12'12" S
→ Longitude: 052°01'45" W

The information on locations must be given clearly: latitude & longitude; position & distance from a noticeable point, giving an important point of reference.

The Pilot embarking position will always be agreed with the Pilotage Tower.

Whenever the ship arrives at the Port, it must contact the Terminal and Pilotage Tower via radio.

The captain is the sole responsible for the maneuvers, and also for all information to be given to the pilot about any peculiarity, specific conditions or difficulties found, such as machine deficiency, boilers, problems or damages in the navigational aid devices, mooring lines or in any element that may cause danger to mooring, rope release, and ship loading and discharging.

5.3.7 Tugs and Port Services

There are companies that provide services of tugs, boats, supplies, boat repair services and correlated services necessary for supporting the vessels.

Additional information must be obtained from the ship agent.

The services to support mooring and people necessary for placing ropes on the bollards located at the ends of the Tanker Pier are responsibility of the ship and its representative agent.

5.3.8 Navigation risks

5.3.8.1 Dangers to navigation

In the vicinities of the Rio Grande bar there are countless dangers, with depths ranging from 13.7 meters to 20 meters, and navigation less than 20 M from the coast, between parallels 32°00'S and 32°18'S, must be avoided.

Special attention must be given to the following dangers in this area:

→ **Minuano Bank** – with shallowest depth of 13.7 meters at mark 080 and 20.2 M away from the Barra lighthouse.

→ **Parcel do Carpinteiro** – with three bollards: South bollard, with shallowest depth of 14.1 meters at mark 122° and 17.3 M away from the Barra lighthouse; Middle bollard, with shallowest depth of 16.5 meters at mark 117° and 17.4 M away from the Barra lighthouse; and North bollard, with shallowest depth of 17.5 meters at mark 115° and 18.4 M away from the Barra lighthouse.

5.3.9 General restrictions

The rules for navigation are edited and updated locally by local authorities and the terminal.

There cannot be maneuvers with winds above 25 knots of speed.

5 knots is the maximum speed for movement on the access channel.

With winds above thirty knots, the loading and discharging operations at the pier are suspended until the wind reaches lower values.

With atmospheric discharges, the operations are interrupted until the discharges stop.

5.4 Maneuver Areas

The local rules (NPCs) and Pilotage must be queried.

5.4.1 Navigational and berthing aids

The local rules (NPCs) and Pilotage must be queried.

5.4.2 Depth control

The depth control must be monitored during the boat movement and the operation for berthing at the Tanker Pier. The features for berthing at the Tanker Pier are described below:

South End

→ Maximum deadweight of the ships: 65,000
→ Maximum ship length: 225 meters
→ Minimum length of straight hull: 70 meters
→ Draft: 40 feet

North End

→ Maximum deadweight of the ships: 25,000
→ Maximum ship length: 140 meters
→ Draft: 33 feet

Barge Pier

→ Maximum deadweight of the ships: 5,000
→ Maximum ship length: 100 meters
→ Draft: 33 feet

Geographic coordinates of the pier

→ Latitude: 32°05'00"S
→ Longitude: 052°06'00"W

5.4.3 Maximum dimensions

The maximum size for a ship coming to the Tanker Pier is of 225 meters of length, 65,000 DWT. With these dimensions, the ship can operate only at South End. For the north end, the ship must have maximum length of one hundred and forty (140) meters and DWT of 5,000.

For the barge pier, maximum length of 100 meters and DWT of 5,000.

5.5 Environmental Factors

Relative air humidity is around 80%.

Note: Meteorological Bulletins and Warnings to Navigators are transmitted by the PWZ and PR radio stations. For more details, refer to the DHN's publication "Lista de Auxílio Rádio DH 8-8".

5.5.1 Prevailing winds

The winds follow the regime of coast winds.

The prevailing winds in the region are the Northeast wind during spring and summer, and the Southwest wind during fall and winter. Its average speed is 30 km/h (16 knots), being, therefore, a wind in the moderate range.

However, there are strong flows of wind, with gusts reaching 60 km/h (32 knots), wind 7 on the Beaufort scale, described as strong wind, a situation when the loading or discharging operation will be interrupted. If the conditions worsen, that is, in case of very strong wind (8 in the Beaufort scale) above 39 knots (72 km/h), the ship will be unberthed from the pier.

The arrival of the SW wind is also expected, due to the accentuated elevation of sea level at the bar. Another preannounce of violent SW is the sudden change in the direction of the wind, counterclockwise.

5.5.2 Waves and swell

The wave regime in Rio Grande depends largely on the local wind regime.

The waves are perpendicular to the coast, and are softened on the terminal, since the pier is located inside a channel.

Local measurements and observations indicate that the amplitudes are rarely superior to two meters and that the periods are usually short (7 seconds).

5.5.3 Rainfall

112 days/year, distributed in the 12 months.

5.5.4 Lightning storms

They usually happen during winter and summer. During these storms, operations are interrupted.

5.5.5 Visibility

It is usually good during summer, although it is strongly affected by mists in fall and spring, and also by strong hazes.

5.5.6 Tidal currents and other currents

The tide has characteristics of mixed tide, with average level 22 cm above the chart reduction level, and being greatly influenced by meteorology, that is, by local winds.

With S wind, the tide tends to fill and retain the water on the Patos lagoon; the opposite occurs with N wind.

In calm condition, the tide is null, because this region of the globe is a null tide region.

Near the jetties, with S wind the flood current may reach 3 knots; with N wind, the falling current may reach 5 knots.

Near the buoy pairs 1-2 and 3-4 on the channel to access the New Port, the strong falling current gets the ship closer to buoys 1 and 3.

5.5.7 Variation on the tide levels

The variations on tide may reach up to one and a half meter, combining the moon and meteorological tides.

5.5.8 Measurements

There is facility for measuring the wind speed both in the Terminal and in the Pilotage station.

6

DESCRIPTION OF THE TERMINAL

6.1 General Description

The Tanker Pier has three mooring berths.

They are called South End, North End and Barge Pier berths.

South from the Tanker Pier there is the Pier from the company Adubos Trevo, a Fertilizer company, and North there is the pier from the company Copesul.

In order to be served, all users/loaders must make a previous contact with the Terminal for information on the general service conditions. These conditions are:

→ Acceptance, berthing, (dis)connection, movement and utility services in operation with the ships.

→ Service of storage of liquid products and gases in general.

6.2 Physical Details of the Berths

Special attention must be given to berthing and unberthing maneuvers on the North End, since the South End is misaligned. The machine must always be tested before maneuvers and measures must be adopted so the engines are not inoperant during the maneuver.

6.3 Berthing and Mooring Arrangements

See table on the next page.

Physical Details of the Berths

Berth Number	Type	Berth length (meters)	Depth (meters)	Tide (meters)		Beam (max.)	Boat length (max.)	Distance between fenders (meters)	Products Moved	DWT (max.)	Notes
				Syzygy	Dry						
1 South	Pier	160	12	–	–	35	225	50/2 fenders	Oil, gas, ammonia, acids, chemical products, oil by-products	–	Berthing always with support of three (03) tugs
2 North	Docks	100	10	–	–	25	150	22.5/3 fenders	–	–	Berthing always with support of three (03) tugs
3 Barg	Pier	100	10	–	–	20	100	30/2 fenders	Oil by-products	–	–

Berthing and Mooring Arrangements

Berth Number	Requires Pilot for maneuvers	Ship Size DWT (max.)	Number & BP of Tugs				Approach (max.)		Mooring Points		Mooring Lines		
			Atracação		Desatracação		Speed (max)(m/s)	Angle (max)(°)	Bollards	Hooks	Line	Breast Line	Spring Line
			Nº	BP	Nº	BP							
1PS	Yes	65,000	3	–	3	–	0.1	3	2	8	8	6	6
2 PN	Yes	22,500	3	–	3	–	0.1	5	5	3	8	4	8
3 PB	–	5,000	1	–	1	–	0.1	3	5	–	6	2	4

6.4 Berth features for Loading, Discharging and Bunker

Berth Number	Products	Hose /Flanges of the Arm	Receive or Send	Temperature (min.)	Temperature (max.)	Flow (max. and min.) m^3/h	Pressure (max.) kgf/cm^2
PS	Oil	2 x 8"	R/E	20	50	1.600/200	7
	Chemical products	2 x 6	R/E	20	40	400/150	7
	Acids	2 x 6	R	15	30	400/200	7
	Ammonia	2 x 6	R	-34	-32	300/100	7
	LPG	2 x 6	R	0	10	300/100	12
	Oil by-products	2 x 6	R/E	10	40	700/100	7
	Petrochemical products	2 x 6	R/E	10	40	300/100	7.0
	Bunker	2 x 6	R/E	40	70	400/100	7.0
PN	Oil	2 x 8"	R/E	20	50	1.600 /200	7.0
	Chemical products	2 x 6	R/E	20	40	400/150	7.0
	Acids	2 x 6	R	15	30	400/200	7.0
	Ammonia	2 x 6	R	-34	-32	300/100	7.0
	LPG	2 x 6	R	0	10	300/100	12.0
	Oil by-products	2 x 6	R/E	10	40	600/100	7.0
	Petrochemical products	2 x 6	R/E	10	40	300/100	–
PB	Bunker:						
	Heavy	1 x 10" API	Exp.	–	–	500	Unavail.
	Diesel	1 x 6"API	Exp.	–	–	50	

6.5 Management and Control

There is an operation control room located in the next terminal.

The control is made via closed television circuit and with the presence of one employee on the ship connection.

The ship must have a radio system for communication with the Terminal.

Information related to quantity moved during that period, expectation for end of operation and any other relevant information must be exchanged mandatorily every hour. A qualified member of the ship crew must be assigned for service on the deck, in order to ensure the maintenance of communications or stay in visual contact with the operator in land during the operation. This crew member must warn the Terminal operator when it is necessary to change the loading or discharge flows.

VHF radios or direct voice may be used for this purpose.

An officer responsible for the ship and with good command of the English language will be equipped, as agreed, to be a communication means.

An officer responsible for the ship and a sufficient number of crew members must be on call to keep the safety of the ship operation.

The information must always be initiated by the ship.

In addition to the fixed and portable radio system, the ship must have an alternate communication means, for example, cellular phone.

6.6 Major Risks

The major risks during the berthed ship laytime are:

→ Distancing from the Pier due to passage of ships throughout the channel;
→ Strong winds, including suddenly;
→ Strong stream;
→ Attack from thieves and pirates by the sea side;
→ Static electricity on cargo movement;
→ Ballast movement;
→ Electric discharges.

7

PROCEDURES

During the ship laytime at the port, various steps are taken to make it possible to operate safely and manage the risks, in order to minimize them.

At every stage, as described in the sub-items below, measures are taken so as to facilitate the operations and plan them adequately.

Before scheduling the ship or loading for operation purposes (loading, discharge, transshipping) on the Tanker Pier, the Vetting document from Petrobras must be filled to be forwarded for evaluation. Ships presenting prior problems will not be accepted for operation on the Tanker Pier. Actions that disrespect the normal deadlines for this purpose will not be responsibility from Petrobras.

7.1 Before Arrival

7.1.1 Improper Ship

The Terminal reserves itself the right to refuse berthing to any ship considered inadequate, or not in compliance with safety or mooring conditions, or presenting any circumstances that may pose risks to its assets, which includes personnel, equipment and environment.

For acceptance of operation on the Tanker Pier, the information in appendix F, www.transpetro.com.br, must be sent properly in advance to Petrobras in Rio Grande for the assessment to be made. For ships that intend to discharge on the Tanker Pier, the

questionnaire must be sent 1 (one) week before loading the ship on the source port to prevent disturbances that will not be responsibility from Petrobras.

The ships heading for the Tanker Pier of the Marine Terminal of Rio Grande will be visited on the anchorage area by the Port Health, Customs and Maritime Police. The Ship agent makes the arrangements for this purpose.

Occasionally, the visit may occur at the Tanker Pier.

When the sanitary conditions are not satisfactory (the Free Practice is not granted), the ship must wait on the quarantine anchorage area established by the Harbor Master, keeping the quarantine signal from CIS hoisted, and no person is permitted to disembark.

The terminal will refuse the operation of ships berthed that have situation different from the one informed on the Vetting questionnaire, do not comply with safety issues laid down by IMO, OCIMF, STCW, MARPOI and other legal regulations applicable, as well as when any condition preestablished or informed is changed.

7.1.2 No form of cleaning the tank, deck, smokestack or similar is permitted. In case of extreme need, the Terminal must be inquired for assessing the case. The authorities are always inquired before the Terminal issues an authorization.

7.1.3 The estimated time of arrival (ETA) must be informed to the Terminal, via fax simile and e-mail, with the expectation 72, 48, 24, 12 and 6 hours in advance. The non-compliance with this condition prevents the maintenance of warranty of berthing by order of arrival.

7.2 Arrival

7.2.1 Before scheduling the ship on the Tanker Pier, the ship representative must do so with the Superintendent of Rio Grande Port (SUPRG). Only the schedules with prior agreement from SUPRG will be accepted. The legal and mandatory fees must be paid in advance. The captains must name their agents and have the International Certificates updated/valid on board

The Ship agent needs the following documents:

→ Passenger list (3 copies)
→ List of passengers in transit (3 copies)
→ Crew list (3 copies)

The Agent also arranges for the necessary Disembarking Cards.

After the visit, the ship must hoist the Customs flag (blue with white star).

7.2.2 Water supplies and bunkering must be requested in advance. Due to the ISPS CODE, the Terminal does not have facility for embarking and disembarking people, materials and equipment.

7.2.3 The communications with the Terminal before berthing must occur according to appendices D and E.

7.2.4 The addresses and telephone numbers of important local organs can be found below:

Federal Police
Rua General Osório, 512 – Phone: (55 53) 32391066

Harbor Master
Rua Almirante Cerqueira e Souza, 198 – Phone: (55 53) 3233-6119.

Receita Federal (IRS)
Rua Marechal Floriano, 300 – Phone: (55 53) 3231-2299.

Santa Casa de Misericórdia
Rua General Osório, 625 – Phone: (55 53) 3231-3633.

Hospital Universitário de Rio Grande
Rua Visconde de Paranaguá, 102 – Phone: (55 53) 3233-8800.

Superintendence of Port of Rio Grande (SUPRG)
Rua Honório Bicalho, s/nº – Phone: (55 53) 3231-1366

7.3 Berthing

7.3.1 Ship mooring system

The system must have at least the following facilities:

→ A crane or derrick (minimum 3 tonnes) ready for use, to assist in connecting the hoses to the onboard manifold;

→ Windlasses, winches, brakes and jaws in perfect conditions of use must be available with the aim of mooring efficiency;

→ Towing ropes (in steel), messengers, guide-ropes and lines must be ready for use on the bow and stern;

→ Mooring lines in proper material, authorized by the ship's certification Society. The lines must be in perfect state of preservation, without patches or wearing. The mooring lines must have the same material.

Mooring work

The mooring works will always be performed with the help of the Pilot, who shall follow the mooring schemes in the appendices of this manual.

The ship must be moored for complete satisfaction of its own Captain and the Terminal.

During mooring, bow and stern must be provided with all necessary means, among others, an officer with communication radio.

The ship will not be moored when it does not meet the minimum requirements made by the Terminal or the ones the Pilot considers as safety factors.

Mooring lines

Under no circumstances should the mooring lines be slack or loosened. If this happens, the ship could move along the pier or even move away from it. In this case, the operation will be interrupted for safety reasons and the hoses will be disconnected.

The ship will be held responsible for the time the operation is interrupted.

The mooring lines shall receive permanent attention and be worked up in order to keep the ship in the position indicated.

They must be kept under proper tension, through manual brakes, and the use of constant tension winches is not permitted.

They must be in good condition, without wearing above 10% of the rated diameter, without sewing or patches.

All mooring lines must be made of the same material, that is, fiber or wire. Using "mixed" mooring lines is not permitted, that is, lines performing the same function, but manufactured with different materials. They shall be of the same type, gauge and material.

The mooring lines must be arranged as symmetrically as possible in relation to the middle of the ship.

The breast lines must be deployed as perpendicularly as possible to the longitudinal axis of the ship, and passed far forward and aft as much as possible.

Spring lines must be set up in the most parallel position possible to the longitudinal axis of the ship.

If fiber tails are used on the wire lines, the latter cannot exceed one third of the distance between ship hawseholes and pier bollards, and they must have a minimum breaking load at least 25% higher than the load from the steel wire line it is connected to.

Windlasses

They must be in good conditions and have sufficient capacity according to the vessel.

Sequence for mooring work

a) Approach the tanker pier with trim and draft necessary for the ship to be controlled.

b) Pass the towing ropes through the aft central chain pipe to the tug that will assist the berthing maneuver and the mooring work, as per the Pilot's instructions. When a supporting boat approaches the ship's hull, launch a line for the boat, which, on its turn, will moor a messenger cable on its end. When this cable is transferred to the ship, it will be a guide for passing the first towrope to one of the pier bollards, as guided by the Pilot.

c) The first towrope will be taken to the pier and selected according to the weather conditions, as per the Pilot's instructions.

d) Sequentially, the remaining towropes will be fast to the bollards indicated by the Pilot.

7.3.2 The ship must have gangway ladder and/or wharf ladder for safe access to the ship. The Terminal does not have this type of facility. The ladder or wharf ladder must be on an angle adequate with the horizontal. The ladder must have a net to prevent people from falling.

7.4 Before Transferring the Cargo

7.4.1 For moving oil and by-products, electricity insulating hoses will be used for chemical products, hoses with electric continuity and grounding cable connection will be used. It must be agreed before the ship berthing if the system will be used isolated or not between the parties. Throughout the laytime at the Pier, tanks with products flammable or that may explode must be rendered inert. If the ship does not have this resource, it must request a supply to the Terminal.

7.4.2 The ship must first contact the Terminal, to exchange the information necessary for connecting the hose and/or loading arm. The hose connection and disconnection on the ship's discharge manifolds are made by a team from the Terminal, with the help of the ship's derrick:

→ Oil PIPELINE: 16" of diameter, with sleeves of 10" and 8";
→ by-product line: 10" or 12" of diameter, with sleeves of 6" or 8";
→ ship bunkering line: 12" of diameter, with sleeves of 6";
→ ammonia line: 16" of diameter, with sleeve of 6";
→ sulfuric acid line: 10" of diameter, with sleeve of 6";

→ BTX line: 8" of diameter, with sleeve of 6";
→ BTX line: 6" of diameter, with sleeve of 6";
→ chemical line: 6" of diameter, with sleeve of 6";
→ phosphoric acid line: 8" of diameter, with sleeve of 6".

The ship must leave the reduction ready for connection according to the diameter and pressure class.

For gas ships, the ESD button must be made available for the shore team. For liquid ships, the ESD button must be on a location easily accessible and available.

Procedures for moving cargo

a) Loading or discharging is performed via dedicated pipelines for each type of product specified, after the connections listed in the previous item have been carefully verified.

b) The ships must keep their propulsion system in a state of readiness during the entire operation, so that they are able to cast off, clearing the berth, in case of any emergency.

c) The ship loading manifolds that are not operating must be properly flanged, and always with the use of all screws.

d) It is not permitted during operations in the Tanker Pier: other connections on board, hot-welding services, tank loading by the top, cleaning tanks, tank ventilation and conditioning, movement and maintenance in moors and anchors, de-carbonizing cylinders, maintenance on the generator system and correlated services of similar nature.

e) The discharge or transfer of the product will not commence without the permission and formal agreement between ship and Terminal.

f) The maximum pressure and flow rate established by the ship, according to its possibilities and features, must be maintained during the transfer, should its operating characteristics be less than the capacity of the Terminal.

g) The ship must maintain full time one man for watching the load manifold and mooring lines, in order to establish contact with the Terminal team, and another man for help and temporary replacement. The team on board must comply with regulation STCW during all phases. The ship can never be without captain and officer simultaneously.

h) The fire fighting material must be ready for any emergency, as well as the fire system, which must always be pressurized with proper pressure, never below the condition of putting water by the other sea side.

i) Keep the intake vapor circuit under pressure, aiming at stiffening or loosening the towropes, when required. In case of another system, the same recommendation is given.

j) The load manifolds shall be equipped with flanges of diameter previously agreed with the Terminal, ANSI standard.

k) Before starting the operation, the hose line will be tested for tightness with pressurization with N2. The onboard and shore valve must be blocked.

l) The quantity moved must be informed to the Terminal every hour. If there is discrepancy higher than 10% between the amounts, the operation must be interrupted.

m) The tight doors that provide access to the hallways must remain closed with the locks passed and tightened.

n) The personnel from Petrobras terminals is authorized to suspend the operation in case of non-compliance with any rule, law or regulation aforementioned, or in case of any dangerous situation that the operation supervisors believe to exist.

o) It is expected that the tankers accept and comply with all safety-related regulations and standards accepted and adopted worldwide in the ocean transport of oil.

p) The ship's Captain is entitled to interrupt the loading, when there are reasons to believe that the operations onshore are unsafe, as long as he notifies the pier service personnel in advance.

q) The traffic of people in the tanker pier without being protected with helmet, goggles and safety boots is expressly forbidden.

r) All hull and bottom valves that are not in use must be closed and locked.

s) All hull and bottom valves belonging to the loading system must remain closed and locked during the entire operation.

t) Aspirating the central air conditioning system or the mechanical ventilation must be adjusted to prevent the entrance of gas from the cargo, if possible via air recirculation within the compartments.

u) If there is any suspicion that gas from the cargo is being aspirated to within the accommodations, the air conditioning and mechanical ventilation systems must be stopped and the aspiration must be closed.

v) The window-type air conditioning units that are not certified as safe for use in presence or flammable gas, or that aspirate air from outside the superstructure, must be electrically turned off and all aspirations and external outlets must be covered or closed.

w) The fans must be turned off whenever there is risk of introducing gas from the cargo to the ventilation compartment.

x) The ventilation pipes must be kept directed so as to prevent the entrance of gas from the cargo. If the pipes are located so that gas from cargo can enter through them, regardless of the direction they are turned to, they must be covered, plugged or closed.

y) All doors, portholes and other similar openings that enable the passage from the main deck to accommodations or machine area, or those in any level that lead to the main deck, must be kept closed. A screened door cannot be considered a safe replacement for an external door.

z) All radio transceivers used must be intrinsically safe and explosion-proof.

aa) Communications via VHF between the ship, the Terminal and the tug available will be permitted.

bb) Every Portable Electrical Equipment used must be intrinsically safe and explosion-proof.

cc) The radio and radar transmission antennas must be disconnected and grounded. In case of need to use the radio or radar because of test due to repairs, this procedure shall be agreed between the Terminal and the ship representatives, so that necessary additional measures are adopted.

dd) Only the use of electric light intrinsically safe and explosion-proof in the deck will be permitted during the ship laytime at the pier.

ee) The ship must display at both sides, warning notices (in English and Portuguese) with the following caption:

→ NO SMOKING;
→ DO NOT USE UNPROTECTED LIGHTS;
→ ENTRANCE OF NON-AUTHORIZED PEOPLE FORBIDDEN.

7.4.3 Measurements and sampling will always be performed at the beginning and end of operations. Measures can be taken during the operations if necessary, according to authorization from the Terminal. For measurements and sampling, the tanks must not be depressurized. If necessary, it must be informed to the Terminal for previous analysis and approval.

7.4.4 The compliance with the operational conditions must occur according to appendix F and initial chart.

7.4.5 Before starting the operations, the Ship/Shore Safety Checklist must be filled up (Appendix from "Isgott and Sigito").

7.4.6 There is restriction for the excess of dense smoke via smokestack and cleaning that can be measured by the Ringelmann scale or similar method.

7.4.7 There is restriction for vessels on the hull during the ship laytime. If necessary, a request must be previously made to the Terminal, which will assess the situation and issue the conditions.

7.4.8 There is restriction for propeller movement during the ship laytime. At the north end, there is also restriction for use of Bow Trust and Stern Trust, which must not be used without prior authorization from the Terminal.

7.5 Cargo Transfer

7.5.1 During the entire loading and discharge operation, the variables of height, pressure and temperature involved must be monitored. In case of discrepancy, the operation must be interrupted for investigation.

For ships transporting sulfuric acid, a ballast below the tanks that have the acid cargo will not be permitted. These ships must depressurize their cargo tanks before berthing at the Tanker Pier.

The oil and chemical tankers must maintain their tanks always rendered inert. For discharging oil tankers, the minimum positive pressure in the tanks will be 500 mm of H_2O and O_2 content below 8% in volume. In case of difficulties or problems in the inert gas system of the ship, the operation will be interrupted until the system complies with the minimum acceptable.

The tanks must be measured every hour. The difference between the volume moved between the ship and the Terminal must be inferior to (10%) of the value moved at that time.

7.5.2 The requirements for LPG must follow additional recommendations from Ocimf and Sigito.

7.5.3 The requirements for ballast/deballast must comply with the legislation in force. The Terminal has facilities to receive ballast water and Sludge. If there is interest from the ship in having this service, it must be scheduled properly in advance. If the ship needs to use a ballast and deballast system, it shall use the existing resources available. To do so, the ship must work with availability of 1,000 m^3. The ballast tank mouths must remain closed, and probing must be performed by the proper means.

7.5.4 There is no facility for receiving slop from the ship.

7.5.5 For cleaning the tank and COW, the terminal must be inquired in advance. If the Terminal agrees with the operation, it will assign a representative for following the operation. For the operation to be executed, it must be authorized by the ship's Certification Society, as well as the equipment used. The cleaning residues must remain on board, or disembark for the load receiver, as long as he agrees.

7.5.6 For making repairs, the Terminal must be inquired in advance. Repairs that leave the guiding and propulsion systems, especially the main ship systems, unavailable will not be accepted. The engines, generators, compressors, guiding systems, pipelines and control system must be operational so that the ship can operate at the Terminal.

7.5.7 There must be total compliance with the ship/shore safety inspections during the ship operation (according to appendix from "Isgott").

7.5.8 In case of operation downtime, the causes that led to operation paralysis during the ship laytime must be formally indicated to the Terminal.

7.5.9 In case of emergency, both on shore and on board, the operation must be immediately suspended and the positions for disconnection must be protected. The shore Combat Brigade leader will contact the vessel Captain at the time, for defining the immediate ship unberthing, which will depend on the scenario.

7.6 Cargo Measurement and documentation

7.6.1 The arms and hoses will always be drained for onboard. Initially, the valves on shore will be blocked, then the hose volume will be blown with nitrogen into the vessel tanks. After being verified that the hoses are empty, the onboard valves must be blocked and the hoses must be disconnected.

7.6.2 The cargoes must be verified by authorities or their qualified representatives each time foreign trade operations are held.

All cargoes are subject to regulations from all national authorities.

A copy of the customs cargo release document, copy of Manifest and initial and final measurement spreadsheet for all ship tanks must always be sent to the Terminal. The responsibility for its compliance and proof with the authorities is of the merchandise owner and its trustees.

For electrostatic accumulator products, a period of at least one (01) hour must be given after the end of the operation to introduce tape measures, sample extractor, thermometers or any other metallic object.

7.7 Unberthing and Leaving the Port

7.7.1 For leaving the berth or port, all the precautions taken on the arrival must be generally taken.

7.7.2 The pilot disembarking point is the same as the embarking point.

The captains must name their agents and have the International Certificates updated on board. For releasing the ship departure, it must be obtained:

→ Departure pass from Customs
→ Departure pass from Harbor Master
→ Departure pass from Maritime Police

The Ship agent needs the following documents:

→ Passenger list (3 copies)
→ List of passengers in transit (3 copies)
→ Crew list (3 copies)

The Agent also arranges for the necessary Disembarking Cards.

When the crew members' families embark on ships headed to abroad, the respective passports, in addition to the specific license granted by the Harbor Master, must be handed to the Agent 24 hours before the ship clereance, for purposes of regulating the embarking visas and list of passengers with the Federal Police.

When returning from abroad, the Captains must send messages to the Terminal informing the number of passengers to disembark, and the respective list of passengers, along with the passports, must be presented to the Federal Police during the entrance visit, in order to be properly investigated by the police and sanitary authority.

7.8 Compliance with the ISPS Code

The Terminal has implemented corporate safety protection measures applicable to ships and port facilities, in compliance with the requirements of the International Maritime Organization – IMO, by adopting the ISPS – International Ships and Port Facility code.

When required, these protection measures may be taken by the ship, via the Port Facility Security Officer (PFSO), or VHF radio, channels 16, 09 or 11.

Usually, the Terminal operates at safety level 01.

For further details, the Port Facility Security Officer (PFSO), who is qualified according to the requirements stipulated by the IMO, may be contacted by the phone (55 53) 32343200.

8

PORT AND ANCHORAGE AREA ORGANIZATION

8.1 Port Control or VTS

8.1.1 According to item 5.3.5

8.1.2 Contacts via radio and telephone, according to item 10.2.

8.2 Maritime Authority

8.2.1 The maritime authority with jurisdiction on the Terminal is the Harbor Master.

8.2.2 The vessels must go through inspection from any other authority before berthing or after unberthing.

8.3 Pilotage

8.3.1 In the port where the pilotage service is mandatory, the by-law must be mandatorily complied with.

8.3.2 The size, nationality, type of vessel and destinations to where the pilotage service becomes mandatory are defined by Law.

8.3.3 There is only one Pilotage organization operating in the port that helps the ship arriving to the Terminal and leaving it.

8.3.4 In emergency situations, the pilotage service may be called via VHF channel 16 and/or 9 or via the pilotage tower phone, which the agent must inform to the captain.

8.4 Tugs and other Maritime Services

8.4.1 Tug Services

Owner/Operator	Name	Total HP/ KW
Wilson Sons	Atlas	4,400
	Antares	2,170
	Hamal	1,010
CNL	Lagoa Paulista	1,545
	CNL Jacira	2,612
Metalnave	Escalibur	2,220
	Bricantia	3,057
	Lugos	2,956
	Tanarus	2,956
	Percival	1,575
	Artur	1,170
	Merlin	1,822
	Caillean	3,057
	Pelagiun	2,956
	Avalon	1,822
	Lancelot	2,160
	Ektor	2,160
	Sulis	2,956
	Lot	2,220
	Galahad	2,160
F. Andreis	F10	1,710
	Taura	325
Rio Grande Marítima	Santos	1,020
	Castor	750

8.5 Terminal Exploration Regime

8.5.1 The terminal is of public use.

8.6 Other Major Users

8.6.1 The facilities below are interconnected to the Terminal:

→ Petrochemical Terminal
→ Fertilizer Plant
→ Oil Refinery
→ Tank for Ammonia

9

EMERGENCY PLAN

9.1 Emergency Contacts

Organization	Operating Times	Identification Acronym	Telephone (55 53)	Fax (55 53)	Cell phone (55 53)	VHF/UHF	
						Call	Conversation
Port Control	24 hours	Pilotage	3234-1402	–	–	16/9	–
Tugs	Administrative	–	–	–	–	–	–
Pilots	–	–	3231-2233	–	–	–	–
Berth control room	24 hours	Operation	3234- 3200	3234- 3215	–	16	13
Terminal Control room	24 hours	Operation	3234- 3200	3234- 3215	–	16	13
Police	24 hours	–	3239-1066	3231-1313	–	–	–
Fire Department	24 horas	–	3231-3355	–	–	–	–
Medical Assistance	Santa Casa	–	3231-3633	–	–	–	–

9.2 Environmentally Sensitive Areas

The areas within the port or near the Terminal that are defined as Sensitive Areas or subject to risk of pollution are the marshy areas, and one is close to the mouth jetties.

At north there is the Saco da Mangueira, which is also a sensitive region. On the other bank of the Port, most of the region is considered sensitive.

9.3 General Description of the Emergency Combat Organization

Incidents within the Port/Terminal area

Incident type	Organization in charge	Other organizations involved			
Collision in the Channel	Am	Terminal	P&I	Ship agent	SUPRG
Vessel Running Aground	AM	P&I	Agent	SUPRG	Pilotage
Collision at the Berth	AM	Terminal	P&I	Agent	SUPRG
Vessel Sinking	AM	SUPRG	P&I	Agent	Terminal
Fire Onboard	AM	Terminal	Fire Dept.	Agent	P&I
Fire in the Berth	Terminal	Fire Department	SUPRG	Agent	AM
Pollution	Fepam	Agent	P&I	Terminal	SUPRG/AM

9.4 Emergency Plans

9.4.1 The ship must send beforehand a summary of its emergency plans for the following situations:

→ Fire
→ Pollution
→ Tank overflowing

9.4.2 The ship must inform its resources available for facing an emergency. If necessary to know the Terminal resources, its representative must request a copy of the resource for such emergency.

9.4.3 The terminal has resources available for assistance to minor medical emergencies.

9.5 Public Resources for Combating Emergencies

There is a civil defense structure in the city. It congregates the private and public organizations that may operate in case of emergency.

9.5.1 Port Administrator

The Port administrator is SUPRG.

9.5.2 Maritime Authority

The Port authority is the Harbor Master.

9.5.3 Local Emergency Services

According to item 9.1

9.5.4 Mutual Maritime Support Plans

AM leads a PAMM that assists emergencies with ships.

9.6 Combating Oil and Chemical Products Spillage

There is a resource of barriers, skim pack, collector boats and other facilities for assistance to a spillage.

In case of spillage caused by the ship, it will be unconditionally responsible for indemnifying the costs involved.

In case of spillage with cause given by the ship and if the captain needs support, he shall send a request for provision of emergency support service with commitment for payment. The Assistance will be given depending on the scenario and the product spilled.

For special cargo (acids, chemical products in general), the ship must have resources for containing, collecting and neutralizing small leaks on board. It will be inspected on the arrival and will be mandatory for starting operations.

9.6.1 Combat Capacity of the Terminal

The terminal has capacity to react to a medium-size emergency.

9.6.2 Combat Capacity of the Environment Agency

The Environmental Agency at Rio Grande does not have resources for combating oil spillage in the sea.

9.6.3 – Resources available in the Mutual Support Plans of other Terminals

The resources available in other Transpetro terminals for fighting against pollution emergencies occurring at the terminal surroundings are listed in the LCP.

9.6.4 Combating medium-size oil spillage

When occurring significant pollution – medium-size incident – the Terminal may provide the regional resources from Transpetro, with payment in advance.

These resources, their state of readiness and how they are brought into action are described in the LCP.

9.6.5 Combating large-scale oil spillage

The LCP at the Terminal lists the actions and the entities responsible for every type of event in case of combat to large-size incidents (catastrophic proportions) that may occur within its unit, pipelines or vessels, or involves third parties.

For this type of event, Transpetro/Petrobras may make available the national or international resources at its reach, and they must be paid in advance.

10

CONTACTS

The most important contacts must be requested to the Agent due to visit. Refer to the annex for details.

10.1 Terminal

Location	Contact	Telephone (55 53)	Fax (55 53)	VHF/UHF Channels	
				Call	Conversation
South End	Operator	3234-3200 r. 4304	–	16/6	13/6
North End	Operator	3234-3200 r. 4224	–	16/6	13/6
Barge Pier	Operator	3234-3200 r. 4310	–	16/6	13/6
Control Center	Shift Leader	3234-3200 r. 4230	3234-3254	6/16	6/13
Safety	Tech. of Safety	3234-3200 r. 4328	3234-3215	6	6

10.2 Port Services

Organization	Contact	Telephone (55 53)	VHF/UHF Channels	
			Call	Conversation
SUPRG	Supervisor	3231-1966	–	–
Harbor Master	–	3233-6119	16	to be agreed
Pilots	–	3231-2233	16	9
Tugs	Rio Grande Marítima	3232-1790	16	to be agreed
Tugs	CNL – Centro de Navegação da Lagoa	3231-3255	16	to be agreed
Tugs	F. Andreis	3231-1099	16	to be agreed
Tugs	Saveiro Kamuyrana Serviço Marítimo	3233-7700	16	to be agreed
Tugs	Metalnave	3231-9591	16	to be agreed
Tugs	Wilson Sons	3233-7700	16	to be agreed
Tugs	F. Andreis	3231-1099	16	to be agreed

10.3 Selected Navigation Agents and Suppliers

Company	Business	Telephone (55 53)	E-mail	Call
Agência Marítima Orion	Agent	3231-1566	orion@rgd.amorion.com.br	16
Agência Marítima Granel	Agent	3234-1132	amg.riogrande@granel.com.br	–
Agência Rio Grande Ltda.	Agent	3235-3332	amrg@amrg.com.br	–
Aliança Navegação Ltda.	Agent	3233-7300	alianca@rig.alianca.com.br	–
Atlas Marítima Ltda.	Agent	3233-5400	am@atlasmaritime.com.br	–
Centaurus Agência Marítima Ltda.	Agent	3231-3311	centaurus@centaurus-aqmar.com.br	–
Corymar Agência Marítima Ltda.	Agent	3231-2255	cjrivoire@corymar.com.br	–
Cranston Transportes Int. Ltda.	Agent	3233-760	orig@cranston.com.br	–
Fertimport S.A.	Agent	3231-2488	rgd.fetimport@bungue.com.br	–
Hamburg Sud Brasil Ltda.	Agent	3233-7300	alianca@rig.alianca.com.br	–
Meridian Agência Marítima Ltda.	Agent	3231-4994	meridian@meridian-ag.com.br	
Oceanus Agência Marítima Ltda.	Agent	3231-1355	agency-rig@oceanus.com.br	–

continue

Company	Business	Telephone (55 53)	E-mail	Call
Sagres Agência Marítima	Agent	3233-1133	sagres@sagres.com.br	–
Sampayo Nickhorn S.A.	Agent	3231-1477	robinson@sampayo.com.br	–
Sampayo Brascar	Agent	3231-1477	robinson@sampayo.com.br	–
Sea Wave Agência Marítima Ltda.	Agent	3231-3957	seawave@mikrus.com.br	–
MB Agência Marítima Ltda.	Agent	3233-9696	marceb.rgb@serenstar.com.br	–
Sul Trade Transportes Int. Ltda.	Agent	3235-3500	sultrade@sultrade-ag.com.br	–
Supermar S.A.	Agent	3231-1122	velloso@rig.supermar.com.br	–
Tranship BR Agência Marítima	Agent	3233-6000	motobrasveiculos@.com.br	–
Vicente Morel Despacho e Agência Ltda.	Agent	3232-4329	vicentemorelltda@ vicentemorelltda.com.br	–
Wilson Sons Agência Marítima Ltda.	Agent	3233-7700	rig@wilsonsons.com.br	–

10.4 Local Authorities, State and National Agencies

The list of authorities and their respective contacts is included in the item 9.1.

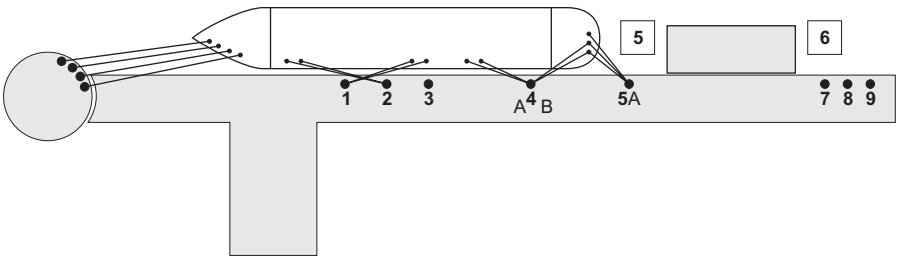
APPENDICES

A – Charts including berths and approaches.

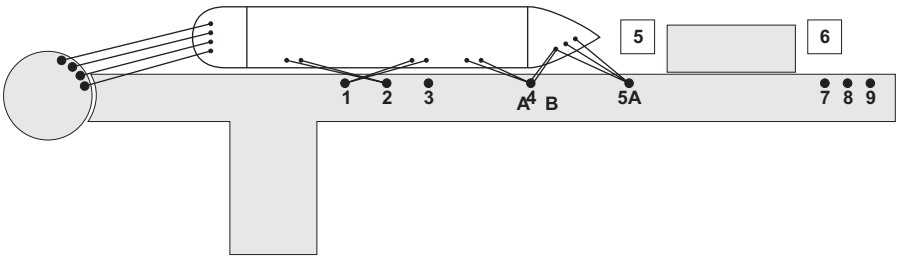
B – Diagram or each berth considering the lengths, barriers/dolphins, location of mooring points, manifolds.

Mooring on north end

Ship with length up to 140m – bow to north

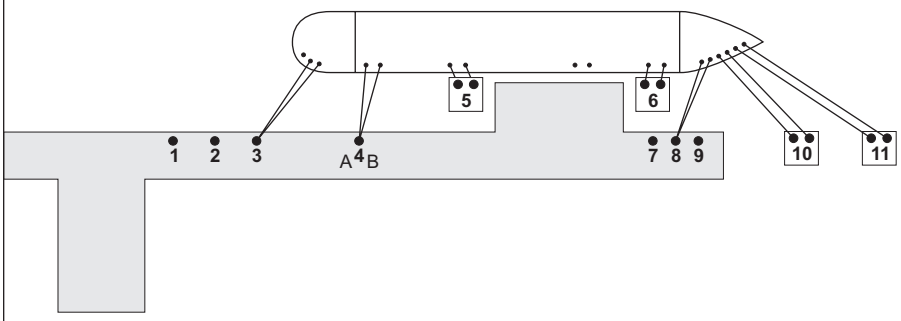


Ship with length up to 140m – bow to south

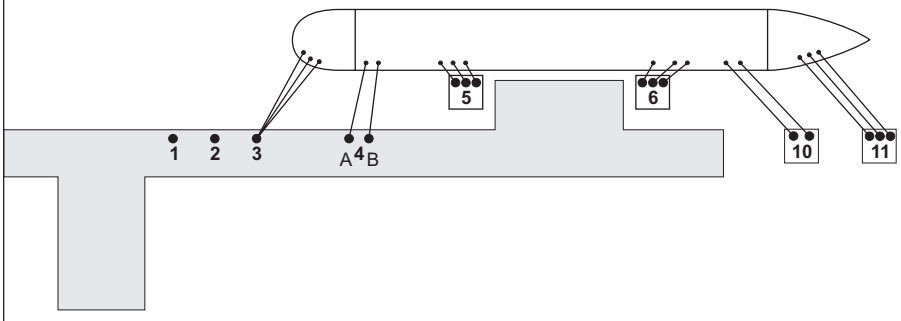


Mooring on south end

Ship with length up to 180 m – bow to south

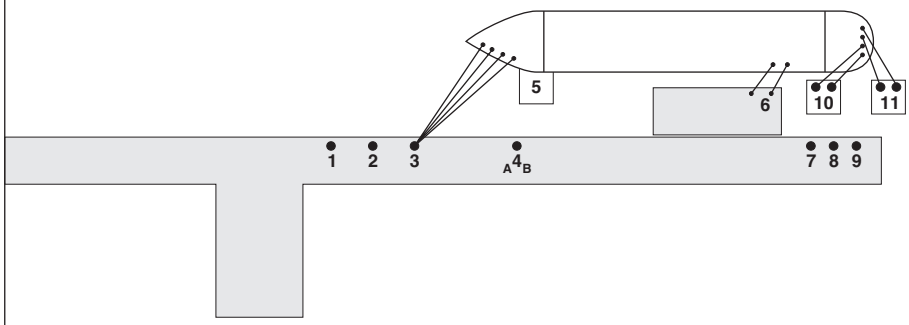


Ship with length between 180 and 225 m – bow to south

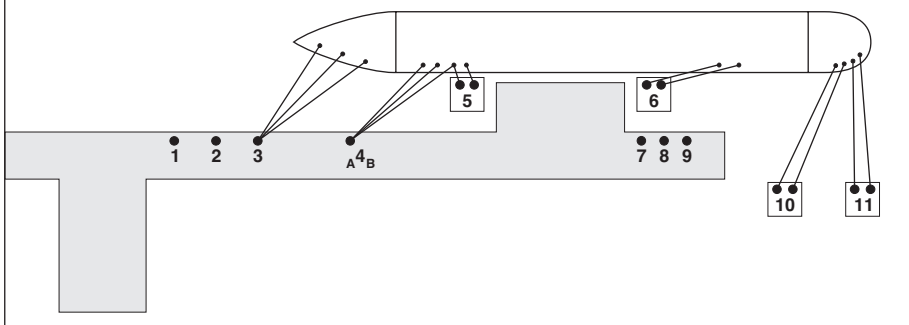


Mooring on south end

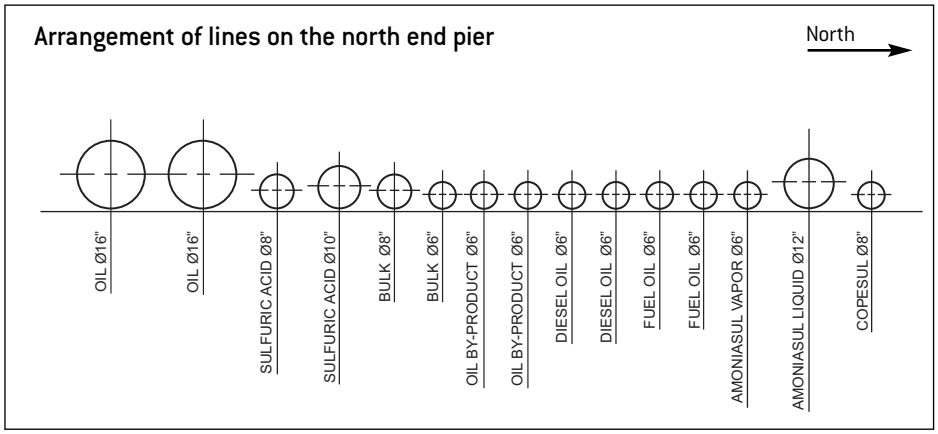
Ship with length up to 180m - bow to North

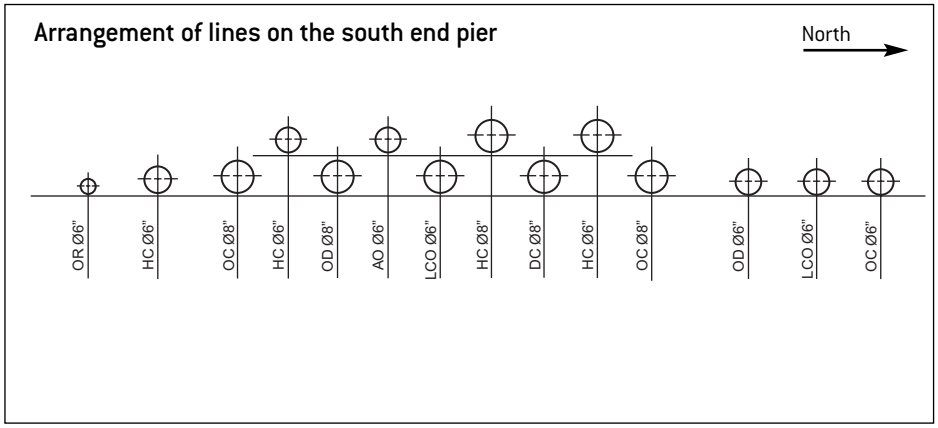


Ship with length between 180 and 225 m - bow to north



C – Diagram with loading connections, dimensions and sizes of flanges.





D – Essential information from the Terminal to the Ships.

Ship/Terminal Information Exchange

Item 3,1,4 of Isgott (Information from the Terminal to the ship before arrival)

To the Ship:					
From the Marine Terminal:					
Mooring berth:	Latitude:		Longitude:		
	Low tide draft:	(m)	Water salinity:		(mg/l)
Berthing board	Port side:	Starboard:	According to the tide:		
	Maximum speed when berthing:				(m/s)
	Maximum angle when berthing:				(°)
	Speed/angle indicator position:				
Tugs available for maneuvering	Towing lines used in the maneuvers:				
	Auxiliary vessels available for maneuvers:				
	Call the ship's agency				
Mooring	Number of mooring lines required:				
	Line:		Breast line:		
	Spring line:		Material:		
Terminal equipment available for mooring					
	Bollards:		Hooks:		
	Additional mooring details:				
Access ladder	Terminal:		Ship:	Position:	
Connection details	Hoses:		Arms:		
	Diameter:		Pressure Class:		
Operating sequence	Product:	Loading 1º:	m^3	Discharging 1º:	m^3
	Product:	Loading 2º:	m^3	Discharging 2º:	m^3
	Product:	Loading 3º:	m^3	Discharging 3º:	m^3
	Product:	Loading 4º:	m^3	Discharging 4º:	m^3
	Has the sequence been changed?		Yes:	No:	
On-board tank measurement	Ship without inert gas system: Follow the recommendations in item 7,2,2 of Isgott,				
	Ship with inert gas system: Follow the recommendations in item 7,2,3 of Isgott,				
Degassed tank required		Yes:	No:		
Berthed COW operations permitted?	Yes: Follow the recommendations in item 9,4 of Isgott.				
	No:				
Tank washing permitted for berthed ships?	Yes: Follow the recommendations in item 9,4 of Isgott.				
	No:				

Environmental wind	Speed:	knots	knots	knots
condition limits	Action:	Interruption	Disconnection	Unberthing
Environmental wave	Height:	> m	> m	> m
condition limits	Action:	Interruption	Disconnection	Unberthing
Operational limits	Variable:	Pressure >	Flow >	Temperature >
(Product 1)	Action:	Interruption	Interruption	Interruption
Operational limits	Variable:	Pressure >	Flow >	Temperature >
(Product 2)	Action:	Interruption	Interruption	Interruption
Possibility of receiving dirty ballast or slop?				
	Yes	Minimum fluidity	Maximum volume	
	No	º	m^3	
The product must be free of chlorinated or organo-chlorinated, or oxygenated solvents (ethanol, methanol and MTBE), machine residues contaminated with lubricant oil and metals, inorganic/organic chloride				

Responsible for the information:

E – Essential Information from the Ship to the Terminal

Port and Terminal:		
Vessel Information Request:		
Ship name: Flag: Captain's name: Ship owners:	Estimated Time of Arrival (ETA): Last port: Next port: Agents:	
Does the ship have an inert gas system? Oxygen content:		
Length overall (LOA): Length between perpendiculars: Beam:	Draft at arrival: Maximum draft during transfer: Draft when leaving:	
Number of engines: Number of propellers:	Transversal propulsion: Bow (number and power): Stern (number and power):	
Tugs, minimum required: No. and static traction (bollard pull):		
Number and size of manifold flanges: Cargo: Ballast: Bunkers:	Distances: Bow to manifold: Hull to manifold: Manifold height to main deck:	
Loading schedule (fill when applicable):		
Naming: Type and quantity: m^3	Type and quantity: m^3	Type and quantity: m^3
Ballast discharge at sea: Quantity: m^3	Estimated time:	
Slop/ballast discharge ashore: Quantity: m^3	Estimated time:	
Discharging schedule (fill when applicable):		
Type and quantity: m^3	Type and quantity: m^3	Type and quantity: m^3
Ballast:	Volume: m^3	Time:
Bunkers requested:		
Type and quantity:	Type and quantity:	
Additional information (if any):		

Please, send via fax or e-mail to the Terminal Supervisor.

F– Information to be exchanged before cargo transfer.

Ship Nomination and Acceptance Questionnaire

	General information
1.	Vessel's name:
2.	Previous name(s):
3.	Year built:
4.	Flag:
5.	Type of vessel (tanker, chemical, OBO, etc.):
6.	Type of hull (single, double hull, double bottom, PL, HBL):
7.	IMO number:
8.	Owner's details (address/telephone/fax/e-mail):
9.	10. P & I Club:
10.	Ship manager details (address/telephone/fax/e-mail):
11.	Year/month present Ship Manager assumed responsibility for the vessel?
12.	Draft (m):
13.	Summer dwt (m):
14.	Summer draft (m):
15.	Air draft at ballast condition (m):
16.	GRT/NRT:
17.	LOA (m)/Beam (m):
18.	Hose boom/Crane (type/SWL/off board range):
19.	Loading capacity (98%, excluding slop tanks):
20.	Classification society, since when:
21.	Date of last special surveyl:
22.	Date of last drydock:
	Certification
23.	Inform expiry date of:
	Safety construction:
	Safety equipment:
	Safety radio:
	Cargo Ship safety:
	International load line:
	International oil pollution prevention:
	Noxious liquid substances:
	Document of compliance:
	Safety management:
	International Ship security:
	Type (Full term or interim):
	Issue date and expiry date (DD-MMM-YYYY format):

continue

	Certifying body:					
	Responsible flag state:					
	Vessel fully compliant with ISPS Code Part B (state 'Yes' or 'No'):					
	Is the vessel exempt from any IMO rule or flag country rule? Which?					
	Crew Management					
24.	Number of Crew Members and Nationality (officers/crew):					
25.	Owner/Ship Manager warrants compliance with Ocimf Drug & Alcohol Policy Guidelines? Date of last test:					
26.	What is the working language on board? Which?					
	Officers details					
		CMT Master	IMT C. Officer	1ON 1st Officer	2ON 2nd Officer	2ON 2nd Officer
27.	Nationality					
28.	Years in company					
29.	Years as an officer					
30.	Years of experience on tankers (tanker, chemical, gas OBO etc.)					
31.	Time on board during this period					
32.	English proficiency (good/fair/poor)					
	Officers details					
		CMT C. Engineer	1ON 1st Engineer	2ON 2nd Engineer	2ON 2nd Engineer	2ON 2nd Engineer
33.	Nationality					
34.	Years in company					
35.	Years as an officer					
36.	Years of experience on tankers (tanker, chemical, gas OBO etc.)					
37.	Time on board during this period					
38.	English proficiency (good/fair/poor)					
	Safety management					
39.	Dates of last two visits on board by ship's superintendent:					
40.	If the senior Officers are on board this ship for less than six months, please describe the procedures adopted when boarding to become familiar with his tasks/responsibilities:					
41.	Majors / Terminal operators approvals, based on OCIMF/SIRE and or CDI programmes and procedures (please inform date of last inspection of each, pending items and comments):					
42.	Date/Place/Corrective actions related to pollution or navigation incidents over last 12 months:					

continue

43.	Does vessel have planned prevention maintenance system?
44.	Is the vessel ready, in all respects, to perform the intended operation properly bearing in mind environmental protection and operational safety/good practice requirements?
45.	Charterers, cargoes, terminals and loading/unloading dates in the last six months:
46.	If applicable, inform where/when the ship has operated at a Petrobras or Transpetro marine terminal:
47.	Date and place of last Port State Control inspection:
48.	Has the vessel been detained by any Port State Control in the last 12 months?
49.	If yes, inform place, date and deficiencies recorded:
	Pollution Prevention
50.	Is vessel segregated ballast tanker type (SBT)
51.	If not, can the vessel load/deballast or unload/ballast simultaneously
52.	Is the vessel equipped and operated in accordance with recommendations contained in ICS/Ocimf International Safety Guide for Oil Tankers and Terminals (Isgott)?
53.	Is the monitoring system for unloading ballast and oily water separator in engine room in satisfactory working condition?
54.	Date of last SOPEP drill:
55.	Are the Oil Record Books updated?
56.	Is the Owner/Ship Manager/Master aware that by Brazilian law, accidents with pollution are considered to be crimes punishable by fine and prison?
	Cargo and Ballast System
57.	Is the vessel free from restraints regarding intact stability?
58.	Is the vessel's loading and discharge equipment fully operational? If not, explain.
59.	Does cargo manifold(s) comply with Ocimf requirements? If not, explain.
60.	Is the vessel fitted with an inert gas system?
61.	If fitted with inert gas system, is system fully operational? If not, explain.
62.	Is the vessel fitted with a closed gauging and sampling system?
63.	If fitted with a closed gauging and sampling system, is system fully functional? If not, explain.
64.	Is the vessel fitted with a crude oil washing?
65.	If fitted with inert gas system, is system fully operational? If not, explain.
66.	Date of last hydrostatic test of cargo lines:

Date of last hydrostatic test of cargo lines

Name:		
Company:		
Position:		
Phone:	Fax:	e-mail:

G – Useful addresses.

Port authorities:

Command of the 5th Naval District
Rua Almirante Cerqueira e Souza, 70
Phone: (55 53) 3233-6108
Fax: (55 53)3233-6181

Harbor Master of the State of Rio Grande do Sul
Rua AlmIrante Cerqueira e Souza, 198
Phone: (55 53) 3233-6119

Superintendence of Port of Rio Grande
Avenida Honório Bicalho, s/n
Phone: (55 53) 3231-1366

Federal Police
Rua Marechal Floriano Peixoto, 300
Phone: (55 53) 3231-2299

IRS Department
Rua General Osório, 512
Phone: (55 53) 3239-1066

Agência Nacional de Vigilância Sanitária – Anvisa
Posto Portuário de Rio Grande
Rua Marechal Floriano, 5
Phone: (55 53) 3232-3916

Navigation agents:

Agência Marítima Orion Ltda.
Rua Aquidaban, 623 – Centro
Phone:(55 53) 3231-1566

Agência Marítima Granel
Avenida Portuária, 1.000 – Setor 07 – Distrito Industrial
Phone: (55 53) 3234-1132

Agência Rio Grande Ltda.
Rua General Bacelar, 493 – Centro
Phone: (55 53) 3235-3332

Aliança Navegação e Logística Ltda.
Rua Francisco Marques, 183 – Centro
Phone:(55 53) 3233-7300

Atlas Maritime Ltda.
Avenida Silva Paes, 266/201 – Centro
Phone: (55 53) 3233-5400

Centaurus Agências Marítimas Ltda.
Rua Luiz Loréa, 286 – Centro
Phone:(55 53) 3231-3311

Corymar Agência Marítima Ltda.
Rua Francisco Marques, 178 – Centro
Phone: (55 53) 3231-2255

Cranston Transportes Integrados Ltda.
Rua Marechal Floriano, 122 – Centro
Phone:(55 53) 3233-7600

Fertimport S.A.
Rua Carlos Gomes, 658 – Centro
Phone: (55 53) 3231-2488

Hamburg Sud Brasil Ltda.
Rua Francisco Marques, 183 – Centro
Phone: (55 53) 3233-7300

Meridian Agência Marítima Ltda.
Rua Francisco Marques, 160 – Centro
Phone: (55 53) 3231-4994

MB Agência Marítima Ltda. – Seven Stars
Rua Zalony, 160 /1.307 – Centro
Phone: (55 53) 3233-9696

Oceanus Agência Marítima Ltda.
Rua Francisco Marques, 183 – Centro
Phone: (55 53)3231-1355

Sagres Agenciamentos Marítimos
Avenida Major Carlos Pinto, 530 – Centro
Phone: (55 53) 3233-1133

Sampayo Nickhorn S.A.
Rua Riachuelo, 197/ 1º andar – Centro
Phone: (55 53) 3231-1477

Sampayo Brascar
Rua Riachuelo, 197 / 1º andar – Centro
Phone: (55 53) 3231-1477

Sea Wave Agência Marítima Ltda.
Rua Benjamin Constant, 185 / 303 – Centro
Phone: (55 53) 3231-3957

Sul Trade Transportes Integrados Ltda.
Rua Andrade Neves, 1613 – Bairro Centro
Phone: (55 53) 3235-3500

Supermar S.A.
Rua General Neto, 273 – Centro
Phone: (55 53) 3231-1122

Transhipps Br Agenciamentos Marítimos Ltda.
Rua Marechal Floriano, 45 – Centro
Phone: (55 53) 3233-6000

Vicente Morel Despacho e Agenciamento Ltda.
Rua Zalony, 160 – 7º andar cj 707 – Centro
Phone: (55 53) 3232-4329

Wilson Sons Agência Marítima Ltda.
Rua Riachuelo, 201/205 – Centro
Phone: (55 53) 3233-7700