

PONTA UBU MARITIME TERMINAL



RESOLUTION No. 06

September 2020

Anchieta, September 9, 2020.

Resolution No. 06

SAMARCO MINERAÇÃO S/A, located in the municipality of Anchieta, Espírito Santo, manager of the Ponta Ubu Maritime Terminal, recognized by the Maritime Authority and other competent authorities, in observance of the legal precepts and in accordance with Law No. 12,815, dated June 5, 2013, Regulatory Standard NR-29 and NR-30, the Standards of the Brazilian Maritime Authority, and the Standards and Procedures of the Port Authority of Espírito Santo.

Resolves to,

A - Set, maintain and operate the boundaries of the Access Channel and the Turning Basin of the Terminal;

B - Delimit the anchorage areas, mooring areas for loading and unloading, areas for sanitary inspection and maritime police, areas assigned for rigs and other special vessels, area for warships and submarines, area for vessels under repair or awaiting mooring, and area for vessels with flammable or explosive cargo;

C - Define and disclose the maximum operating draft of the vessels, due to bathymetric surveys carried out under its responsibility, approved by the Navy Hydrography Center;

D – Define and disclose the maximum deadweight and the maximum dimensions of the vessels that will circulate in the area, according to the limitations and physical characteristics of the Port wharf;

E - Set and disclose the restrictions for mooring and unberthing maneuvers for the West Side and East Side Berths, Tugboat Docks, and the Miscellaneous Cargo Terminal (TCD).

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PONTA UBU MARITIME TERMINAL

1 – MAIN CHARACTERISTICS

1.1 – Location

Located in the State of Espírito Santo, Highway ES -060, Guarapari-Anchieta Stretch km 14.4 - Ponta Ubu, Municipality of Anchieta.

The Terminal is located in the following geographic coordinates (DATUM WGS84):

Table 1 – Geographic coordinates of the terminal

LATITUDE	LONGITUDE
20° 47' S	040° 34' W

1.2 – Limits

The information about the limits is characterized in the port plan in the chart DHN 1404 (DATUM WGS84).

The terminal inland waters, as defined in the Rules and Procedures of the Port Authority (NPCP -ES-2016), refer to the region west of the imaginary line from the north end of the seawall at the Ponta Ubu Terminal to the northeast tangent of Ponta de Meaípe.

The access channel is delimited by six floating signs consisting of lighted articulated Buoys (BA) located in the following geographic coordinates (WGS 84):

Table 2 - Position of the articulated buoys that delimit the access channel

ARTICULATED BUOYS	TYPE OF SIGNAL	LATITUDE	LONGITUDE	Luminous Feature
BA 01	Starboard Side	20 ° 46 . 83 ` S	040 ° 32 , 98 ' W	R. E. 1 s
BA 02	Port Side	20 ° 47 , 02 ' S	040 ° 32 , 98 ' W	R. V. 1 s
BA 03	Starboard Side	20 ° 46 , 83 ' S	040 ° 33 , 55 ' W	Lp(2) . E. 5 s
BA 04	Port Side	20 ° 47 , 02 ' S	040 ° 33 , 55 ' W	Lp(2) . V. 5 s
BA 05	Starboard Side	20 ° 46 , 82 ' S	040 ° 33 , 78 ' W	Lp(3) . E. 6 s
BA 06	Port Side	20 ° 46 , 98 ' S	040 ° 33 , 78 ' W	Lp(3) . V. 6 s

The turning basins of the west and east berths are also referenced by lighted articulated buoys (BA 05, BA 06, BA 07 and BA UBU), located in the following geographical coordinates (WGS 84).

Table 3 - Position of articulated buoys that reference the turning basins

ARTICULATED BUOYS	TYPE OF SIGNAL	LATITUDE	LONGITUDE	Luminous Feature
BA 05	Starboard Side	20 ° 46 , 82 ' S	040 ° 33 , 78 ' W	Lp(3) . E. 6 s
BA 06	Port Side	20 ° 46 , 98 ' S	040 ° 33 , 78 ' W	Lp(3) . V. 6 s
BA 07	Starboard Side	20 ° 46 , 95 ' S	040 ° 34 , 23 ' W	Lp. E. 3 s
BA UBU	East Cardinal	20 ° 46 , 74 ' S	040 ° 34 , 17 ' W	MR.(3) B. 5 s

The West Side Berth (LW) approach channel is delimited by floating signals located in the following geographic coordinates (WGS 84):

Table 4 - Position of buoys that reference the LW approach channel

ARTICULATED BUOYS	TYPE OF SIGNAL	LATITUDE	LONGITUDE	Luminous Feature
BA 07	Starboard Side	20 ° 46 , 95 ' S	040 ° 34 , 23 ' W	Lp. E. 3 s
BA 09	Starboard Side	20 ° 47 . 21 ' S	040 ° 34 . 40 ' W	Lp(3) . E. 8 s

The Miscellaneous Cargo Terminal (TCD) approach channel is delimited by floating signals located in the following geographic coordinates (WGS 84):

Table 5 - Position of buoys that reference the TCD approach channel

ARTICULATED BUOYS	TYPE OF SIGNAL	LATITUDE	LONGITUDE	Luminous Feature
BA 07	Starboard Side	20 ° 46 , 95 ' S	040 ° 34 , 23 ' W	Lp. E. 3 s
BA 09	Starboard Side	20 ° 47 . 21 ' S	040 ° 34 . 40 ' W	Lp(3) . E. 8 s
BA SS 7	East Cardinal	20 ° 47 . 23 ' S	040 ° 34 . 46 ' W	MR(3) . B. 5 s

The following items are navigation aids in addition to floating signals:

1. Alignment in 090^o-27^o direction of the "Light Pipe" type, delimiting the central part of the buoyed channel (Parallel 20° 46.90'S - DATUM WGS84).
2. A landing Lighthouse located in the following geographic coordinates: Lat. 20° 46.80'S and Long. 040° 34.68'W - DATUM WGS84 - Lp.B.5s
- Range = 14 Nautical Miles
3. Alignment in 020^o -200^o direction, marked by the torches at the North Limit of the Jetty and the torch of the Seawall End.
4. An indirect lighting system for the stones on the north and west side of the seawall.
5. An indirect lighting system for the fenders and facing of the wharf at the East and West Berths.
6. Lights at the northeastern and northwestern ends of the wharf.
7. Lights at the eastern end of dolphin 3, western end of dolphin 1, northern and southern ends of the Causeway.

1.3- Area forbidden for anchoring or stay of vessels

Anchoring or staying in the area defined by a 139-meter strip, outside the boundaries of the access channel and turning basin of the Ponta Ubu Terminal is prohibited. This area is considered an operational safety margin for navigation in the terminal access channel.

Support vessels, tugboats, speedboats, fishing vessels, barges and the like shall comply with the prohibitions described above.

1.4 – Pilot boarding point and anchorage areas

1.4.1 - Pilot Boarding Point

Table 6 – Position of the Pilot Boarding Point.

LATITUDE	LONGITUDE
20 ° 46 , 42 ' S	040 ° 32 , 55 ' W

1.4.2 - ALPHA Anchorage Area - Sanitary Inspection and Federal Police Area.

Table 7 – Alpha anchorage area limits.

POINT	LATITUDE	LONGITUDE
AFIR	20 ° 46 , 30 ' S	040 ° 33 , 00 ' W
BALA	20 ° 46 , 20 ' S	040 ° 33 , 30 ' W
CRUZ	20 ° 46 , 70 ' S	040 ° 32 , 30 ' W
DEDO	20 ° 46 , 70 ' S	040 ° 33 , 00 ' W

1.4.3 - BRAVO Anchorage Area- Area for rigs, special vessels and vessels under repair.

Table 8 – Bravo anchorage area limits.

POINT	LATITUDE	LONGITUDE
BALA	20 ° 46 , 20 ' S	040 ° 32 , 30 ' W
ELMO	20 ° 45 , 80 ' S	040 ° 31 , 50 ' W
FACE	20 ° 46 , 70 ' S	040 ° 31 , 50 ' W
CRUZ	20 ° 46 , 70 ' S	040 ° 32 , 30 ' W

1.4.4 - CHARLIE Anchorage Area - Area for Warships and Submarines.

Table 9 – Charlie anchorage area limits.

POINT	LATITUDE	LONGITUDE
GATO	20 ° 47 , 00 ' S	040 ° 33 , 00 ' W
HORA	20 ° 47 , 00 ' S	040 ° 32 , 40 ' W
INTE	20 ° 47 , 50 ' S	040 ° 32 , 40 ' W
JOIA	20 ° 47 , 50 ' S	040 ° 33 , 00 ' W

1.4.5 - DELTA Anchorage Area - Area for vessels with flammable, dangerous or explosive cargo.

Table 10 – Delta anchorage area limits.

POINT	LATITUDE	LONGITUDE
KILO	20 ° 47 , 30 ' S	040 ° 31 , 00 ' W
LIRA	20 ° 47 , 30 ' S	040 ° 27 , 40 ' W
MINA	20 ° 49 , 30 ' S	040 ° 27 , 40 ' W
NAIR	20 ° 49 , 30 ' S	040 ° 31 , 00 ' W

1.4.6 – Internal area of the terminal

Not available. Eventually, the Terminal Management, duly authorized by the Representative of the Maritime Authority, may authorize the anchoring of vessels in emergencies and/or for the safeguard of human life at sea in the region of the Turning Basin area.

1.5 – Tugboats

It is mandatory to use a tugboat when maneuvering vessels at the Ponta Ubu Terminal, in accordance with the concepts and instructions defined in the MARITIME AUTHORITY STANDARDS - NORMAM's, Rules and Procedures of the Port Authority of Espírito Santo - NPCP-ES, and Normative Instructions and Resolutions of the Terminal Management.

The use of a tugboat is allowed in the maneuvers of vessels that have auxiliary maneuvering devices; Bow-Thrusters, Stern-Thrusters and/or Azimuth Thrusters; operating and with sufficient power to allow turning, approach, mooring and unberthing without the aid of tugboats.

1.6 – Operational restriction

In order to preserve the safety of navigation and avoid potential risks to the port, vessels, people and the environment, it is forbidden to remain with a moored vessel alongside moored or anchored vessels without prior authorization from the terminal management, which will also check the safety precepts during the transit of vessels.

2 - ACCESS, DIMENSIONS AND RESTRICTIONS

2.1 – Access Channel

One-way channel, ranging from the first pair of buoys to the center of the Turning Basin West Side.

Operational Characteristics

Table 11 – Dimensions of the access channel.

Length	1,847.00 meters
Design width	360.00 meters
	290 meters between BA 05 and BA 06
Design depth	19.00 meters
Dredging depth	19.50 meters

Restrictions Referring to Vessels

Table 12 – Maximum dimensions of the vessels in the access channel.

Maximum deadweight	250,000 tons
Maximum total length	301.99 meters
Maximum Breadth	52.99 meters
Maximum draft	16.80 meters + tidal range
Maximum speed	9.0 knots

2.2 - Turning Basin

The center of the maneuvering area for turning of ships is located at the end of the Access Channel, referenced with buoys BA 05, BA 06, BA UBU and BA 07, consisting of two partially overlapping Turning Basins:

2.2.1 - Turning Basin – WEST SIDE (LW)

Intended for vessels for the WEST SIDE (LW) and Miscellaneous Cargo Terminal (TCD) berths.

Operational Characteristics

Table 13 – Dimensions of the West Side (LW) Turning Basin.

Turning Basin Center (LW)	Lat 20° 46.90 ' S and Long 040° 34.04 ' W
Design radius	302.00 meters
Design diameter	604.00 meters
Design depth	11.80 meters
Dredging depth	12.30 meters

Restrictions Referring to Vessels

Table 14 – Maximum dimensions of the vessels in the West Side (LW) Turning Basin.

Maximum deadweight	250,000 tons
Maximum total length	301.99 meters
Maximum breadth	52.99 meters
Maximum draft – BOW	10.20 meters + tidal range
Maximum draft – STERN	10.30 meters + tidal range

2.2.1.1 - Vessel Maneuverability Restrictions.

- a - Upon unberthing, vessels with length of up to 216.99 meters moored by port side at the West Side (LW) Berth may perform a turn at the East Side (LE) Turning Basin.

2.2.2 - Turning Basin – EAST SIDE (LE) Berth

Intended for vessels that access the East Side (LE) Berth and the East Side Berth of Tugboats (LEREB).

Operational Characteristics

Table 15 – Dimensions of the East Side (LE) Turning Basin

Turning Basin Center (LE)	Lat 20 ° 46.93 ´ S and Long 40 ° 34. 09 ´ W
Design radius	241.00 meters
Design diameter	482.00 meters
Design depth	14.50 meters
Dredging depth	15.00 meters

Restrictions Referring to Vessels

Table 16 - Maximum dimensions of the vessels in the East Side (LE) Turning Basin.

Maximum deadweight	150,000 tons
Maximum total length	240.99 meters
Maximum breadth	32.99 meters
Maximum draft	12.40 meters + tidal range

2.3 – Pier – West Side (LW) Berth

2.3.1 – Approach Channel – from the center of Turning Basin to the southern limit of the berth basin.

Operational Characteristics

Table 17 - Approach Dimensions of the West Berth (LW) Channel.

Length	750.00 meters
Design width	140.00 meters
Design depth	18.70 meters
Dredging depth	19.20 meters

Restrictions Referring to Vessels

Table 18 – Maximum dimensions of vessels in West Berth (LW) Approach Channel.

Maximum deadweight	250,000 tons
Maximum total length	301 . 99 meters
Maximum breadth	52 . 99 meters
Maximum draft	16.80 meters + tidal range

2.3.2 – West Berth Basin

Operational Characteristics

Table 19 – Dimensions of West Basin Berth.

Operational length	313.00 meters
Design width	66.30 meters
Dock wharf	308.00 meters
Design depth	18.70 meters
Dredging depth	19.20 meters

Restrictions Referring to Vessels

Table 20 – Maximum dimensions of vessels in West Basin Berth.

Maximum deadweight	250.000 tons
Maximum total length	301 . 99 meters
Maximum breadth	52 . 99 meters
Maximum draft	18 . 40 meters

2.3.3 - Vessel maneuverability restrictions.

- a - For entry, vessels scheduled to dock on starboard, with a length greater than 292.99 meters or a draft greater than 10.00 meters, must be maneuvered during the day.
- b - For entry, vessels over 216.99 meters in length must be moored by starboard.
- c - For departure, vessels with a length of up to 216.99 meters moored to port may perform a turn at the Turning Basin of the East Side (LE) Berth
- d - Vessels with a draft greater than 12.0m will be positioned from the 08th bitt, that is, not less than 30 meters from the southern limit of the Berth Basin.

2.4 - Pier – East Side (LE) Berth

2.4.1 – Approach Channel – from the center of Turning Basin to the southern limit of the berth basin.

Operational Characteristics

Table 21 - Approach Dimensions of East Berth (LE) Channel

Length	660.00 meters
Design width	97.05 meters
Design depth	15 . 00 meters
Dredging depth	15 . 50 meters

Restrictions Referring to Vessels

Table 22 – Maximum dimensions of vessels in East Berth (LE) Approach Channel

Maximum deadweight	150.000 tons
Maximum total length	225.99 meters
Maximum breadth	32.35 meters
Maximum draft	13.10 meters + tidal range

2.4.2 – East Berth Basin

Operational Characteristics

Table 23 – Dimensions of East Berth Basin.

Operational length	313.00 meters
Design width	40.44 meters
Dock wharf	280.00 meters
Design depth	15.00 meters
Dredging depth	15.50 meters

Restrictions Referring to Vessels

Table 24 – Maximum dimensions of vessels in East Berth Basin.

Maximum deadweight	150,000 tons
Maximum total length	225.99 meters
Maximum breadth	32.35 meters
Maximum draft	14.70 meters

2.4.3 – Vessel Maneuverability Restrictions

- a - For entry, vessels must be maneuvered during the day, with the exception of vessels up to 110.99 meters in length that have auxiliary maneuvering devices; Bow-Thrusters, Stern-Thrusters and/or Azimuth Thrusters; that allow them to perform turning, approaching, mooring and unberthing without the aid of tugboats.
- b - For entry, vessels with a draft greater than 10.00 meters must be docked by port side.

2.5 – Pier – East Side Berth of Tugboats (LEREB)

2.5.1 – Approach Channel – from the center of Turning Basin to the southern limit of the berth basin.

Operational Characteristics

Table 25 – Dimensions of Approach Channel of East Side Berth of Tugboats (LEREB)

Length	309.00 meters
Design width	50.97 meters
Design depth	08.50 meters
Dredging depth	09.00 meters

Restrictions Referring to Vessels

Table 26 – Maximum dimensions of vessels in East Side Berth of Tugboats (LEREB) Approach Channel.

Maximum deadweight	15,000 tons
Maximum total length	100.99 meters
Maximum breadth	16.99 meters
Maximum draft	06.60 meters + tidal range

2.5.2 – Berth Basin

Operational Characteristics

Table 27 – Dimensions of East Side Berth Basin of Tugboats.

Operational length	100.00 meters
Design width	21.24 meters
Dock wharf	100.00 meters
Design depth	08.50 meters
Dredging depth	08.80 meters

Restrictions Referring to Vessels

Table 28 – Maximum dimensions of vessels in East Berth Basin of Tugboats

Maximum deadweight	15,000 tons
Maximum total length	90.99 meters
Maximum breadth	16.99 meters
Maximum draft	08.20 meters

2.6 –Miscellaneous Cargo Terminal (TCD)

2.6.1 – Approach Channel – from the center of Turning Basin to the western limit of the berth basin

Operational Characteristics

Table 29 – Dimension of Miscellaneous Cargo Terminal (TCD) Approach Channel

Length	930.00 meters
Design width	85.47 meters
Design depth	10.00 meters
Dredging depth	10.50 meters

Restrictions Referring to Vessels

Table 30 – Maximum dimension of vessels in Miscellaneous Cargo Terminal (TCD) Approach Channel.

Maximum deadweight	22,000 metric tons
Maximum total length	157.99 meters
Maximum breadth	28.49 meters
Maximum draft	8.10 meters + tidal range

2.6.2 – Berth Basin

Operational Characteristics

Table 31 - Dimensions of Miscellaneous Cargo Terminal Berth Basin

Operational length	120.00 meters
Design width	35.61 meters
Dock wharf	100.00 meters
Design depth	10.00 meters
Dredging depth	10.50 meters

Restrictions Referring to Vessels

Table 32 – Maximum dimensions of vessels in Miscellaneous Cargo Terminal Basin

Maximum deadweight	22,000 tons
Maximum total length	157.99 meters
Maximum breadth	28.49 meters
Maximum draft	09.10 meters

2.6.3 - Vessel Maneuverability Restrictions

- a - For entry, vessels over 120.99 meters in length, which do not have auxiliary maneuvering devices; Bow-Thrusters, Stern-Thrusters and/or Azimuth Thrusters; must be operated during the day.

3 - TERM

This Resolution enters into force after ratification by the Maritime Authority. All provisions to the contrary, issued up to the present date, are hereby revoked.

Marco Antônio Muniz Gamaro
Specialist Engineer - Port
Ponta Ubu Maritime Terminal

Distribution List

Port Authority of Espírito Santo

Port Authority Council of the Vitória and Barra do Riacho Ports

Union of Pilots of the State of Espírito Santo - PILOTAGE ESPÍRITO SANTO

Union of Maritime Navigation Agencies of the State of Espírito Santo - Sindamares

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CHANGE REGISTRATION SHEET

No. of Change	Referring Official Letter	Pages	Change Date	Initials - Notes