

**BRAZILIAN NAVY
BRAZILIAN SHIPPING CENTER**

**MARITIME TRAFFIC INFORMATION
SYSTEM**



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1. INTRODUCTION

Signatory of International Convention for the Safety of Life at Sea and Maritime Search and Rescue, Brazil has committed to use the resources available to assist vessels (MV), of any nationality, in an emergency situation within the maritime area your responsibility, known as "Area SAR (Search and Rescue) Brazilian."

In this sense, Brazil's navy has an Information System for Maritime Traffic - SISTRAM, which uses electronic data processing and tracking of NM in this region, both in long-haul routes, either in coastal or inland waters.

Monitoring systems of maritime traffic in the world, primarily aimed at providing the necessary support to ships in emergencies, known as SAR incidents "and" contribute to security, to combat the so-called "accident protection".

The SISTRAM is similar to "AMVER system" for the U.S. and other SAR systems in other countries, which aim to allow in the event of a SAR incident, the rapid location and activation of nearby vessels, able to assist and provide or direct, by the most expeditious means, medical assistance, as appropriate. It also allows CISMAR direct the merchant traffic to avoid areas of risk to safety.

The greater the number of vessels System employees, most reliable and effective it becomes and contributes to increase the safety of life at sea and inland waters.

For this reason, all MV are invited to attend the SISTRAM. For MV Brazilian flag and chartered by Brazilian shipping such participation is mandatory, even when out of the Brazilian SAR area. This will allow the vessels of Brazil to support them in any region of the globe.

The merchant ships flying a foreign flag are invited to voluntarily join the SISTRAM, which can be done by sending their position and navigation data for the Brazilian Shipping Center. However, when traveling in the territorial sea or in inland waters in Brazil are required to adhere to SISTRAM. It is worth noting that despite the existence of other systems that allow automatic and independent entries of information relating to merchant traffic, such as the Maritime Monitoring System to Support Activities Petroleum (SIMMAP), System Monitoring and Identification of the Long Ships Distance (LRIT) and Automatic Identification System (AIS), the merchant ships are not exempt from fulfilling the procedures for accession to the SISTRAM.

2. PROCEDURES FOR THE ACCESSION SISTRAM

2.1 - Purpose of SISTRAM

Follow the movement of ships in SAR maritime area of responsibility in Brazil. For Brazilian flagged ships or chartered by a Brazilian company, the monitoring will be conducted across the globe. Monitoring is accomplished through standard navigation information, provided by the ship. The data provided may be used in SAR incident, both those in which the ship is involved and in those where their assistance is needed.

2.2 - Benefits of adherence to SISTRAM

- 1) - Rapid start of SAR operations.
- (2) - Appointment of MV that are near the position of a wrecked vessel, to provide assistance.
- (3) - Medical care or emergency medical advice for the MV that have no doctor.

2.3 - Area of Operation SISTRAM

The monitor SISTRAM MV SAR area of Brazil (Figure 1). Regarding the Brazilian flag ships or chartered by a Brazilian company, the monitoring will be conducted in any region of the planet.

2.4 - participation

The International Convention recommend that MV, any flag, participating in the system for their own safety. To join SISTRAM, MV should send your Trip Planner for each singradura within the coverage area of the SISTRAM even when on the move navigation. The Travel Plan should be transcribed in the form of messages from Type 1 to 4.

The routing information for these CISMAR (see subsection 2.7) is governed by the Rules of the Maritime Authority for Traffic and Permanence of vessels in waters under national jurisdiction (NORMAN-08), as mentioned in paragraph g of

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section 3 of this newsletter, (Brazilian legislation).

2.5 - Types of Messages

TYPE 1 - Trip Planner

It is the basic information for starting up and estimate the vessel's position and may be sent at the time the ship SISTRAM adhere to, an action that should be performed when the ship suspended from a Brazilian port or, when proceeding from foreign ports, enter the Brazilian territorial sea. When the foreign ship to enter the Brazilian SAR area, immediately, you can join the system voluntarily. Recalls that the Brazilian flag ships must always adhere to SISTRAM, sending a message by e-mail TYPE1

NOTE

The Travel Plan should be sent as soon as possible, preferably before the suspend, or before the entry into the Brazilian SAR area.

Option Route Model

For boats that perform routine trips with the same points of defeat, there is the option "Use Model Route", if the route (s) in the system has already been registered, according to NORMAM-08 / DPC.

TYPE 2 – Position Report

It is information that allows you to confirm if the ship suspended or that its position is consistent with the Trip Planner. Must be sent within 24 hours after the scheduled start of the message type singradura 1.

NOTE

A ship in bad weather or adverse conditions can send the instant message and position in the time that suits you best.

TYPE 3 – Change of route

Is the information necessary to make corrections along the planned route, when changing the port of destination, when deviate by more than 25 miles from the original route or there is another change that alters the Trip Planner.

TYPE 4 – Final Message

It contains information that participation in SISTRAM. Should be sent to an hour before the time set for entry into the port of destination or when leaving the Brazilian SAR area (Figure 1).

**FOR THE PREPARATION OF MESSAGES, VIEW
EXAMPLES OF MESSAGES (page 6 and 7)**

2.6 – how to Participate

Participation in the system when the ship starts to send your Trip Planner (message type 1) and ends when you submit your Final Message (Type 4).

NOTE:

Any ship which is within the area of monitoring, without yet having joined the SISTRAM, you can do it anytime, just send your Trip Planner (message type 1), from the position in which the decision is taken. If, otherwise, is already participating in the system and want to terminate your membership, simply end the Final Message (Type 4), completing the line X - Comments by the information it is ending its participation.

2.7 – Sending messages SISTRAM

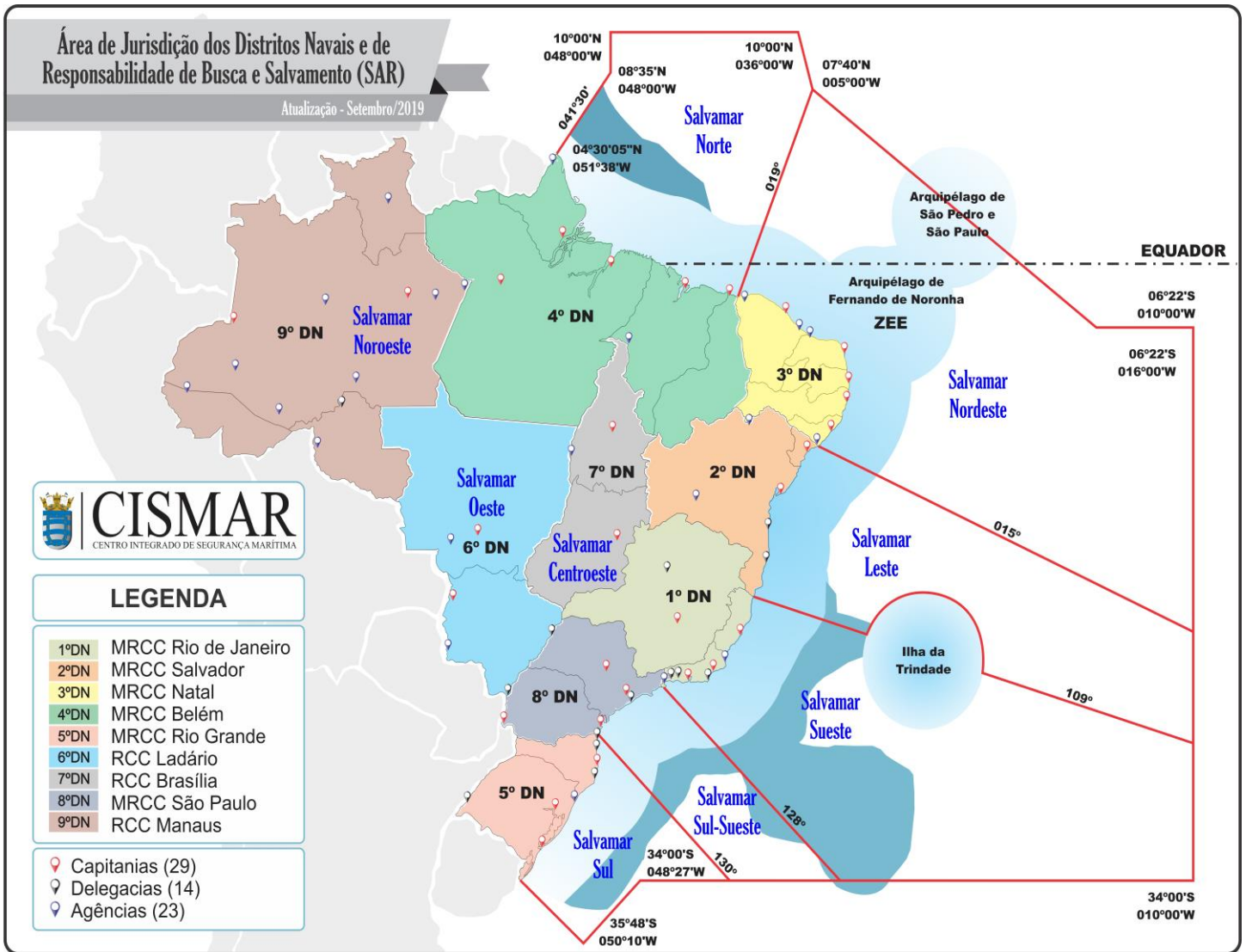
Messages for SISTRAM should be addressed to the **BRAZILIAN SHIPPING CENTER (CISMAR) Organ Navy based in Brazil Rio de Janeiro.**

They may also be transmitted by facsimile, telephone or through the Stations of RENEK (listed in Table 1), at any time.

For more details get in touch with:

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FIGURE 1 - THE SAR AREA FROM BRAZIL / AREA MONITORING BY SISTRAM



Trip Planner - (Message Type 1)

Sailing Plan				NOTES
Required data items				
System Name		Type of Message	Date-Time-Month-Year Transmission	(1)
SISTRAM		1	Z//	
Intl Radio Call Sign	Ship's Name	Flag	Type	(2)
A /	/	/	//	
Date-Time of Departure				(1)
B /		Z //		
Port of Departure		Latitude ()	Longitude ()	(3)
G /	/	/	//	
Port of Destination		Latitude ()	Longitude ()	ETA
I /	/	/	Z //	
Route Information				(4)
Latitude ()		Longitude ()	ETA	
L /	/	/	Z //	
L /	/	/	Z //	
L /	/	/	Z //	
L /	/	/	Z //	
L /	/	/	Z //	
On Board Medical Resources				(5)
V /		//		
Optional Data Items				(6)
Current Coastal Radio Station		Next Coastal Radio Station		
M /	/	//		
Comments - up to 65 characters				(7)
X /		//		
Comments				(7)
Y /		//		

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Position Report - (Message Type 2)

Position Report				NOTES	
Required Data Items					
System Name		Type of Message	Date-Time-Month-Year Transmission	(1)	
SISTRAM		2	Z//		
Intl RadioCall Sign	Ship's Name		Flag	Type	(2)
A /	/	/	/	//	
Date-Time of Position				(1)	
B /	Z //				
Latitude ()		Longitude ()		(3)	
C /	/	/	//		
Optional Dataltems				(6)	
Current Course					
E /	//				
Estimated Average Speed					
F /	//				
Current Coastal Radio Station		Next Coastal Radio Station			
M /	/	/	//		
Comments - up to 65 characters				(7)	
X /	//				
Comments				(7)	
Y /	//				

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Deviation Report - (Message Type 3)

Deviation Report				NOTES
Required Data Items				
System Name	Type of Message	Date-Time-Month-Year Transmission		(1)
SISTRAM	3	Z//		
Intl Radio Call Sign	Ship's Name	Flag	Type	(2)
A /	/	/	//	
Deviation Course Data Items				(8)
Port of Destination	Latitude ()	Longitude ()	ETA	
I /	/	/	Z //	
Route Information				(4)
Latitude ()	Longitude ()	ETA		
L /	/	Z //		
L /	/	Z //		
L /	/	Z //		
Optional Data Items				(6)
Current Coastal Radio Station	Next Coastal Radio Station			
M /	//			
Comments - up to 65 characters				(7)
X /	//			
Comments				(7)
Y /	//			

Final Report - (Message Type 4)

Final Report				NOTES
System Name	Type of Message	Date-Time-Month-Year Transmission		(1)
SISTRAM	4	Z//		
Intl Radio Call Sign	Ship's Name	Flag	Type	(2)
A /	/	/	//	
Arrival Port or Exit Point	Latitude ()	Longitude ()	ETA	(3)
K /	/	/	Z //	
Optional Data Items				
Comments - up to 65 characters				(7)
X /	//			
Comments				(7)
Y /	//			

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(1) Date-Time Group

Must be expressed in groups of six digits, with the first two digits are the day of the month, and the following four hours and minutes. The date-time group to use Greenwich Mean Time (GMT), followed by "Z".

Example: 201200Z→1200 at time by day 201200 at time by day 20 (HMG).

Fill in the date-time group must be added the month, represented by the three initial letters, and the year, represented the last two digits.

Example: 201200Z MAR 07.

(5) Type of Ship

TM - General Cargo; BMT - Tank; TMB - Grain; TMF - Ferry; TU - Fishing; TMT - Tug; TMC - Container; TME - RO-RO; TMM - Research; PLAT - Platform; TMGB - break - ice ; TMK - submarine cables; TMH - Crane; TMOS - Special Liquids; FPSO - Ship Platform; OTR - Other.

(6) Latitude and Longitude

The Latitude is expressed in groups of four digits, consisting of degrees and minutes, and suffixed with "N" for north or "S" for south.

Longitude is expressed in groups of 5 digits, consisting of degrees and minutes, and suffixed with "E" for East or "W" for West.

Example: 1830S for lat. 18°30`S, and 03815W for long. 038° 15' W.

(7) Route Information

Information from the planned route, the line L, is expressed between the points of turn, at least three points.

A ship to enter the SAR area, should express L in the first line of the message type to a lat / long from that point and time of entry date.

For message Deviation (type 3) in the first line L are given data point or the first turn point observed confirming the removal (greater than 25 miles) from the planned route.

(8) Medical Resources Board

Select as appropriate from the following: MD - Physician, PA - Physician's assistant or supervisor health nurse - nurse; None - No.

(9) Optional Data

These data are useful but not required. In the message type 2, the current direction is expressed in the E line, in groups of three digits, and the estimated average speed line F, in groups of three digits, in us and tenths of knots.

Example:
E/234// to direction 234°
F/153// to speed of 15.3 Knots

(10) Lines X and Y (Comments)

Completing optional.

They are usually included in the X reference data useful for SISTRAM, as the estimated date-time of the next transmission, the type of load, the number and INMARSAT EPIRB etc.

The line Y can be used for any communication at the discretion of NM.

(11) Items of Deviation Course

I change the line specifies the destination port, the message type 3.

Example:
I / SALVADOR / 1258S / 03831W / 051800Z // in case of port to be changed to SALVADOR.

3. BRAZILIAN LEGISLATION

The instructions listed above are in accordance with the laws and decrees presented below:

a) Legislative Decree No 11 of 16 April 1980. Published in the Official Gazette of April 18, 1980, section I, p.6730, approves the text of the International Convention for the Safety of Life at Sea (SOLAS 74), concluded in London on 1st November 1974.

b) Legislative Decree no 34 of May 21, 1982. Published in the Official Gazette of May 26, 1982, section I, p. 9529, approving the text of the International Convention on Maritime Search and Rescue (SAR-79 IMO) concluded at Hamburg on 17April1979.

c) Act in 8617, to January 4, 1993. Published in the Official Gazette of January 5, 1993, section I, p. 057 and 058, available on the Territorial Sea, Exclusive Economic Zone and Continental Shelf Brazilian, and other measures.

d) Law No. 9537 of December 11, 1997, provides for the safety of waterway traffic in waters under national jurisdiction (East).

e) Decree No. 2596 of May 18, 1998, approves the Regulation of the Law of Maritime Traffic Safety in waters Under national jurisdiction.

f) Ministerial Decree No. 67, March 18 1998.

Brazilian Maritime Authority delegates responsibility for implementing the Law on Maritime Traffic Safety by the Commanders of Naval Districts, Corps Commanders,

Director of Ports and Coasts and Directorate of Hydrography and Navigation.

g) Standards Authority for Maritime Traffic and Permanence of vessels in waters under national jurisdiction, (NORMAN-08), available at the site of the Diretoria de Portos e Costas (DPC): www.marinha.mil.br/dpc.

Importantly, according to the document mentioned in paragraph g) above, all Brazilians and MV chartered by Brazilian shipping, long distance and cabotage (sailing anywhere on the planet) and foreign-flagged sailing MV Brazilian territorial sea (12M) shall report position, course, speed, origin, destination and ETA. The foreigners who joined the MV SISTRAM, and have informed the points of defeat within 12M on the message type 1, need not do it again to enter the Brazilian territorial sea..

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EXAMPLE OF MESSAGE:

EXAMPLE 1

The ship KNFG / SEA WOLF, departs Santos (23° 56' S / 046° 19' W) at 0900 hours (GMT), on March 1, bound for New York (40° 42' N / 074° 01' W). Estimated

exit from Brazilian SAR area (10° 00' N / 044° 02' W) at 1340 hours (GMT) on March 8, and arrived in New York at 1410 hours (GMT) on March 14.



Note - Point **P** represents the ship's location in the Position Report (Type 2 message) sent within the first 24 hours after departure from a Brazilian port, and the **L** points represent ship's intended track.

(1) Departed from Santos to point **L1** (23° 46' S / 039° 45' W) at an average speed of 15 knots with an estimated arrival at point **L1** of 0900 hours (GMT) on March 2.

(2) The ship will head from point **L1** to point **L2** (05° 24' S / 031° 55' W) at an average speed of 15 knots with an estimated arrival at point **L2** 1630 hours (GMT) on March 5.

(3) At point **L2**, the ship will turn to course 322° with average speed of 17 kts. The estimated arrival time at point **L3** (10° 00' N / 044° 02' W) is 1340 hours (GMT) on March 8. This will mark the departure of the ship from the Brazilian SAR area.

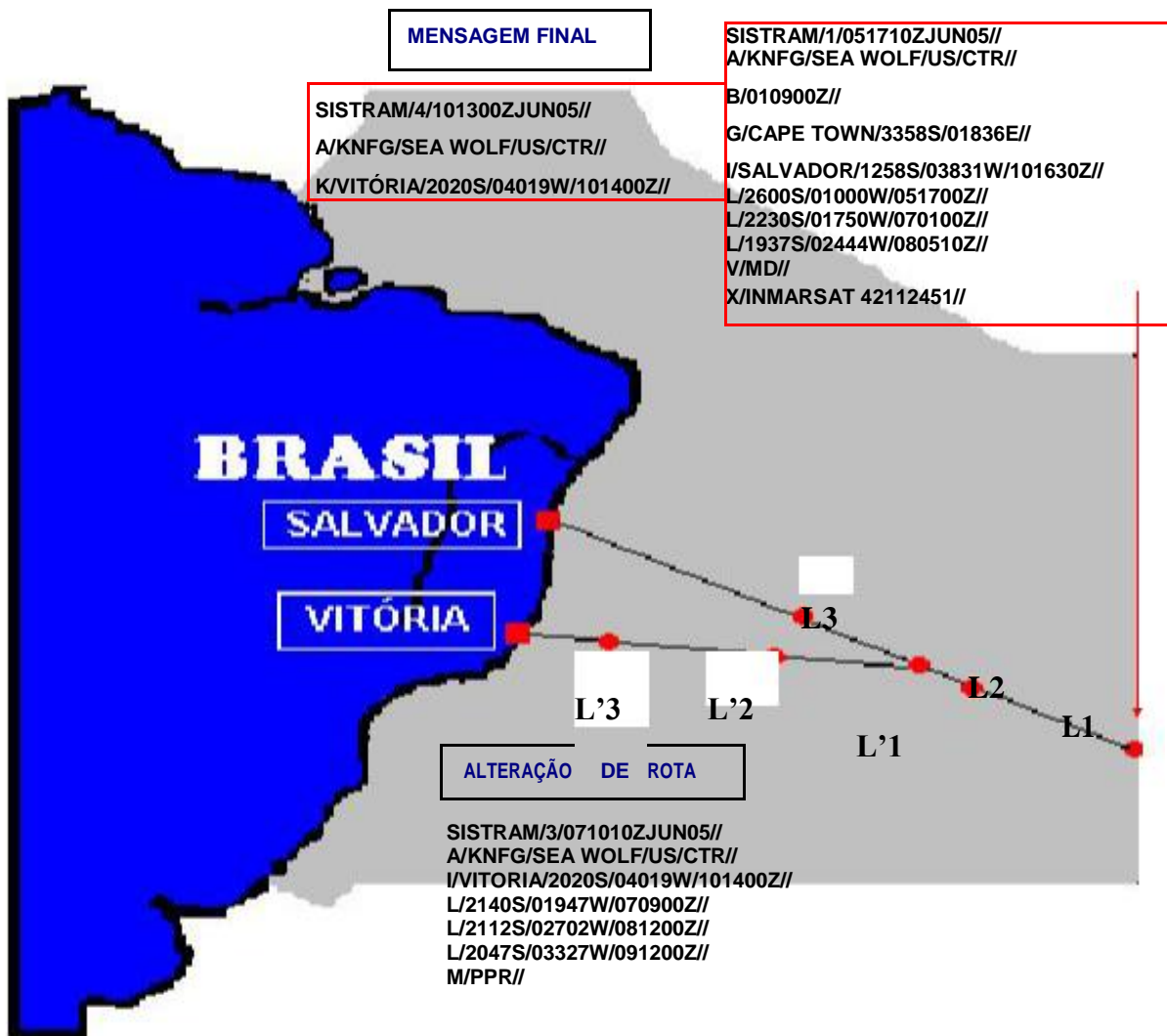
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EXAMPLE 2

American ship KNFG / SEA WOLF departs from CAPE TOWN (33° 58' S / 018° 36' E) bound for SALVADOR (12° 58' S / 038° 31' W) at 0900 hours (GMT) on March 1. Estimated entry into the Brazilian SAR area is at point L1 (26° 00' S / 010° 00' W) at 1700 hours (GMT) on March 5. Estimated arrival time in SALVADOR is 1630 hours (GMT) on March 10. At 0900 hours (GMT) on March 7, at position L'1 (21° 40' S / 019° 47' W), the

ship needs to change destination to the port of VITÓRIA (20° 20' S / 040° 19' W). The estimated arrival at VITÓRIA is 1400 hours (GMT) on March 10.

PLANO DE VIAGEM



Note - The points on the routes above represent the following situation:

L1 - 26° 00' S / 010° 00' W at 1700 hours (GMT) on March 5 - entered on SAR area;
L2 - 22° 30' S / 017° 50' W at 0100 hours (GMT) on March 7 - estimated position in the Sailing Plan;
L3 - 19° 37' S / 024° 44' W at 0510 hours (GMT) on March 8 - estimated position in the Sailing Plan;

L'1 - 21° 40' S / 019° 47' W at 0900 hours (GMT) on March 7 - position where the course changed;
L'2 - 21° 12' S / 027° 02' W at 1200 hours (GMT) on March 8 - estimated position in the Deviation Report;
L'3 - 20° 47' S / 033° 27' W at 1200 hours (GMT) on March 09 - estimated position in the Deviatin Report.

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TABLE 1

National Network Coastal Radio Stations from Embratel - RENEK

STATION NAME	CALL SIGN	WATCH FREQUENCIES	REMARKS	REMOTE STATIONS	CALL SIGN
RIO RÁDIO LAT: 22o57' 53" S LONG: 043o 40'23" W TEL: 08007012141	PPR	500 KHz 2;4;8;12;16;22;25 MHz 156 A 174 MHz	VOICE, MORSE AND RTLX	MANAUS RÁDIO ITACOATIARA RÁDIO PARINTINS RÁDIO BELÉM RÁDIO MACAPÁ RÁDIO BREVES RÁDIO S. LUIS RÁDIO SANTARÉM RÁDIO ALMERIM RÁDIO OLINDA RÁDIO F. DE NORONHA RÁDIO ARACAJU RÁDIO ILHÉUS RÁDIO SALVADOR RÁDIO SÃO MATEUS RÁDIO RIO NOVO SUL RÁDIO T. DE FREITAS RÁDIO CAVALINHO RÁDIO FORTALEZA RÁDIO VITÓRIA RÁDIO NATAL RÁDIO MOSSORÓ RÁDIO MACEIÓ RÁDIO ARACATI RÁDIO CABEDELÓ RÁDIO PORTO ALEGRE RÁDIO PARANAGUÁ RÁDIO MORRO REUTER RÁDIO OSÓRIO RÁDIO CAMPOS RÁDIO A. DOS REIS RÁDIO C. DE ABREU RÁDIO SANTOS RÁDIOS. SEBASTIÃO RÁDIO ITAJAÍ RÁDIO JOINVILLE RÁDIO FLORIANÓPOLIS RÁDIO LAGUNA RÁDIO JUNÇÃO RÁDIO	PPM PTM PRM PPL PTL PRL PPB PPT PTT PPO PTO PTA PPI PPA PVR PRI PTI PPE PPF PPV PPN PRQ PRO PTF PTN PPP PPG PRP PTP PTV PTR PRR PPS PTS PPC PRD PTC PRC PPJ