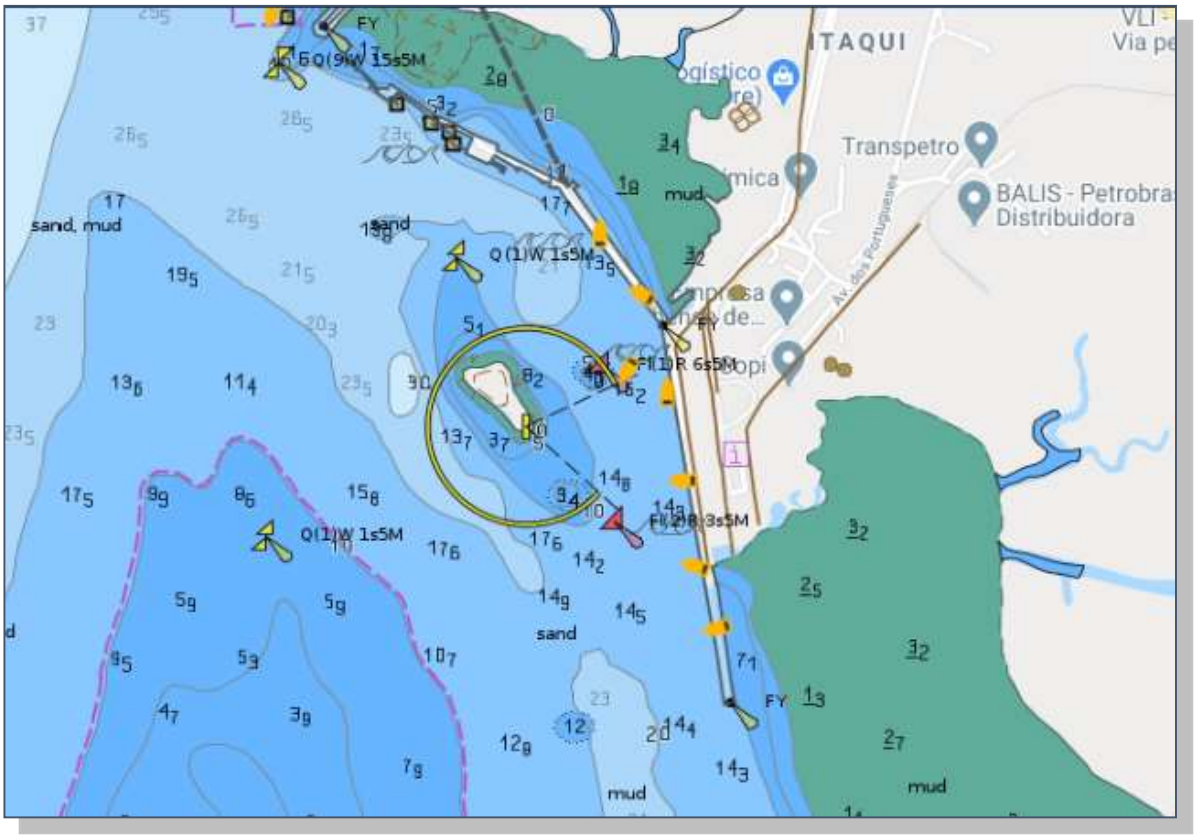
# PORT INFORMATION




**PORTO DO ITAQUI (PORT OF ITAQUI)**

## TASELIS - SÃO LUIS WATERWAY TERMINAL

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# 1. INTRODUCTION

This Port Information was prepared and reviewed by Petrobras Transporte S.A. (TRANSPETRO) that operates the São Luís Waterway Terminal, in the Port of Itaqui. It provides essential information for ships operating in the terminal. This document is also distributed internally in the organization, to the stakeholders of the port, local and national authorities, and has versions in Portuguese and English.
The information contained in this publication is intended to supplement, never replace or alter any type of national or international legislation, instructions, guidelines or official publications. Information that contradicts any item contained in the above-mentioned documents must therefore not be taken into consideration.
The Terminal reserves the right to alter any of the operational characteristics presented herein without prior notice.
If misleading information is found that needs to be updated, please contact:

- SÃO LUIS TERMINAL
- Telephone: (98) 3217-6501 Fax: (98) 3217-6502
- Address: Porto do Itaqui s/n – Itaqui – São Luís - MA –CEP 65085-370
- e-mail: optsl@petrobras.com.br

- PETROBRÁS TRANSPORTES S/A - TRANSPETRO
- Telephone: (21) 3211-9072
- Address: Avenida Presidente Vargas, nº 328 – Rio de Janeiro - RJ

The latest version of this Port Information can be obtained from the following address:
www.transpetro.com.br

# 2. DEFINITIONS

**Nautical Advisor (AN) –**
Its main activity is to serve as a reference for the
Terminal in nautical matters, acting as advisor to the manager and attending maritime authorities and the maritime community. As complementary attributions, it is responsible for coordinating the activities of the maneuver captains, nautical inspectors and STS superintendent, maritime and port activities, investigation of maritime accidents, raise the training needs and train, when necessary, the GIAONT members due to new legislation or any other activity designated by the Waterway Terminal Manager;**BM** – Low tidewater Stand
**BP** – Bollard Pull - Longitudinal static traction of vessel
**CAP –** Captaincy of the ports of Maranhão
**Initial CHART of STS** - Document issued by the terminal in the operations of loading and unloading, where the ground facilities are presented, the data of the vessels, the information on the voyage and observations supplementary information on the operation and safety and also where information on the operational conditions of the ships is requested.
**CBR** – Brazilian Tugboat Company
**CDA** – Environmental Defense Center
**COW** – Crude Oil Washing. - Washing of cargo tanks of ships that use their own oil on board, in order to reduce lees and remnants adhered to the bulkheads and bottom of the tanks and reduce the remainder on board.
**CRE** – Emergency Response Center

**DDSMS** - Daily Dialogue on Safety, Environment and Health - Dialogue done daily with the workforce in order to raise the level of information of workers with regard to the risks of their activities to safety of work, the environment and health. It also aims to generate exchange of experiences and information on ways to reduce accidents and incidents, prevent pollution and diseases.
**DHN** - Directorate of Hydrography and Navigation.
**DPC** - Directorate of Ports and Coasts of the Brazilian Navy.
**SQUAT effect -** Increased draft of a ship as a result of increased displacement speed, especially in restricted waters.
**EMAP** - Maranhão Port Administration Company
**ETA** – Estimated Time of Arrival
**GEC** – Special Contingency Group
**GIAONT** – Operational Inspection and Monitoring Group of Ships and Terminals. Group composed of the Nautical Advisor, Nautical Inspector, Captain of Maneuvers, selected according to the requirements defined in item 3.42 of the PP-3N1-00004 – PMO, attached to PP-1TP-00018-0. This group is subordinate technically to the Sectorial Management of Inspection and Certification (TP/DTM/CCM/INGER/IC), administratively to (GTRIP) and operationally to TA Manager.
**LPG** – Liquefied Petroleum Gas
**IBAMA –** Brazilian Institute of Environment
**IMO –** International Maritime Organization
**Nautical Inspector (IN)** - Its main activity is to perform the inspections of operational safety on vessels operating in the Terminals Waterway workers, and may accumulate the assignment of STS Superintendent.
**ISGOTT** – International Safety Guide for Oil Tankers and Terminals.
**Operational Safety Checklist (LVSO)** – Safety operational safety of ships for each operation.
**MA –** State of Maranhão
**Low tide** – Condition in which the tide reaches the minimum amplitude at a certain time of year.
**Syzygy tide** – Condition in which the tide reaches the maximum amplitude at a certain time of the year.
**MARPOL 73/78** - International Convention for the Prevention of Pollution from Ships.
**MBL** – Minimum brake loading
**MF** – Marine Fuel
**MGO** – Marine Gasoil
**Discharging Ship - Vessel** that transfers the cargo.
**Receiving Ship - Vessel** that receives the cargo.
**NOR - Notice of Readiness** - Notice of readiness, issued when the ship is in a condition to be ready for operation.
**LCP** – Local Contingency Plan
**PETROBRAS –** Petróleo Brasileiro S.A.
**PEI -** Individual Emergency Plan
**PM** - High tidewater Stand
**POB** – Pilot on board
**PRE** - Emergency Response Plan.
**SEMA –** Secretariat of the Environment
**SINPEP –** Integrated Electronic Standardization System of Petrobras
**SISCOPE –** Operations and Stays Control System
**HSE** – Safety, Environment and Occupational Health
**SOPEP - Ship Oil Pollution Emergency Plan** or minimize the consequences of pollution caused by ships.

**STS (Ship to Ship)** - Cargo transfer operation between ships with a ship moored alongside the other. It can be moored, anchored or navigation.
**STS Moored - (Ship-to-ship at Port or Double Banking)** - Operation of transfer of product between ships, moored alongside, with one of them docked at the pier.
**STS Anchored - (Ship-to-ship at anchor)** - Product transfer operation between ships, moored alongside, with one of them anchored.
**STS Provider** – Company contracted to organize and assist in the operation of ship to ship transfer. The services performed by these companies vary, but include from the provision of personnel and equipment to enable the ship to Ship transfer.
**STS Superintendent** – Terminal representative assigned to supervise and assist commanders in STS operations moored or anchored in sheltered areas.
**SWL - Safe Working Load** - It is the maximum load capacity that the equipment supports in its operation.
**TA-SELIS** – São Luís Waterway Terminal
**Deadweight Ton (DWT)** - Corresponds to the difference between the displacement total maximum and the light weight of the ship, i.e. what can be carried in cargo, fuel, water, ballast, provisions, crew.
**TRANSPETRO –** Petrobras Transportes S.A.
**UN-Bunker** - Petrobras Department that markets the bunker (MF and MGO)
**UTC** – Universal Time Control
**VETTING** – Vessel safety assessment process.
**VLSFO** – Very Low Surfer Fuel Oil
**VPQ (Vessel Particulars Questionnaire)** – Questionnaire with general data of ships.
**VTS -** Vessel Traffic Service

## 3. NAVIGATION CHARTS AND REFERENCE DOCUMENTS

Information regarding the port of Itaqui can be obtained from the publications of the Brazilian Navy, listed below.

### Nautical Charts (DHN)

| Area | Brazilian Chart |
|---|---|
| | **Brazil (DHN)** |
| ***From Cape Gurupi to the island of Santana*** | 400 |
| ***Nearby São Marcos's Bay*** | 410 |
| ***São Marcos Bay*** | 411 |
| ***Near the ports of São Luis and Itaqui*** | 412 |
| ***Port of Itaqui*** | 413 |

### Other Publications

| Type/Subject | Editor or Font | | |
|---|---|---|---|
| | **Number (DHN)** | **US Hydrographic Office** | **British Admiralty** |
| **Rules and Procedures of the Port Authority of the State of Maranhão** | **NPCP-Ma** | | |
| ***East Coast Navigation Support*** | **East Coast Route** | | |

| | | | |
|---|---|---|---|
| ***List of Brazil Lighthouses*** | **DHN** | | |
| ***Oiapoque Bay to Parnaíba River*** | **DHN** | **24020** | |
| ***Santana Island to Camocim*** | **DHN** | **24260** | |
| ***Cape Gurupi to Santana Island*** | **DHN** | **24270** | |
| ***São Marcos Bay*** | **DHN** | **24271** | |
| ***CHART from British Admiralty*** | | | **3958** |
| ***CHART from British Admiralty*** | | | **535** |
| ***Guide to Port Entry – ed. 2019/20 Shipping Guide*** | | **Whiter by Seaman Shipping International** | |

# 4. PORT DESCRIPTION

## 4.1 General Description

TA/SELIS is located in the port of Itaqui, near the city of São Luís (MA) and operated by Petrobras Transporte S.A. – TRANSPETRO.
Its activities consist of receiving, storing and delivering petroleum products and LPG, providing labor services in the Storage and Transfer of Petroleum Derivatives to the distributors installed in the Port, supplying Bunker to ships and tugs in the Port of Itaqui, Operationalization of cargo in train wagons. It acts as an export and cabotage warehouse for smaller terminals. Its area of influence covers the states of Maranhão, Piauí, Tocantins, Southwestern Pará, northern Goiás and northeastern Mato Grosso.

## 4.2 Location

### 4.2.1 Coordinates

The terminal facilities are located at the following coordinates:
02º35’12”S and 044º23’30’’W.

### 4.2.2 General Geographical Location

São Luís Waterway Terminal – TA/SELIS is located next to São Marcos Bay, State of Maranhão on the North/Northeast coast of Brazil. It is located 11 km west of the city of São Luis, being connected to it by highway.

## 4.3 Terminal Approaches

### 4.3.1 General Description

The **Port of São Luís** is located in a recess of the coast, the NW of the island of São Luís, which is formed by the estuary of the Anil and Bacanga rivers with geographical position 02°35’00” S 044°22’00”W.
The demand for the port of São Luís can be made at any time of the day or night, according to the rules of maneuvers and anchoring determined by the Port Authority of the State of Maranhão.
The demand of the port of São Luís, for the sailors coming from W and E, is made approving the buoy nr. 01 from the entrance of the channel, when it then guides itself towards the other pairs of buoys that demarcate the channel and according to the draft of the vessel to the anchorages determined by the Port Authority, or even the pair of buoys 19/24 for mandatory loading of pilot for mooring.
After performing deepening dredging of the entire surroundings of Guarapirá Island, between July 12 and 13, 2022, the signals components of the EMAP beacon (three buoys) were moved to their new definitive positions, in order to provide a greater maneuvering area for ships that dock and undock at the Port of Itaqui. There was no change in the anchoring devices of the

signals, given that the post-dredging depths found in the new positions are similar to the depths observed in the previous positions of said aids.

The channel signaling and the notable points, geographical accidents and hazards found in the approach to the port of Itaqui are described in section 5.3.8. of the East Coast Roadmap (DHN). And the information on the changes made to the buoys near Guarapirá Island will be described in the Notices to Navigators – DHN.

### 4.3.2 Anchorages

In almost the entire bay of São Marcos, the anchoring of ships is greatly hindered by the inadequate nature of the bottom, almost always of bad temper. In addition, throughout the bay of São Marcos, the strong flood or ebb tide, which can reach 6 knots, has caused the loss of iron on the occasion of the anchoring of ships, with a great risk of stranding in the numerous sandbanks and high depths existing in the bay. The Port Authority recommends to the Masters that, when anchoring their ships, they keep the crew in "Travel Regime" in order to have on board qualified personnel and in sufficient number for emergency maneuvers.

The most favorable occasion to reach these anchorages is about 4 (four) hours before dawn.

Ships with only 1(one) iron, or with machinery problems should in principle use the anchorages nr. 1, 2 or 3.

*" IT IS EXPRESSLY FORBIDDEN TO ANCHOR ANY VESSEL IN THE MANEUVERING AREA AND THROUGHOUT THE PORT ACCESS CHANNEL"*

Ships using the terminals and ports of São Marcos Bay must observe the specific anchorage areas provided for in the 400 series charts of the Hydrography and Navigation Directorate.

The anchoring areas designated by the Port Authority for the port of Itaqui are as follows:

| **Recommended or Designated Anchorages** | | | | | | |
|---|---|---|---|---|---|---|
| ***Name From Area*** | ***Latitude & Longitude*** | | | **Anchorage Radius in Miles** | **Minimum Depth in meters** | **Notes** |
| | Points | LAT S | LONG W | | | |
| UNO (1) | A | 01°58'5 | 044° 07,0' | 12.2 x 3.6 | 19 x 31 | • For ships above 80,000 DWT and draft greater than 11 m<br>• Vessels in dispute<br>• Ships undergoing major repairs |
| | B | 01°55.5 | 044°09,0' | | | |
| | C | 01°49.2' | 043°58,4' | | | |
| | D | 01°51.8' | 043°56.5 | | | |
| TWO (2) | A | 02°02,9' | 044°03,4' | 4.37 x 2.2 | 31 x 34 | • For ships with a draft greater than 20m. In this area, the navigator must pay attention to the existence of submarine cables in the West sector of the same. |
| | B | 02°05,4' | 044°03,4' | | | |
| | C | 02°06,0' | 044°07,2' | | | |
| | D | 02°04,4' | 044°06,1' | | | |
| THREE (3) | A | 02°08,3' | 044°08.7 | 4.40 x 1.10 | 26 x 33 | |
| | B | 02°10,9' | 044°09,' | | | |
| | C | 02°12.1' | 044°10,0' | | | |
| | D | 02°12.1' | 044°11,0' | | | |
| FOUR (4) | A | 02°19,2' | 044°12,2' | 2.18 X 1.15 | 15 X 38 | • Vessels with DWT less than 80,000 tons and/or 11m draft. |
| | B | 02°21.4 | 044°09.8 | | | |
| | C | 02°24,4' | 044°12,8' | | | |
| | D | 02°27,4' | 044°17,2' | | | |
| | E | 02°26,6' | 044°19,4' | | | |
| FIVE (5) | A | 02°22,2' | 044°20,3' | 4.90 X 1.0 | 14 X 32 | |
| | B | 02°25,0' | 044°21,3' | | | |
| | C | 02°24,4' | 044°22,2' | | | |
| | D | 02°20.1' | 044°20,4' | | | |

| Recommended or Designated Anchorages | | | | | | |
|---|---|---|---|---|---|---|
| ***Name From Area*** | ***Latitude & Longitude*** | | | **Anchorage Radius in Miles** | **Minimum Depth in meters** | **Notes** |
| | Points | LAT S | LONG W | | | |
| SIX (6) | A | 02°28,6' | 044°24.5' | | | Vessels with displacement up to 80,000 DWT and draft less than 11 meters<br>Note: The Anchorage in this area requires express authorization from the Port Authority and additional precautions that will be determined upon request. |
| | B | 02°29.2 | 044°24,0' | | | |
| | C | 02°30,6' | 044°25,4' | | | |
| | D | 02°29,6' | 044°26,0' | | | |
| SEVEN. (7) | A | 02°33,6' | 044°25,0' | | | Vessels with displacement up to 80,000 DWT and/or maximum draft of 9 meters |
| | B | 02°34,0' | 044°23,6' | | | Note: The Anchorage in this area requires express authorization from the Port Authority and additional precautions that will be determined upon request. |
| | C | 02°35,5' | 044°24,3' | | | |
| | D | 02°34,8' | 044°25,7' | | | |
| EIGHT (8) | A | 02°35,4' | 044°26,0' | | | Loads and discharges of fuels and explosives |
| | B | 02°34,8' | 044°25,7' | | | |
| | C | 02°35,5' | 044°24,3' | | | |
| | D | 02°36,8' | 044°24,8' | | | |

**Note**: There are other areas in the channel, whose use will only be possible if authorized by the Port Authority
Navigation agencies and pilotage keep the Port Authority informed of the areas in which the aforementioned ships are anchored.

### 4.3.3 Aid to Navigation

The nautical signaling for the port of Itaqui and adjacent terminals, Ponta da Madeira and Alumar, is made based on Lighthouses and light buoys.

#### 4.3.3.1 Lighthouses

In the area of São Marcos Bay and nearby, the following lighthouses are installed: Apeú, São João, Mangunça, Pirajuba, Pirarema, Alcântara, Ilha do Medo, Ponta da Areia, São Marcos, Araçagi and Santana.

#### 4.3.3.2 Light buoys

The access channel, the evolution basin and the anchoring areas are marked by light buoys, six of which are equipped with a radar reflector.
The Brazilian Navy publishes the characteristics of the nautical signaling of the Itaqui area in its list of lighthouses – (DHN).

### 4.3.4 Port Limits

The area of the Organized Port of Itaqui is defined in Ordinance No. 238, of 05/05/94, of the Ministry of Transport and consists of:

a) By the land port facilities delimited by the polygon defined by the vertices A, F, G, 6, H, J, L and C, of UTM Coordinates listed below:

| POINT | COORDINATE X | Y-COORDINATE |
|---|---|---|
| A | 569,463.723 | 9,716,244.655 |
| F | 570,804.613 | 9,716,841.685 |
| G | 571,437.291 | 9,715,973.294 |
| 6 | 570,689.926 | 9,715,165.913 |
| H | 571,460.874 | 9,710,563.814 |
| J | 570,859.257 | 9,710,463.028 |
| L | 570,034.806 | 9,715,384.435 |
| C | 569,719.675 | 9,715,669.811 |

The polygonal covers the entire pier, berthing and berthing pier, warehouses, buildings in general and internal roads and railways, as well as the land along these areas and in their surroundings belonging to the Union, whether or not incorporated into the assets of the Port of Itaqui or under its custody and responsibility.

b) The maritime infrastructure, comprised in the polygon ABCD defined by the vertices of geographical coordinates indicated below:

| POINT | LATITUDE | LONGITUDE |
|---|---|---|
| A | 02º37'00" s | 44º23'00" w |
| B | 02º34'15" s | 44º23'00" w |
| C | 02º34'15" s | 44º22'00" w |
| D | 02º37'00" s | 44º22'00" w |

The polygonal covers waterway accesses, anchoring areas, evolution basin, main access channel and adjacent areas to the margins of the land facilities of the Organized Port of Itaqui.

### 4.3.5 Port Control or VTS

The port control is carried out by **EMAP** - Tel: PABX (0xx98) 3216-6000 Fax: (0xx98) 3232.4758 CEP 65085-370 and by the Port Authority.

VTS – Vessel Traffic System **–** The Itaqui Port Complex does not have this resource.

### 4.3.6 Pilotage

Inside or outside the port area, Pilotage is mandatory for all ships destined for the Port of Itaqui. Pilots can be requested through the vessel's **Agency** at least 4 hours before arrival. They can also be requested through VHF Channels 16 or 14.
In undocking, Pilotage is requested by the Agency according to the forecast of completion of the operation provided by the Terminal and/or Ship.
The Pilot's boarding time follows that determined in the **Standards for Maneuvers of the São**

**Marcos Bay Port Complex,** updated by the Port Authority of Maranhão, through Ordinances that can be consulted on the website: www.marinha.mil.br › capitania-dos-portos-do-maranhao

#### 4.3.6.1 Pilot boarding

The pilot's embarkation and disembarkation point is defined as the point 1,2 miles W from the lighthouse of the island of Medo or another designated point on the DHN 412 nautical chart.

#### 4.3.6.2 Responsibility for the maneuver

The Master of the vessel is solely responsible for the maneuvers, being responsible for all the information to be provided to the pilot on any peculiarity, specific conditions or difficulties existing; such as: deficiency of some machinery equipment, problems or breakdowns of navigation aids, mooring lines or any element that may affect the safety of the mooring or unmooring maneuver as well as the operation of loading or unloading the ship.
Once moored, the ships must be safely moored and positioned to carry out their operations without risk to people, equipment and the environment.

If the Master does not accept the pilot's instructions, in order to preserve the safety of the ship's maneuver, the Port Master, through the ship's agency, must be notified in writing. This fact should also be reported to the Terminal by the ship's agency.

### 4.3.7 Tugs and Port Services

The available tugboat services are provided by the ship's agency, in accordance with the Rules of Maneuver approved by CPMA through Ordinances. The rules regarding the number of tugboats to be used are described in these Ordinances.

Tugs and towing services for mooring, unmooring and evolution of ships in the Port of Itaqui are provided by specialized companies.

The Rules/Rules for the employment of tugboats are established by the "Rules and Procedures of the Port Authority of Maranhão – NPCP-MA", which may be acquired in the Port Authority or in direct contact with the Agent or directly on the website of the Port Authority over the Internet.

Ships must have mooring lines of good quality and in good condition, as well as in sufficient quantity to promote a safe mooring to the ship, the tugboats do not provide towing rope for these maneuvers.

The tugboats available in São Luís have a firefighting system.

The available tugboats are listed in item 8.4.2, and this list may undergo eventual changes according to the needs of emergency or scheduled repairs. Shipping and Pilotage Agencies are always up to date on this availability.

The form of communication between tugs and ships during mooring and unmooring maneuvers is through VHF radio in channels defined by the Pilotage and Port Authority. Such devices are continuously connected in order to respond to any call from a ship moored at the pier or from terminal operation personnel. As an alternative in the event of failure of ship or tug communication equipment during maneuvering, ships will use internationally known regulatory whistle signals for this purpose.

#### 4.3.7.1 Boat services

a) **Speedboats for personnel transportation** – The speedboat service is normally performed by the pilot's speedboat. If necessary, this service may be requested from the ship's agent in advance.

b) **Pilotage Boat** – The pilot uses the boat proper to the pilotage of the port of Itaqui.

c**) Boats for delivery of provisions** – There are several companies that serve the transportation of various materials to the anchored ships and can be requested in advance by the ship's Agency. **TRANSPETRO** does not recommend these tasks, due to the meteorological conditions, characteristic in the São Marcos bay that make these maneuvers unsafe. It is advised that the supply of provisions and various materials to ships should be made when they are moored. There are EMAP Procedures that must be followed for this type of service, and when the ship is operating, Transpetro Procedures prescribed in PMO TA & TM 2011 must be observed and the EMAP Operational Control Center and TRANSPETRO must be consulted for safety guidelines. The companies contracted to perform the service must be registered with EMAP and duly authorized to operate in the primary area of the port.

#### 4.3.7.2 Mooring service

**EMAP** has its own team to assist with the cables in the mooring and unmooring tasks of the ships. Today the moorings are carried out by accredited companies, hired directly by the Navigation Agencies. We currently have 4 accredited companies:
- Company: International Maritime: Contact: (98) 3089-3411 – 99225-1532 E-mail: comercial@internacionalmaritima.com.br;
- Smart Sea : Contact: (98) 98177-4692 – 99910-3125 E-mail: comercial@smartsea-ma.com;
- Starmar Navegação – Contacts: (98) 99175-4787 – 88115-4448 E-mail: starmar@starmarservicos.com.br;
- Venus Marítima – Contact: (98) 98520-9147 – 98781-3290 E-mail: venus@venusmaritima.com;

### 4.3.8 Risks to Navigation

The environmental conditions and background characteristics, as well as the dimensions of the access channel and maneuvering area do not offer restrictions on navigation. However, particular attention should be paid to the speeds of currents caused by large tidal variations.
The main risks for the vessels that will operate in the terminal are as follows:

**CHART 440**

Extensive and nearby highs, comprised between markings 038° and 066° from Pirajuba lighthouse and at distances of 24.7 to 52 miles, where a minimum of 10 meters is prised.

Extensive and close high-bottom, comprised between markings 016° and 046° from Araçagi lighthouse and extending to a maximum distance of 43.1 miles, at marking 039°, where a minimum of 8.9 meters is prone.

High-Bottom, between markings 015° and 020° from Araçagi lighthouse and at distances of 20.7 and 23.2 miles, where a minimum of 8.1 meters is taken.
Extensive high-bottom, between markings 027° and 031° of the Araçagi lighthouse and at distances of 24.5 and 26.9 miles, where a minimum of 7.6 meters is plumbed.

High-bottom, at marker 317° from Santana lighthouse and at a distance of 6 miles where a minimum of 5.9 meters is plumbed.

Extended high ground between markings 006.5° and 060° from the Santana lighthouse and at distances of 11.5 and 16.8 miles, where a minimum of 11.8 meters is plumb.

High-bottom, at marking 068° from Santana lighthouse and at the distance of 13.4 miles, where 9.9 meters plumb.

High-bottom, at marker 075° from Santana lighthouse and at a distance of 12.4 miles, where it plumb 8.8 meters.

**CHART 411**

**Coroa dos Ovos** – Extensive high-bottom, whose limit SE is in the marking 352° of the Pirajuba lighthouse and in the distance of 5.6 miles with a large area that covers and discovers in the low water.

**Pedras de Itacolomi** – With ENE limit in the 342° mark of the Pirajuba lighthouse and in the distance of 3.7 miles, which they discover in the low water.

**Banco de Itacolomi** – With N end at the 028° mark of the Pirajuba headlight and at a distance of 5.4 miles, where a minimum of 2.9 meters is assumed.

**Banco das Almas** – Extensive high-bottom of fine sand, extending to NE, with NE and SW limits in the markings 065° and 127° of the Pirajuba lighthouse and in the distances of 11.1 and 7.3 miles, where a minimum of 3.9 meters is assumed.

Bent hull, at the 320° mark of the Araçagi lighthouse and at a distance of 8.8 miles, dangerous for navigation.

**Banco do Meio** – Extensive high-bottom of sand that extends to the NE and SW is in the markings 010° and 311° of the Araçagi lighthouse and in the distances of 13.9 and 8.8 miles, where a minimum of 2.1 meters is assumed, bursting in the low water.

**Banco Darlan** – Extensive high-bottom of fine sand, between the markings 358° and 342° of the Araçagi lighthouse at distances of 9.2 and 7.9 miles, where a minimum of 3.7 meters is assumed.

**Bancos Coral do Norte and Coral do Meio** – Extensive high-deep sand, with SW limit in the 352° marking of the Araçagi lighthouse and in the distance of 5.4 miles, where a minimum of 0.2 meters is pummeled, bursting in the low water.

**Banco Coral do Sul** – With SW limit in the 330° marking of the Araçagi lighthouse and in the distance of 3.9 miles, with bollards that are uncovered in the low waters and present blowouts.

**CHART 412**

**Banco da Cerca** – Extensive high-bottom, with SW and NE limit in the 007° and 038° markings of the Ilha do Medo lighthouse and in the distances of 1.7 to 5.2 miles, where a minimum of 0.2 meters is assumed, bursting at low water.

**Banco de São Marcos** (Cabeços) – Between the markings 030° and 054° of the São Marcos lighthouse and at distances of 0.9 to 1.8 miles, which is uncovered and bursts at low water.

Extensive high-bottom, between the markings 050° and 055° of the lighthouse São Marcos and in the distances of 3.4 to 3.8 miles, where a minimum of 3 meters is assumed.

High-bottom at the 060° mark of the São Marcos lighthouse and at a distance of 3.7 miles, where 4.5 meters are plumed.

High bottoms in the marking 072° of the São Marcos lighthouse and in the distance of 3.7 miles, where 4.5 meters are plumed.

High-bottom in marking 152° of the Alcântara lighthouse and in the distance of 2.7 miles, where 5 meters are plumed.

**CHART 413**

High-bottom in the marking 018° of the Ilha do Medo lighthouse and in the distance of 1 mile, where 8.6 meters are plumed.

**Pedra do Severino –** At the 033° mark of the Ilha do Medo lighthouse and at a distance of 1 mile, where 2.4 meters are plumed.

Extensive high-bottom with stones, between the markings 054° and 062° of the Ilha do Medo lighthouse and in the distances of 1.1 to 1.6 miles, where a minimum of 1.4 meters is assumed.

**Recifes da Ilha do Medo** – Surrounding the island and extending NE up to 0.58 miles from the lighthouse, covering and discovering.

Wrecked ship "Hyundai New World", at the 262° marker of the lighthouse Ilha do Medo and at a distance of 3.3 miles, where they plumb from 2.5 to 8 meters.
**Cabeço Mearim** – Extensive high-bottom with stones, between the markings 213° and 218° of the Ilha do Medo lighthouse and in the distances of 1 to 1.3 miles, where a minimum of 4.4 meters is assumed. Beacon with isolated hazard light buoy.

High-bottom with stones, involving the island of Guarapirá, where 3.4 to 10 meters plummet. Its NNW, NE and SE extremes are beaconed with luminous buoys.

Pedra in the 172° mark of the Ilha de Guarapirá lighthouse and in the distance of 0.43 miles, where 12 meters are plumed.

**Banco dos Lanzudos** – Extensive high-bottom of sand, which undergoes periodic modifications. Its part N is formed by two tips, where less than 10 meters are plumed and from which the depths decrease to the area it discovers with a half tide of ebb. The northern end of the tip plus E is at the 257° mark of the Guarapirá Island light and at a distance of 0.55 miles, being marked with a North cardinal light buoy.

### 4.3.9 General Restrictions

Maneuvering of ships during the night, there are no restrictions, except for specific conditions, such as: absence of light beacons, occurrences of cyclical events, natural or not, or other joint decisions between the Pilotage and the Companies involved that may require time restrictions.

The maximum recommended speed for ships in the mandatory Pilotage area must be a maximum of 8 (eight) knots.

The ship's masters and pilots decide on the current and wind conditions for each case, with no minimum or maximum value stipulated as a general or specific rule.

**Maneuver restrictions**. Specific cases for maneuvers in the Port Complex of São Marcos Bay**.**
The Port of Itaqui uses **Vale**'s **tidal table**, approved by the Navy Hydrography Center, as a reference for setting times for High and Low Seas, this defines the maneuvering windows in the Port Complex of São Marcos Bay, according to Ordinances issued by CPMA (see item 4.3.6.)
The updated Tabua de Maré and other information can be found on the EMAP website http://www.portodoitaqui.ma.gov.br/.

## 4.4 Maneuvering Areas

The **evolution basin** is located between the terminal of Ponta da Madeira (chart 413) to the east, parallel 02°34'5 S to the south and the buoys No. 23 and 25 to the west; the **depth** varies from 23 m on the docking line of the pier to 35 m near buoy 25;
The **width** of the basin is 0.8 nautical miles; and the **length** is about 2 miles.
In this area, the anchoring of any vessel is prohibited, except with the authorization of the Port Authority.

### 4.4.1 Aid for Navigation and Mooring

The Terminal does not have navigation aid equipment. However, as an aid to the mooring/unmooring maneuvers of the ships, tugs are used, according to the size of the vessel and the pilotage rules, approved by the Port Authority. The Terminal Operator, together with the mooring team and the Transpetro Safety Inspector, assists the ship's Captain and the Pilot to position it in order to enable safe mooring and access as well as the connection of the hoses for the operation.

### 4.4.2 Depth Control

The points that limit the maximum draft for mooring and unmooring in the organized port of Itaqui are in the access channel and are described in the nautical charts according to sections 4.3.8 and 4.3.9.
EMAP, together with the Port Authority, makes periodic bathymetric records of the depths and drafts of the access channel, evolution basin and berths of the port of Itaqui.

### 4.4.3 Maximum Dimensions

The access channel has a minimum natural depth of 23 m, an approximate width of 500 m and a length of 101 km. The maximum allowable draft is 22.3 m.
The internal Channel offers a minimum depth of 15 m, approximate width of 280 m and the maximum authorized draft is 14.5 m.
The maximum permissible dwt, Length, Mouth and Draft for each berth are listed in section **6.2 of this.**

## 4.5 Environmental Factors

**Climatic Conditions**

Maranhão has several climatic patterns, all tropical, but with different amounts of rainfall and varied vegetation coverages, with a warm and semi-humid tropical climate and with an average

**temperature** of 26.7°C ranging from 23.4ºC (in winter) to 31ºC (in summer) in the capital, São Luís and on the coast, with good weather conditions in the Port of Itaqui and adjacent areas.

| AIR TEMPERATURE PORT OF ITAQUI | | | |
|---|---|---|---|
| MONTHS | MAXUMUM AVERAGE | Minimum Average | MONTHLY AVERAGE |
| January | 30.6 | 23.7 | 26.8 |
| February | 30.2 | 23.3 | 26.4 |
| March | 30.2 | 23.3 | 26.3 |
| April | 30.4 | 23.3 | 26.3 |
| May | 30.9 | 23.2 | 26.3 |
| June | 31.2 | 23.0 | 26.4 |
| July | 30.9 | 22.7 | 26.2 |
| August | 31.4 | 22.9 | 26.6 |
| September | 31.5 | 23.7 | 27.0 |
| October | 31.5 | 24.0 | 27.2 |
| November | 31.4 | 24.0 | 27.3 |
| December | 31.3 | 24.1 | 27.2 |
| DHN SOURCE | | | |

**Atmospheric Pressure** – The annual average is around 1,012mb

**Relative humidity** during the year is about 82%

**Siltation Rate**

The silting rate of the Port of Itaqui is considered inexpressive, making dredging and maintenance necessary only along the berths and only every 5 (five) years. The silting in the berths varies according to the time of year (rainy season and dry season), and our dredging is carried out on demand, after the bathymetries we do every 3 months. The last dredging campaign in berths 100 to 104 was carried out in July 2022.

Additional meteorological information for the area is provided in the following sub-items:

### 4.5.1 Predominant Winds

In the maritime region are those of the East, with annual average frequency of 54.25% and Beaufort strength between 3 and 4; those of the Northeast, with 19.41% of annual average frequency and Beaufort scale varying between 3 and 4

### 4.5.2 Waves and Vacancies

The Port of Itaqui, due to its location, is protected from waves generated on the high seas. The waves on site, 1.10 m with periods of 6.0 seconds, are formed in the bay of São Marcos itself, caused by local winds

### 4.5.3 Precipitation

The period of highest rainfall concentration ranges from January to May, called in the region as wintering, where intense rainfall of short duration occurs, with a maximum precipitation of 472.6

mm/month, referring to April. In the dry season, which runs from August to November, the level of precipitation decreases to a minimum of 10.5 mm/month in November. The month of December is considered as a transition month

### 4.5.4 Lightning Storms

They are not frequent and may occur in summer seasons, in the afternoon and early evening. The elements that contribute to its incidence are rare cold fronts and possible high temperatures during the day.

### 4.5.5 Visibility

Visibility is considered good, but can be reduced in the rainy season. The months of February, March and April are the ones with the highest percentage of covered sky, which coincides with the most intense period of rainfall in that area. During this interval of the year, the measurements recorded variations around 77%. The table below shows the average cloudiness indexes in the Port of Itaqui (Source: DHN):

| MEDIUM CLOUDINESS PORT OF ITAQUI | |
|---|---|
| **MONTHS** | **TOTAL INDEX (0-10)** |
| January | 5 |
| February | 6 |
| March | 6 |
| April | 6 |
| May | 5 |
| June | 4 |
| July | 3 |
| August | 3 |
| September | 3 |
| October | 4 |
| November | 4 |
| December | 5 |

### 4.5.6 Tidal Currents and other Currents

The circulation of waters in São Marcos Bay is governed by tidal variations.

The minimum values of the currents occur close to the upholstery and the maximum values occur from 3 to 4 hours after the peak in the leaks, and from 2 to 3 hours after the low-water in the floods. The currents are reverse, present the North to Northeast direction in the ebbs and, after the upholstery, reverse the direction south to southwest during the floods.

In the Evolution Basin, flood currents range from 4.3 knots in syzygy to 3.7 knots in neap, and in Vazante, they range from 5.1 knots in syzygy and 4.2 knots in neap. The nautical chart 413 provides more information on the currents in the Port of Itaqui.

### 4.5.7 Variation of Tidal Levels

The maximum draft for berthing (18.5 meters) in berth 106 was calculated due to the worst tide condition.

The tide at the Port of Itaqui is of the semi-diurnal type, with the following data observed in the vicinity of the Port of Itaqui and at the Terminal of Ponta da Madeira:

| | |
|---|---|
| Highest astronomical tide (HAT) | 7.00 m |
| Smallest astronomical tide (LAT) | -0.20 m |
| Mean High Water Springs (MHWS) | 6.27 m |
| Mean High Water Neaps (MHWN) | 5.02 m |
| Mean Low Water Springs (MLWS) | 0.59 m |
| Mean Low Water Neaps (MLWN) | 1.84 |

Source: Vale

Tides vary in phase and amplitude along the access channel. The tides of the initial stretch of the channel, buoys No. 1 and 2, occur 75 minutes before and with an amplitude of about 60% of those observed in the Port of Itaqui. The upholstery of the tide is about 69% of the amplitude for the same tide.

The maximum tides reach 7.1 m, occurring in the months of March and September, with an average tidal variation of 3.4 m.

### 4.5.8 Measurements

The Port of Itaqui has the **SIMPOT** system that provides real-time information on tidal height and speed and direction of currents. It consists of a radar tide gauge located in berth 106 and two ADCPs, one located between berths 99 and 100 and the other located at the north end of berth 108.

## 5. DOCUMENTS AND INFORMATION EXCHANGE SHIP X TERMINAL

The following items must be provided by the Terminal or vessel as indicated in the table.

| Information | Prepared by: | | | Delivered to: | | | Feedback |
|---|---|---|---|---|---|---|---|
| | Terminal | Ship | Both | Terminal | Ship | Both | |
| **Before Arrival** | | | | | | | |
| Pre-Operational Information | x | | | | x | | The agent sends to the ship |
| Estimated Arrival (ETA) and information on the vessel and operations | | x | | x | | | The ship's agent receives and transfers to the terminal |
| **Prior to Cargo Transfer or Supply** | | | | | | | |
| Essential information about the Terminal | X | | | | X | | Initial Chart from SISCOPE |
| Cargo/slop/ballast details on board | | X | | X | | | During initial release |
| Information essential to the operation. *(complete on site)* | X | | | | X | | During initial release |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Operational Safety Checklist – LVSO. Ship/Shore | | | X | | | X | According to Item 26.3 of ISGOTT. |

| During the Loading, Unloading or Supply Operation | | | | | | | |
|---|---|---|---|---|---|---|---|
| Ship/Shore Operational Safety Checklist Re-check | | | X | | | X | According to Item 26.3 of ISGOTT. |

| After Loading, Unloading or Fueling Operation and Before Departure | | | | | | | |
|---|---|---|---|---|---|---|---|
| Information required for undocking the Vessel | | | X | | | X | Quantity of fuel and water on board |
| | | | | | | | |
| **After Undocking, at the exit of the port** | | | | | | | |
| Information relating to the output data of the Porto | | X | | | X | | Upon disembarkation of maritime pilots and departure from port |

# 6. PORT/TERMINAL DESCRIPTION

## 6.1 General Description

Itaqui has eight operational berths with depths ranging from 12 to 19 meters, of which the port has a docking berth with 06 berths, being designed to receive ships up to 100,000 dwt and 02 liquid bulk pier with projected capacity for ships up to 155,000 dwt.

## 6.2 Physical Details of Cradles operated by TRANSPETRO.

| BERTH | TYPE | CRIB LENGTH (meters) | DEPTH (meters) | BEAM (maximum) | LOA (maximum) | BUSY PRODUCTS | MAX SIZE (dwt) | DRAFT MAX (meters) |
|---|---|---|---|---|---|---|---|---|
| 102 | Wharf | 223 | 12 | 40 | 200 | LPG BUNKER | 80,000 | 11,5 |
| 104 | Wharf | 200 | 15 | 40 | 183 | LPG, LIGHT, DARK and BUNKER | 100,000 | 14,5 |
| 105 | Wharf | 280 | 18 | 45 | 229 | BUNKER | 150,000 | 17,5 |
| 106 | Pier | 340 | 19 | 50 | 280 | LIGHT, DARK and BUNKER | 155,000 | 18,5 |
| 108 | Pier | 300 | 15 | 40 | 245 | CLEAR | 91,600 | 14,5 |

*SOURCE: EMAP*

## 6.3 Recommended Mooring and Mooring Arrangements.

### Berth 102, 104 and 105

| Vessels | | Mooring (Bow/Stern) |
|---|---|---|
| LOA | DWT | |
| ≤ 150 m | ≤ 20,000 ton | 3 - 1 - 1 |
| > 150 m and ≤ 190 m | > 20,000 ton and ≤ 40,000 ton | 3 - 2 - 2 |
| > 190 m | > 40,000 ton | 4 - 2 - 2 |

**Cradle 106 and 108**

| Vessels | | Mooring (Bow/Stern) |
|---|---|---|
| LOA | DWT | |
| ≤ 190 m | ≤ 40,000 ton | 3 - 2 - 2 |
| ≥ 190 m | ≥ 40,000 ton | 4 - 3 - 2 |

*SOURCE: EMAP*

## 6.4 Characteristics of the berth for Loading, Unloading and Supply.

| BERTH | PRODUCTS | ROWS | HOSE FLANGES | RECEIVE & SEND | TEMP. °C | | FLOW RATE (MAX.) M³/h | PRESSURE (MAX) 17kgf/cm² |
|---|---|---|---|---|---|---|---|---|
| | | | | | MIN | MAX. | | |
| 102 | LPG | 1 x 8" | 2 X 8" API | RECEIVE | +5 | 45 | 300 | 17 |
| | MGO | 1 X 6" | 1 X 4" API | SENDS | 15 | 40 | 100 | 7 |
| | MF | 1 X 10" | 1 X 4" API | | 40 | 60 | 200 | |
| 104 | CLEAR | 1 X 12" E 1 X 18" | 8 X 8" API | RECEIVE E SENDS | 15 | 40 | 1200 | 7 |
| | MGO | | 1 X 4" OR 1 X 8" | | | | 100 | 7 |
| | DARK | 1 X 14" | 3 X 8" API | | 60 | 70 | 800 | 7 |
| | MF | | 1 X 4" or 1 X 8" | | 35 | 60 | 200 | 7 |
| | LPG | 1 X 8" | 1 X 8" | RECEIVE | +5 | 45 | 300 | 17 |
| 105 | MF | 1 X 10" | 2 X 6" | SENDS | 30 | 60 | 300 | 7 |
| | MGO | 1 X 4" | 2 X 4" | SENDS | 30 | 45 | 200 | 7 |
| 106 | CLEAR | 1 X 14" 1 X 18" | 7 X 8" API | RECEIVE AND SEND | 15 | 40 | 800 | 7 |
| | MGO | | 1 X 4" or 1 X 8" | SENDS | | | 100 | 7 |
| | DARK | 1 X 10" | 1 X 8" API | RECEIVE AND SEND | 60 | 70 | 1200 | 7 |
| | MF | | 1 X 8" | SENDS | 35 | 60 | 200 | **7** |
| 108 | CLEAR | 3 X 8" 2 X 14" | 5 X 8" | RECEIVE AND SEND | 15 | 40 | 1200 | 7 |

## 6.5 Management and Control

The Terminal Control Room (Cargo Control Center) is located in the Administrative area near the tank area about 1.5 km from the port. In this room, the shift supervisor and the room operator act, where the controls of the operations in the various berths are carried out, through the radar measurement system and mass balance system, as well as controlling the operations of pumping products to other neighboring terminals, according to the operational planning defined by Transpetro logistics in Recife and Rio de Janeiro. Attached to this room is the Operation Programming and Logistics Room, where the CTO – Operational Technical Coordinator, the

Terminal Operator and the Administration and Control Technicians who carry out the entire documentary process of the Terminal operations are located.

The communications made with the ships and other Terminals and other operators involved in the operation, are carried out through VHF radios in maritime frequency (**channel 06)** previously combined and registered. A secondary means, via telephone 0xx98 3217 6508/6507, is agreed in case of failure in the main system. This channel is also used in ***Emergencies***.

## 6.6 Main Risks with the ship moored

The maximum tidal variation of about seven meters is an item of vulnerability for the ship that is moored in the berth. When there is an incidence of current in the low waters, there is a risk of removal of the ship from the stern or bow of the pier fenders, regardless of the edge that is moored.
In the berths at berths 102 and 104, greater attention of the ships' crew is requested in relation to the mooring lines, since usually the same bollard is used by two different ships moored in sequential berths, and there may be a need to relieve bollard cables, to facilitate the maneuvering of another ship. There may also be involuntary displacement of ships by action of another passing in the channel at a short distance and with speed above the limit, or even be hit by another unruled ship in the channel.

# 7. PROCEDURES

During the ship's stay in port, several actions are carried out to enable safe operation and manage risks in order to minimize them. In all phases, as described in the sub-items below, the measures are taken in order to facilitate the operations and plan them properly.

## 7.1 Before Arrival

6.6.1 **Refusal of operation**
Based on information from SIRE and SIS3, Transpetro and Petrobrás' Vetting sectors in RJ assess the ship's history in various aspects, request updated information from the ship's operator and if there are pending issues that may compromise the operation, the ship will not be accepted to operate by Transpetro, in the Port of Itaqui. Weekly, these sectors send to the terminals the List of Ships accepted to operate, in a certain period, near the end of this, and the ship has not yet operated, the agent requests a new evaluation, explaining the reasons and submits the appreciation of the Vetting areas of Transpetro and Petrobrás. After mooring and before operation, the ship must be inspected by the Safety Inspector, in accordance with the ISGOTT applying the LVSO and if it detects any item not met the ship will not be released to start any operation.

**7.1.2 ETA -** Ships destined for the facilities of the Port of Itaqui must inform the **estimated arrival** (ETA) 72 and 48 hours in advance, directly to the respective agent, by email. The change or confirmation of the arrival of the ship must be communicated at least 24 hours in advance. In the ETA information, it must be specified whether the mentioned time is local or GMT.

**7.1.3 Pre-operational Information** – In advance of 48 hours prior to arrival, the Agency is instructed to send the Pre-operational **Information to the** ship, whose purpose is the exchange of essential prior information to facilitate and expedite the operation of the ship. If fueling is scheduled for the ship, the **Bunker Preliminary Information Exchange** is also sent for the same purpose.

## 7.2 On Arrival

### 7.2.1 Visit by Port Authorities

Vessel informs **HOC** and issues **NOR** to the Agent who in turn informs the Port Authorities, the Maritime Authority and the Terminal, which reverts with the forecast for berthing. As a rule, visits are carried out only after the Vessel has docked.

### 7.2.2 Sourcing Requests

Requests for Fuel Supply must be sent to Petrobras Bunker in RJ through its agent or Shipowner/Operator.

### 7.2.3 Ship/Terminal Information Exchange

The terminal information for the ship and vice versa are exchanged prior to arrival and during **initial release after berthing,** as well as relevant Safety information such as escape routes, Emergency flowchart, emergency contacts, list of port telephones according to item 9.1, and details of Exit Routes in case of evacuation of the ship's crew in emergency.

## 7.3 Mooring

### 7.3.1 Vessel mooring system

The mooring to be effectively carried out for each ship shall be considered satisfactory and safe by the Master and the Pilot, considering the operational needs between the Ship and the Terminal, as well as providing safe access in all situations, including Emergency, according to ISGOTT.

The mooring lines must deserve permanent care in order to keep the ship always moored, they must be kept under adequate tension during operation, with the winches under brake, and the use of automatic tension winches is not allowed.
All must be of the same type, gauge and material (fiber or wire), and, whenever possible, of the same length, and the use of mixed moorings is not allowed.

They must all be long enough to reach the most distant dolphins or bollards and be arranged as symmetrically as possible in relation to the middle of the ship.
The crossbars must be oriented as perpendicularly as possible to the longitudinal axis of the ship and passed as far forward and aft as possible.

Springs shall be oriented as parallel as possible to the longitudinal axis of the ship.

The maximum voltage applied to the cables should be 55% of its **MBL**. If they are used fiber harnesses on wire ropes, the harnesses should be of the same type, with a gauge 25% more than the minimum breaking load of the wire rope, of the same material and length.

The horizontal angle of the head and stern lines in relation to the direction of a crossing perpendicular to the longitudinal axis of the ship shall not exceed 45°.

Approach, mooring and unmooring maneuvers should be performed at low speed, preferably against the current.

Care must be taken when passing the ship's stern mooring lines to the mooring boats in order to avoid accidents with the ship's propellers and mooring vessels.

The use of automatic tension winch is not allowed. The recommended moorings consider that the cables and winches of the ships are in good condition.

Double care should be taken with the crossbars and springs in the period of 1.5 to 4.5 hours before high and low water. Especially, 1.5 hours after high tide, when the **largest stream currents start.**

If the ship does not have enough cables, or preferably steel, they are not, or have cables and winches in poor condition, or the crew is not in a position to maintain the mooring according to the recommendations, additional measures will be taken by the Terminal Operations Safety Inspectors, such as:

a) Do not start the operation;
b) Stop the operation, if it has already started;
c) Keep tugs on stand-by or alongside and/or as a last case;
d) Undocking the ship.

The costs and time arising from these additional security measures shall be the sole responsibility of the Master/Shipowner.

While moored, ships must always keep the machines on **stand-by**, ready to go into operation in an emergency.

**EMAP** has available and trained personnel to handle the mooring lines of the ships in the mooring and unmooring maneuvers. All handling of the cables on board during this maneuver must be carried out by the ship's crew.

### 7.3.2 Ship / shore access

The Port does not have an access ladder, the ship must use its own gangway or board ladder in accordance with the Emap Welcome CHART.

## 7.4 Prior to cargo transfer

### 7.4.1 Safety Checks.

Soon after the Mooring and before the Start of the Operation, in order to verify its operational safety conditions, equipment and procedures, the GIAONT carries out the Safety Inspection, according to the Operational Safety Checklist, based on the latest edition of the ISGOTT, and in accordance with the type of ship.
At the end, it must reflect the exact condition of the ship, at the time the Giaont Inspector must present the result to the ship's Commander or its legal representative, if any non-compliant item that may affect the safety of the operation is observed, it will only start after the pending issue is remedied and the ship is considered safe to operate. The Inspector must immediately report this pending to the Nautical Advisor and the Shift Supervisor, and even remedied must be registered in Annex IV and considered in the evaluation of the ship in Annex V of the PMO, and registered in the SIGO system.

### 7.4.2 Connection of the Hoses – Notes.

The Terminal uses an insulating joint or a line of electrically continuous hoses containing a discontinuous hose in the ground x edge connections. The hoses have records and control of hydrostatic test, vacuum and electrical discontinuity, and are tested at intervals not exceeding 1 year. Test Certificates are available for consultation or copying.
The resources required for connection are agreed upon on the first contact of the ship with the terminal, during the initial release.
The ship must arrange the diameter of the cargo outlets in order to allow the connection of the hoses. (Inform in advance).

After connecting the hoses, they are tested for tightness, using the static pressure of the terminal column for this purpose.
A ship's representative must accompany the entire operation and must be close to the ship's cargo outlet.

### 7.4.3 On-board measurements

On-board measurements shall be carried out by ship's personnel and accompanied by terminal representatives and cargo inspectors. The material used must be properly grounded and the measuring accessories must be explosion-proof.

### 7.4.4 Release of the operation

The start of the operation only occurs after the initial CHART has been completed, by the land and on-board representatives. The Load Plan and the sequence of the operation must be presented to the Terminal Operator and discussed before starting.

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### 7.4.5 Restriction on Excess Smoke and Soot blowing

It is forbidden to carry out branching or cleaning of boiler piping with the ship moored. Every precaution must be taken to ensure that sparks do not escape through the chimney. Failure to comply with these regulations shall result in one or more of the following penalties:
- Immediate interruption of operations;
- Communication of the infringement to shipowners;
- Accountability of the ship for fines, loss of time and all other related expenses arising from this fact.

### 7.4.6 Restriction/Condition of vessels on the side

The prohibition on the permanence of unauthorized small vessels on the side or in the vicinity of moored ships must be strictly observed. Only vessels authorized by the terminal may be in the vicinity or alongside, provided that they meet all safety conditions. Infringement of this standard will have to be reported to the competent authority.

### 7.4.7 Restriction of Propeller movement

The moored ships will not be able to move their propeller(s) while they remain connected to the hoses. Ratcheting may be used after proper warning to the terminal operator, but the propeller must be moved so slowly that absolute safety is obtained. Vessels shall be liable for any damage resulting from these procedures.

## 7.5 Cargo Transfer (INSERT STS PROCEDURES – This document must be provided by the STS provider)

### 7.5.1 Monitoring of pressures and flows.

During the transfer of the cargo is recorded by the on-board and shore representatives on the ship's manifold **every hour**. The terminal controls the internal pressure variables through the centralized control system. The flows on both sides of the operation are removed every hour and compared between the parties having, according to the system used, a limit parameter for operational control. Notice of any changes in operating conditions must be provided and documented by the parties involved in operations. It is expressly forbidden to close valves that cause backpressure in the system, during operation, if necessary, the ship must inform in advance, purposes to avoid pressure surges, likewise the Terminal must inform the ship with the

same advance, requesting the reduction of the flow informing the need to perform maneuvers on land.

### 7.5.2 Transshipment Operations.

The transshipment operation may be carried out with the vessels moored in berths different or alongside, using the interconnection alignments of the berths of the terminal or hoses directly between ships.

### 7.5.3 Special requirements for LPG.

The terminal will check your LPG system Keeping the relief system adequate and aligned.
The ship must not exceed the pressure of 17 Kgf/cm², when in operation. If it exceeds, the terminal will request from the ship the immediate reduction of pressure or interruption of pumping;
The communication must be checked as well as all alignment before the start of the operation;
The hoses connected to the ship are monitored full time during operation, the product temperature must always be kept above +5 ° C.
The emergency stop will be negotiated with the ship at the time of initial release. The volume moved at both ends of the duct is monitored throughout the operation. There is an Inspection and Maintenance Plan for Tanks, Lines and accessories and any defects, immediately maintenance is triggered to perform the correction.

### 7.5.4 Requirements for ballast and de-ballast.

Ships' ballast and de-ballast nets and tanks must be intended only for this purpose, when they are isolated from other on-board nets. The water ballast to be discharged to the sea must be completely free of oil, any oily residue or other substance capable of causing pollution of seawater.

### 7.5.5 SLOP Receipt and Characterization Conditions.

The terminal does not have facilities for receiving ***slop*** from ships.

### 7.5.6 Tank Cleaning (COW Operation)

Conventional tank cleaning operations are generally not accepted. However, the COW operation is accepted, depending on prior authorization of the schedule for the purpose of the ship's stay in the port and the GIAONT for operational safety purposes.

### 7.5.7 Restrictions/conditions for carrying out repairs

Repairs or maintenance work of any nature, involving or coming to involve the risk of sparks or other means of ignition, may not be carried out while the ship is moored at the terminal piers. In extreme cases, all safety standards must be observed and met. Repairs that involve the facilities of the piers or imply any restriction of the ship during the stay must be previously evaluated and authorized by the terminal, the Port Authority and the Maritime Authority.

### 7.5.8 Intermediate Inspections

According to appendix A of the "ISGOTT", they are carried out by the GIAONT during the operation of the ship at agreed intervals at the time of initial release that may not exceed 6 hours, according to the operational safety criteria and recorded in the LVSO.

### 7.5.9 Interruptions of Operations

The interruption of the ship's loading or unloading operations may occur in any situation, whether on the Ship or at the Terminal, such as:

- Temporarily during storms, with incidence of lightning and/or strong winds (According to parameters listed in the LVSO of ISGOTT);
- In the event of non-compliance with any of the rules and standards regarding safety, universally accepted and adopted in the maritime transport of oil;
- If the master of the ship has reason to believe that the shore operations do not offer safety, provided that he gives advance notice to the operators of the pier;
- Product leakage on the ship or at the Terminal;
- High difference between the unloaded and the received ashore or received on the ship;
- Failure to comply with any item of the LVSO Re-check;

### 7.5.10 Actions in case of emergencies

For any emergency situation, the terminal may interrupt the operations in progress so that all resources are aimed at mitigating the accident.
The actions and contacts for each type of emergency are described in the PEI of the Terminal and in the Communication flow as explained in the Flowchart delivered to the CMT at the time of the initial release of the ships.

**COMMUNICATION IN EMERGENCIES**

**FORMS OF EMERGENCY COMMUNICATION**

**AT THE BEGINNING OF THE EMERGENCY: FOR x FOR x FOR (STOP X STOP X STOP)**

**..... THEN DESCRIBE THE EMERGENCY.**

**AT THE END OF EMERGENCY: END OF EMERGENCY (ALL CLEAR)**

**EVACUATION OF AREA AND ABANDONMENT OF THE SHIP**

**EVACUATION OF THE AREA**

***The Shift Supervisor or Terminal Manager, when ordering the evacuation of the area where the Emergency is occurring in the port, must make sure that all operations support personnel, employees of service providers, maintenance personnel listed in the PTs (Work Permit) released at the pier, Operation Technicians and Nautical Inspectors, have left the port area, making sure that no one has stayed behind, contacting those responsible for the employees, using the vhf in the work channel and 06.***

***Guide them to go to the Support Stations located at the junction of berths 103/104 and 105/106, using the escape routes marked on the platforms and tracks. According to the Emergency Control Plan (PCE) of the Port of Itaqui.***

**ABANDON SHIP**

***The vessel's Cmt when ordering abandonment shall ensure that all crew members on board have left the vessel, ensuring that none remain on board.***

***Guide to go to the Support Stations located at the junction of berths 103/104 and 105/106, using the escape routes marked on the berths' tracks and platforms, in order, together and using PPE, also following the guidelines of the Port's emergency monitors.***

## 7.6 Load measurement and documentation

### 7.6.1 Drainage of hoses.

After the end of the operation, the drainage of the hoses used must be started. Terminal operators will provide drainage for closed system at the pier. The ship's representative must arrange for the drainage of the on-board section.

### 7.6.2 Final measurement on board

The final on-board measurements will be carried out by the ship's personnel and accompanied by the terminal representatives and other inspectors. The material used must be properly grounded and the measuring accessories must be explosion proof. The final release of the ship must take place after comparing the quantities handled and the complement of the stay documentation.

## 7.7 Undocking and leaving the port

### 7.7.1 Special Precautions for leaving the port.

During the unberthing maneuver and leaving the port, the channel limits and hazards reported in section 4.3 and its sub-items must be observed.

### 7.7.2 Pilot disembarkation location.

The pilot normally disembarks at the same embarkation point described in section 4.3.6 where a pilotage speedboat will await him.

# 8. ORGANIZATION OF PORT AND ANCHORAGE

## 8.1 Port Control or VTS

according to section 4.3.5

## 8.2 Maritime Authority

The maritime authority to which the terminal is subordinate is the Port Authority of the State of Maranhão. It is responsible for determining the actions and notifying those responsible for any incident within the limits of the port.
The Port Authority of Maranhão determines that the visit of the authorities is carried out after the ship docks in the port.
The Port Authority of Maranhão also defines the official limits of the port according to section 4.3.4.
The Port Authority is the Maritime Authority within the limits of the Port of Itaqui,

## 8.3 Pilotage

For all ship handling, from the pilot's embarkation point (section 5.3.6), pilotage is mandatory.

Regardless of nationality, type of vessel and destination, the minimum size for which the pilotage service is mandatory is from 2,000 dwt.

Pilotage organization that operates in the port of Itaqui and has 36 Pilots.

**ASSOCIATION OF PRACTITIONERS OF THE STATE OF MARANHÃO – APEM**

Rua Montes Altos, nr. 08 – Quintas do Calhau – Calhau – São Luis – Ma.

(98) 3223 8586 Duty (98) 981110356 (24h)

***VHF: Channel 16 and 14***

Email: plantao@apem-ma.com.br

***In cases of EMERGENCY, the means of contact are listed above and must be made directly with the Pilotage Duty. The contact can be directly from the ship or through the agency.***

## 8.4 Tugs and other Maritime Services.

### 8.4.1 List of Companies that operate the tugboats:

1. Camorim Serviços Marítimos Ltda (STARNAVE)
   Contacts: Mauro Silva +55 (98) 99972 7604/ 98407 9247 maurosilva@camorim.com.br | http://www.camorim.com.br

2. SAAMSMIT Towage Brasil S/A
   Contacts: Aloisio Junior aloizio.junior@saamsmit.com.br- +55 98 98802 7522 / +55 98 3311 5000 / +55 98 3311 5005
   www.saamtowage.com

3. Consórcio de Rebocadores da Baia de São Marcos - **CRBSM**
   Contacts: Gabriel de Vico - +55 98 99601 7688
   gabriel.devico@crbsm.com.br

**The use of the tugboats must be made through a request to the tugboat companies by the navigation agencies, as described in the *Standards for Maneuvers of the São Marcos Bay Port Complex.***

### 8.4.2 Tugs available.

Currently 24 tugboats are available to assist maneuvers at the São Marcos Bay Port Complex.

Note: Occasionally any of these may not be available due to emergency repairs, scheduled docking or any other operational need.

The Company informs the Agencies, Terminal, EMAP and Pilotage of the date and time of the withdrawals from operation and their return to activities.

### 8.4.3 Other relevant port maritime services:

**Divers**:

| Company | TELEPHONES | Contact person | Immediate mobilization capacity |
|---|---|---|---|
| ***FIRE BRIGADE MARINE FIREFIGHTERS GROUP - GBMAR*** | (098) 3212 1530/1531/1532 or Duty 193 | Capt. Reis | 3 men on duty 24h. In case of greater contingency (15 divers) |

### 8.4.4. Repairs with ships moored:

Maintenance repairs may be carried out in accordance with the following conditions (provided that they do not affect the safety of operations):
- Authorization of the Port Authority;
- EMAP authorization;
- In compliance with Transpetro's PMO assumptions;
- Preparation of a Preliminary Risk Analysis, by the Terminal (Nautical Inspector) and the Ship's Cmt, to release and monitor this maintenance.

**8.4.5. Support boats**:

The support boats for the supply of spare parts, food and waste removal are activated via the ship's agent and cannot dock on the other side of the docked ship, the ship being in operation without first obtaining the authorization of EMAP and the Terminal Security Inspector.

## 8.5 Other Terminals

In the port complex there are two other ports. The port of **Ponta da Madeira** belonging to VALE - Handles Solid Bulk (iron ore), copper and soybean and the port of **ALUMAR**, of the BILLITON/ALCOA group, handles Aluminum and bauxite, eventually handles Fuel Oil and can move oil derivatives in ship supplies.

## 8.6 Other Primary Users – Port Operators

Other users also operate ships in the port of Itaqui dividing the use of berths in line with the interests of the Port Authority – EMAP, as listed below:

- **Tequimar / Ultracargo -** Liquid bulk;
- **ALZ Terminais Portuários -** Solid Bulk;
- **Brasil Marítima -** Solid bulk, general cargo and containers;
- **COPI -** Solid bulk, general cargo and containers;
- **Corredor Logística e Infraestrutura S.A -** Solid bulk, general cargo and containers;
- **DATA Operações Portuárias Ltda -** Solid bulk, general cargo and containers;
- **G5 Soluções Logísticas -** Solid bulk, general cargo and containers;
- **Glencore -** Solid Bulk;
- **Granel Química -** Liquid Bulk;
- **Itaqui Geração de Energia -** Solid Bulk;
- **Pedreiras Transportes do Maranhão Ltda -** Solid bulk, general cargo and containers;
- **TEGRAM -** Solid Bulk;
- **Termaco Operações Portuárias S.A -** Solid bulk, general cargo and containers;
- **Terminal Corredor Norte S.A -** Solid Bulk;
- **Transglobal Operações Portuárias Ltda -** Solid bulk, general cargo and containers;
- **VLI Multimodal S.A -** General cargo and solid bulk;

## 8.7 Companies accredited to provide various services to ships

**On the website of EMAP – Empresa Maranhense de Administração Portuária – Port of Itaqui – Comunidade Portuária - Accredited - the service providers for ships are listed:**

- **Agencies**

- Tenants
- Assignees
- OGMO
- Operators,
- Accredited Companies
- Pilotage

# 9. EMERGENCY PLANNING & RESPONSE

## 9.1 São Luis Terminal Emergency Response Plan – PRE & Individual Emergency Plan - PEI

Establishes procedures to be adopted in situations of Fire, Hydrocarbon Leaks and First Aid Assistance in Victims, in accordance with the resolutions of the Environmental Agency, and internal Procedures of Petrobras and Transpetro.

## 9.2 Integration with other Plans

- Petrobras Corporate Emergency Plan (PCCORP)
- Mutual Assistance Plan (Pam) of the Port of Itaqui

## 9.3 Emergency Contacts – WFP

**TELEPHONES**

(98) 3231-7444 CCO EMAP (98) 98457-4841

(98) 3216-6500 COSET EMAP (98) 98454-3310

The following table indicates the essential contacts with Phone Number, Fax Number and Radio Channels/Frequencies.

| Organization | Service Hours | Identifying Acronym | Landline Phone | Mobile | VHF Call | VHF Conversation |
|---|---|---|---|---|---|---|
| Port Authority | 24 hours | CPMA | (98) 2101.0107 | | 16 | - |
| EMAP | 24 hours | CCO – Control Center | (98) 3216.6032 | (98) 984574841 | 16 | - |
| Transpetro – TA SLUIS | 24 hours | MANAGEMENT | (98) 3217.6501 | (98) 984784958 | - | - |
| Transpetro – TA SLUIS | 24 hours | Control Room | (98) 3217.6507 | Supervisor 991126584 | 16 & 06 | 06 |
| Transpetro – TA SLUIS | 7:30 am to 4:30 pm Mon to Fri | Ta Sluis Programming | (98) 3217.6502 | (98) 991148158 | - | - |
| Association of Maranhão Pilotage | 24 hours | APEM | (98) 3223.8586 3226.8587 | (98) 981238745 981110356 | 16 | 14 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Tugboats | 24 hours | SAAMSMIT CONSORTIUM STARNAVE | (98) 3301.7345 | (98) 999727604 | 16 | 14 |
| Fire | 24 hours | CBMMA | (98) 3228.2154 | 193 | - X - | - X - |
| Civil Defense | 24 hours | - X - | (98) 3212.1517 | 193 | - X - | - X - |
| Military Police (GTA) | 24 hours | PMMA | (98) 3235.2159 3235.8113 | (98) 9112.5510 193 | - X - | - X - |
| Internal Revenue Service | 8 am to 5 pm | -x- | (98) 3231.6001 | - X - | - X - | - X - |
| City Hall of São Luis | 8 am to 5 pm | PMSL | (98) | - X - | - X - | - X - |
| SEMA | 24 hours | - X - | (98) 3218.8745 | - X - | - X - | - X - |
| IBAMA | 24 hours | - X - | (98) 3231.3207 3231.3070 3231.3010 | (98) 9991.1296 9971.5509 9991.2543 | - X - | - X - |

## 9.4 Environmentally Sensitive Areas

**We can define as vulnerable areas, the areas linked to various economic activities, namely port, fisheries and naval industry, as well as places of historical and tourist importance, which can be affected in the event of a spillage of hydrocarbons and other products dangerous to the marine environment.**

**Vulnerable areas are:**

**· The access channel to the Port of Itaqui;**
**· The entire area of Oil Pier 106 and 108;**
**. The entire dock area of Cradles 100, 101, 102, 103, 104 and 105;**
**· Porto Pesqueiro do Porto Grande;**
**- Port of Alumar**

**Sensitive Areas**

**In the area of influence of the Port of Itaqui, sensitive areas are considered areas of great biological activity or special occurrence of seabirds, leisure beaches, marinas, and which must be given priority in the protection and cleaning, in case of spillage of hydrocarbons and other products dangerous to the marine environment.**

**The following are considered as sensitive areas according to the region's Sensitivity map:**

**· Mangrove area adjacent to the Port of Itaqui;**
**· Strait of Coqueiros and Rio dos Cachorros.**

**Environmental Sensitivity Map**

**In the PCL, the areas most sensitive to an environmental impact are listed by sheets (Maps, Drawings and Annexes) that contain environmental sensitivity maps, showing,**

**according to the selected area, the points that are subject to the greatest impact when this type of event occurs in São Marcos Bay.**

## 9.5 General Description of the Emergency Response Organization

**Responsibilities to deal with possible emergencies involving vessels arriving at the Terminal.**

| Incidents within Port/Terminal TA-NE/SLU area | | | | | |
|---|---|---|---|---|---|
| **Incident Type** | **Responsible Organization** | **Other Organizations Involved** | | | |
| **Channel Collision** | ***Port Authority*** | ***Civil Defense*** | ***TRANSPETRO*** | | |
| **Vessel Stranding** | ***Port Authority*** | ***Civil Defense*** | ***TRANSPETRO*** | | |
| **Cradle Collision** | ***Port Authority*** | ***TRANSPETRO*** | ***Civil Defense*** | **EMAP** | |
| **Shipwreck of Vessel** | ***Port Authority*** | ***Civil Defense*** | ***Fire Department*** | ***TRANSPETRO*** | |
| **Vessel Fire** | ***Ship*** | ***TRANSPETRO*** | ***Fire Department*** | ***Civil Defense*** | ***Port Authority*** |
| **Fire in the Cradle** | ***TRANSPETRO*** | ***Fire Department*** | ***Civil Defense*** | ***Port Authority*** | **EMAP** |
| **Pollution** | ***TRANSPETRO or Ship*** | ***Port Authority*** | ***SEMA*** | ***IBAMA*** | **EMAP** |

## 9.6 Emergency Plans

### 9.6.1 The PEI (Individual Emergency Plan)

It is TA SLUIS 'plan to combat emergencies in all its facilities. It is available in all operational areas, in frames located at the entrances to the operating rooms, maintenance and administrative buildings. The responsible for its update is the local HSE (health, safety and environment activity).

The terminal has an **Emergency Response Center (CRE)** that is equipped with modern equipment and various facilities for the first combat in case of accidental pollution. Periodically, intensive training is carried out, which enables terminal employees to act according to the Local Contingency Plan (PCL). Displayed at strategic points, the Terminal's ERP allows rapid action to be taken in responding to emergencies. In its shed are stored containment barriers, oil collectors and other equipment and materials necessary for the tasks. Work vessels, support vessels, tankers and collecting vessels are stowed on road trailers in a permanent state of readiness next to the ramp of Berth 101.

### 9.6.2. Public Emergency Response Resources

In the port of Itaqui, only TRANSPETRO, through the São Luis terminal and other operational units, activated through the local contingency plan, has resources that can be used to mitigate sea pollution events. For other emergencies, public organizations offer the resources for which they are intended.

### 9.6.3 Local Emergency Services

The fire department, the civil defense, the police and the hospital unit of São Luis have the resources for which they are intended and are triggered according to the table in section 9.1.

The organized port of Itaqui has an **Ambulance** equipped for first aid services in the Primary Area of the port (area located near the pier). A Nursing Technician works on a shift basis. The most

serious cases will be referred to the general hospital, located in the city of São Luis, about 11 km from the place, or to the hospital where the injured person is accredited.

### 9.7 Mutual Aid Plan - WFP

The institutions listed below participate in the WFP (Itaqui Port Mutual Assistance Plan) their resources are available as previously agreed in this plan

- Military Fire Brigade of the State of Maranhão
- TRANSPETRO/TA-NE/SLU
- City Hall of São Luis (Civil Defense)
- EMAP – Maranhão Port Administration Company
- PETROBRÁS DISTRIBUIDORA S.A.
- TEXACO DO BRASIL
- SHELL S.A.
- ESSO S.A.
- MOINHO DE TRIGO DO MARANHÃO S.A.
- GRANEL QUÍMICA LTDA
- CONAB
- COMPANHIA DE PETRÓLEO IPIRANGA
- PETRÓLEO SABBÁ
- RAÍZEN

## 9.8 Oil Spill Response

The sub-items below describe the resources available to combat pollution in the areas adjacent to the terminal.

### 9.8.1 Terminal Response Capacity

The resources available at the terminal to combat oil spill situations are listed in the PCL, which is available in all administrative, operational and maintenance areas of the terminal.

### 9.8.2 Response Capacity of the Environment Agency

The Environment Agency of Maranhão does not have resources to combat oil spills at sea.

### 9.8.3 Resources available from Mutual Support Plans of other Terminals

The resources available at other TRANSPETRO terminals to respond to pollution emergencies occurring in the vicinity of the terminal are listed in the local PCL.

### 9.8.4 Response Medium and Large-Sized Spillage

Organization designated as responsible for responding to significant pollution events. Regional TRANSPETRO / PETROBRAS resources are requested during such events. These features, their readiness and form of activation are described in the PCL.

### 9.9 Major Emergencies Response

TRANSPETRO has a Special Contingency Group – GEC that, if activated, will provide support to major emergencies. The terminal's Individual Emergency Plan - PEI lists the actions and those

responsible for each type of event planned, which may occur within its unit, pipeline range or vessels and involve third parties.

TRANSPETRO / PETROBRAS will make the entirety of the national or international resources to which it has access available during events that are not provided for herein.

## 10. CONTACT INFORMATION

The items below indicate the Contact Information of the Organization, Position Phone, Fax, E-mail, Channel/Radio Frequencies.

### 10.1 Terminal

**Operations Management**

**Phone: (98) 3217.6501 – Email: souzajr@transpetro.com.br**

**Operational Technical Coordinator – (98) 3217-6502 – el:: (99) 9 98279-0013 – E-mail: sergilsondasilva@transpetro.com.br**

**Shift Supervisor – (98) 3217-6508 – Mobile Phone: (98) 9 9112.6584**

**Operating Room – (98) 3217-6507**

**Nautical Advisor/Bunker Manager/SSP(ISPs) – (98) 3217-6540 Mobile Phone: 9 9137.3302 Email: ana.bouillet@transpetro.com.br**

**GIAONT – Operational Inspection and Monitoring Group Ship and Terminal – On Duty Inspector – (98) 9 9152.3959**

**SMS - Security – (98) 3217-6514**

**- Environment – (98) 3217-6516 and 3217-6530**

### 10.2 Local Authorities, State and National Agencies

- **ANVISA**

  **Telephone: (98) 3221-0855 E-mail: carlos.bouman@anvisa.gov.br**

- **PORT AUTHORITY**

  **Telephone: (98) 2107-0101 Email: antonilda@cpma.mar.mil.br**

- **FEDERAL POLICE**

  **Telephone: (98) 3222-4407 E-mail: portodoitaqui.srma@dpf.gov.br**

- **INTERNAL REVENUE SERVICE**

  **Telephone: (98) 3216-6089 E-mail: aldenora.moura@receita.fazenda.gov.br**

- **VIGIAGRO**

  **Telephone: (98) 3216-6054 E-mail: vigiagro-ma@agricultura.gov.br**

## 10.3 Shipping Agents.

- **SYNGAMAR – Union of Maritime Agencies**

  Telephone: (98) 3231-6885 / (98) 3222-4747 Email: syngamar@syngamar.com.br / administrative@syngamar.com.br

  Note: For information on the other Navigation Agencies Consult Syngamar.