



**BRAZILIAN NAVY
DIRECTORATE OF PORTS AND
COASTS**

**MARITIME AUTHORITY STANDARD FOR
THE MANAGEMENT OF SHIP'S BALLAST
WATER**

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**MARITIME AUTHORITY STANDARD FOR
THE MANAGEMENT OF BALLAST WATER OF SHIPS**

**BRAZILIAN NAVY
DIRECTORATE OF PORTS AND COASTS**

2014

AMENDMENT RECORD SHEET

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INTRODUCTION

1 - HISTORY

The introduction of alien aquatic organisms and pathogenic agents from different regions of the world into habitats outside their native limits, potentially threatening the environment and economies, has been a factor of great concern for authorities of several countries.

Historically, it is unknown when the process that may be called -bioinvasion was triggered. However, it is known that, with the technological progress of maritime transportation, vessels became bigger, faster and more frequently used, thus allowing the reduction of voyage times and intensification of commerce deals. Consequently, this transport mode has been pointed out as the main dissemination vector for those organisms, effected, among other ways, through the uptake and discharge of Ballast Water and its sediments, dealt with in the present Standard.

Experts indicate as adverse consequences of the introduction of these invaders to the aquatic environment, the loss of local or regional biodiversity, the modification of landscapes, diverse economic losses, besides the proliferation of pathogenic microorganisms like the one inducing cholera, among others. Concrete situations, like those described below, evidence the transfer of organisms carried by Ballast Water and indicate the need for urgent measures.

The zebra mussel, *Dreissena polymorpha*, originated in Europe, which established itself in the Great Lakes, USA, and today occupies 40% of the north-American rivers, has caused millions of dollars in losses per year with fouling removal and control (Gauthier & Stell, 1996).

In Brazil, the presence of alien species had been perceived sporadically along the coast. However, with the emergence of the golden mussel (*Limnoperna fortunei*), a dramatic change occurred in the way this problem was being handled in the country. This freshwater mollusk, originated from Southeast Asia, was introduced in Argentina through Ballast Water, in 1991. In 1998, its presence was noted in the Jacuí River delta, near Porto Alegre. Presently, its occurrence is found in great proportions in the rivers Guaíba, Paraguai and Paraná .

The golden mussel's presence, given its great adaptation and reproduction capability, has been causing losses due to agglomeration inside water suction and discharge pipes and their consequent clogging, as well as the early deterioration and obstruction of filters and grids due to excessive incrustation. Furthermore, when its mortality occurs, the mussel brings problems to Water Treatment Stations due to the great number of individuals to be discarded and the bad odor, raising the maintenance costs, with the need to clean and change the filters more frequently.

This issue involves, in principle, two basic points: a health risk and the aquatic environment pollution caused by vessels, when using Ballast Water to reach their objectives and purposes. Given the above, the Maritime Authority and the health and environmental authorities, exercising their specific competences established by Law, have been working towards the presentation of possible solutions to minimize losses caused to the environment due to the uptake, discharge or exchange of Ballast Water in places considered inappropriate or not authorized.

2 - PURPOSE

To establish requirements regarding the prevention of pollution by vessels in Brazilian Jurisdictional Waters (AJB), in what relates to Ballast Water Management.

The initial system is fundamentally based on the exchange of Ballast Water in accordance with the International Maritime Organization (IMO) Assembly Resolution A.868 (20), of 1997 and the International Convention for the Control and Management of Ships' Ballast Water and Sediments, adopted in February 2004, signed and ratified by Brazil, respectively, on January 25, 2005 and April 14, 2010. It should be applied to all vessels that may discharge Ballast Water in AJB. The exemptions and exceptions will be addressed in specific items.

As more advanced methods for treatment of Ballast Water are being developed, this Standard will be adapted in order to address the new situations.

3 - CONSIDERATIONS REGARDING BALLAST WATER MANAGEMENT

a) It is fundamental that the Ballast Water management procedures are effective and viable, both technically and ecologically, and implemented with the purpose of reducing the costs and delay imposed to vessels to a minimum.

b) Implementing methods and procedures for Ballast Water Management appears to be a solution for reducing to a minimum the introduction of alien aquatic organisms and pathogenic agents in AJB.

c) The Ballast Water Management System used in compliance with this Standard shall be safe for the vessel, her equipment, crew and passengers, and shall not cause more or greater environmental impact than its absence; and

d) There is an evident need for developing new technologies and equipment of Ballast Water Management, given that operational measures such as the Ballast Water exchange in the ocean are not plainly satisfactory. New Ballast Water Management methods may be accepted as alternatives, if complying with the IMO rules.

4 - RELATED LEGISLATION

4.1 - Law No. 6,938/1981 (National Environmental Policy)

Law No. 6,938/1981 defined pollution in a broad sense, aiming at protecting not only the environment but also society, health and economy. Hence, this Law, in its Article 3, defined pollution as:

"the degradation of environmental quality resulting from activities that directly or indirectly:

a) impair the health, safety and well-being of the population;

b) create adverse conditions to social and economic activities;

c) unfavorably affect the biota;

d) affect aesthetic or sanitary conditions of the environment; and

e) dispose materials or energy in non-compliance with established environmental standards."

4.2 - Law No. 9,537/1997 (LESTA)

The Law of Waterways Traffic Safety (LESTA) established several duties for the Maritime Authority, among them, the basis for preparation of this Standard. LESTA determines that the Maritime Authority shall establish the preventive/normative requirements to avoid generically the marine pollution and, therefore, the one possibly caused by Ballast Water, as described in art. 4, item VII, of said Law:

"Art. 4 - It is for the Maritime Authority to:

(...)VII - establish requirements regarding the safety and habitability conditions for the prevention of pollution from vessels, platforms or their support installations."

4.3 - Law No. 9,605/1998 (Environmental Crime Law)

Law No. 9,605/1998, which addresses environmental crimes and administrative sanctions, defined in art. 70, in a generic fashion, the environmental administrative violation and established that the non-fulfillment of environmental prevention standards constitutes a motive leading to application of penalties.

Decree No. 6,514/2008, which regulated said Law, defined what an environmental administrative violation is and opened to Maritime Authority Agents, in art. 151 combined with Art. 150, the possibility of issuing normative administrative acts aiming at disciplining the necessary procedures to the correct application of administrative penalties. That said, rules disciplining the penalties for non-compliance with preventive requirements established in this Standard were elaborated based on art. 151 of the above-mentioned Decree combined with art. 70 of Law No. 9,605/1998 transcribed below.

"Art. 70 - Every action or omission violating legal rules of use, fruition, promotion, protection and recovery of the environment is considered as environmental administrative violation.

§ 1 - The competence for drawing up a violation record and establishing an administrative process is attributed to officers of environmental bodies integrating the National Environment System - SISNAMA, assigned for

monitoring activities, as well as the agents of Harbormaster offices, from the Navy."

4.4 - Resolution RDC No. 72, of December 29, 2009

The Board of Directors of the National Health Surveillance Agency (ANVISA) approved, through the Board of Directors Resolution (RDC) No. 72 of December 29, 2009, the Technical Regulation establishing minimum requirements for promotion of health in the health control ports installed in national territory and vessels transiting through them.

Its Section VI, which addresses specifically the ballast water, establishes that every vessel, at the Health Authority's discretion, will be subject to collection of ballast water sample for analysis, aiming at identifying the presence of pathogenic agents and physical indication of chemical components.

5 - DEFINITIONS

For the purposes of this Standard, the following definitions will be used:

MARITIME AUTHORITY AGENT – Agents of the Harbormaster, Delegate and Agent Offices of the Navy Command;

BALLAST WATER - Is the water with its particles in suspension, carried on board a vessel inside her ballast tanks, for controlling the vessel's trim, heel, draught stability or stresses;

BRAZILIAN JURISDICTIONAL WATERS (AJB) – Encompasses the interior waters and maritime spaces, in which Brazil exercises jurisdiction, to some degree, over activities, persons, installations, vessels and natural resources alive and not alive, found in the liquid mass, on the seabed or in its subsoil, for the purposes of control and monitoring, within the limits of national and international laws. These maritime spaces comprise the two-hundred nautical mile breadth counted from the base lines, increased by the overlying waters to the extension of the Continental Shelf beyond the two-hundred nautical miles, wherever it occurs.

ECOLOGICALLY SENSITIVE AREAS - Regions of maritime or inland waters, defined by a Public Authority act, where the prevention and control of pollution and the maintenance of ecologic balance require special measures for the protection and preservation of the environment, regarding the passage of vessels;

GROSS TONNAGE – A non-dimensional parameter determined in accordance with the International Convention on Tonnage Measurement of Ships, 1969, representing the total volume occupied by all the vessel's closed spaces;

MARITIME AUTHORITY - Authority exercised directly by the Commandant of the Brazilian Navy, responsible for the safeguard of human life and navigation safety in the open sea and inland waterways, and the prevention of environmental pollution caused by vessels, platforms and their

support installations;

PORT AUTHORITY - Authority responsible for the administration of an organized port, including monitoring the port operations and providing for the services to be carried out with regularity, efficiency, safety and respecting the environment;

SANITARY AUTHORITY - Authority responsible directly, within its delimited territory, for applying adequate sanitary measures in accordance with the Laws and Regulations in force in the national territory as well as with the agreements and other international acts of which Brazil is signatory;

INTERNATIONAL CERTIFICATE – International Certificate of Ballast Water Management issued and approved by the vessel's Flag State, in compliance with prescriptions established in the Convention;

EXEMPTION CERTIFICATE – A Certificate issued by the Directorate of Ports and Coasts (DPC), against previous request from the shipowner or person responsible for the vessel, made in a well-founded way, for the exemption of vessels that do not need to follow the guidelines established in this NORMAM;

COMPANY – The vessel owner or any other organization or person, such as the operator or bareboat charterer of the vessel, who assumed from the owner the responsibility for the vessel's operation and, when assuming such responsibility, agreed to accept all the duties and responsibilities imposed by the International Safety Management Code;

CONVENTION – International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004;

DEBALLAST – Discharge of Ballast Water utilized on board the vessel in the tanks/ballast holds, into the aquatic environment or to port reception facilities;

VESSEL - any construction, including floating platforms and fixed platforms when towed, subject to enrollment with the Maritime Authority and susceptible of locomotion in the water, by own means or not, carrying people or cargo;

BALLAST WATER MANAGEMENT - Encompasses the mechanical, physical, chemical and biological processes, individually or in combination, to remove, render harmless or avoid the uptake or discharge of Harmful Aquatic Organisms and Pathogenic Agents found in the Ballast Water and Sediments contained therein.

NAVAL INSPECTION - Activity of an administrative nature, consisting in the monitoring of compliance with LESTA, the standards and regulations originated from it, and international acts and resolutions ratified by Brazil, in what relates exclusively to the safeguard of human life and navigation safety, in the open sea and inland waterways, and the prevention of marine pollution by vessels, platforms or their support facilities.

SHIP - A vessel of any type operating in the aquatic environment, including submersibles,

floating devices, floating platforms, stationary units of storage and transfer (FSU) and stationary units of production, storage and transfer (FPSO);

ALIEN AND HARMFUL AQUATIC ORGANISMS, AND PATHOGENIC AGENTS - Aquatic or pathogenic organisms which, if introduced in the sea, including deltas or freshwater waterways, may harm the environment, the public health, property or resources, the biological diversity or interfere with other legitimate uses of such areas;

ENVIRONMENTAL AGENCY – An environmental protection and control agency from the federal, state or municipal executive power, integrating the National Environment System – SISNAMA;

POLLUTION – The degradation of environmental quality resulting from activities that directly or indirectly impair the health, safety and well-being of the population, create adverse conditions to social and economic activities, affect unfavorably the biota, affect aesthetic or sanitary conditions of the environment and throw materials or energy in disagreement with established environmental standards;

BALLAST WATER MANAGEMENT SYSTEM (BWMS) – Encompasses the ballast water management through the treatment of that water and its sediments, following the Guidelines established by the IMO, by mechanical, physical, chemical or biological processes, individually or in combination, to kill, remove or turn harmless the harmful or potentially harmful aquatic organisms and pathogenic agents found in the ballast water and its sediments; and

NATURE CONSERVATION UNIT – A territorial space and its environmental resources, including jurisdictional waters, with relevant natural characteristics, lawfully instituted by the Public Authority with conservation purposes and defined limits, under a special management regime to which adequate protection guarantees are applied.

6 - REFERENCES

GAUTHIER, D. and STEEL, D. A. 1996. A synopsis of the situation regarding the introduction of non-indigenous species by ship-transported ballast water in Canada and selected countries. Can. Man. Rep. Fish. Aquatic. Sci. 2380.

JURAS, I.A.G.M., *Problemas Causados pela Água de Lastro*. House of Representatives

- Legislative Consulting Office, 2003. Access: 29/07/2004,
- “www.camara.gov.br/internet/diretoria/conleg/estudos/211161pdf”.

MEDAUAR, O. *Coletânea de Legislação de Direito Ambiental*. 2ed. São Paulo Revista dos Tribunais, 03.

SILVA, J.S.V. e SOUZA, R.C.C.L. *Água de Lastro e Bioinvasão*. Rio de Janeiro Interciência, 2004.

SILVA DE MORAES, L.C. Curso de Direito Ambiental. São Paulo Atlas, 2001. BRAZIL. National Sanitary Surveillance Agency. Access: 02/08/04, “<http://e-legis.bvs.br/leisref/public/showAct.php?id=1196>”.

Law No. 6,938 of August 31, 1981.

Law No. 9,537 of December 11, 1997.

Law No. 9,605 of February 12, 1998.

Decree No. 6,514 of September 21, 1999, regulating Law No. 9,605/1998. Board of Directors Resolution - RDC- ANVISA No. 72 of December 29, 2009. Opinion No.37/2004 of May 4, 2004 from the Directorate of Ports and Coasts.

International Maritime Organization (IMO). *International Convention on Control and Management of Ballast Water and Sediments from Ships*, 2004. London, 2004.

International Maritime Organization (IMO). *Guidelines for Control and Management of Ballast Water of Ships, to Minimize the Transfer of Noxious Aquatic Organisms and Pathogenic Agents - Resolution A.868(20)*. London, 1998.

CHAPTER 1

APPLICATION, EXCEPTIONS AND EXEMPTIONS

1.1 - APPLICATION

The present Standard applies to all national or foreign vessels fitted with Ballast Water tanks/holds, operating in Brazilian ports and terminals.

According to IMO Assembly Resolution A.868(20), 1997, and the International Convention for the Control and Management of Ships' Ballast Water and Sediments, adopted in 2004, the pollution prevention by vessels in AJB, in what relates to Ballast Water management, is based on the obligatoriness of the Ballast Water exchange in deep sea.

1.2 - EXCEPTIONS

Exceptions are emergency or particular situations that dispense the application of the general guidelines (sub-item 2.2.3) established in this Standard.

The following situations are considered as exceptions and should be reported to the Maritime Authority Agent of jurisdiction over the destination port:

- a) cases of force majeure or emergency, to safeguard the human life and/or the vessel's safety;
- b) when necessary to uptake or discharge Ballast Water and its contained sediments to ensure the safety of a vessel and persons on board in situations of emergency or rescue of human life at sea;
- c) when occurring an accidental discharge of Ballast Water and its sediments resulting from damage to the vessel or her equipment, if all reasonable precautions aiming at preventing or minimizing the discharge have been taken, before or after the occurrence or discovery of the damage or discharge, and unless the shipowner, company, vessel operator or officer responsible has caused the damage by negligence;
- d) when the uptake or discharge of Ballast Water and sediments is carried out with the purpose of avoiding or minimizing pollution incidents caused by the vessel; and
- e) when the discharge of Ballast Water and sediments is carried out in the same place where the total volume of those Ballast Water and sediments were originated from, and if no mixture with Ballast Water and sediments from other areas has occurred.

1.3 - EXEMPTIONS

All vessels exempt from meeting this Standard shall operate in such a way as to avoid as much as possible the environment contamination by the deballasting of Ballast Water and sediments.

The following are exempted:

a) any warship, Navy auxiliary ship or any other vessel owned or operated by a State and used temporarily, only in a governmental, non-commercial service;

b) vessels with sealed tanks containing permanent Ballast Water not subject to discharge to the aquatic environment, if bearing a valid Exemption Certificate issued by the DPC - Directorate of Ports and Coasts;

c) maritime and port support vessels;

d) vessels with characteristics which do not allow the exchange of ballast, if bearing a valid Exemption Certificate issued by the DPC; and

e) sports and recreational vessels used only for recreation/contests, or those used for search and rescue, with a total length not exceeding 50 meters and a maximum Ballast Water capacity of eight cubic meters.

CHAPTER 2

BALLAST WATER MANAGEMENT

2.1 - SHIP BALLAST WATER MANAGEMENT PLAN

2.1.1 - Implementation

Every national or foreign vessel using water as ballast must have a Ballast Water Management Plan aiming at providing safe and effective procedures for this purpose. This plan should be included in the vessel's operational documentation, and moreover, be specific for each vessel and contain the following items:

- a) detailed safety procedures for the vessel and crew, in relation to Ballast Water management;
- b) detailed description of actions to be taken for implementing the Ballast Water management;
- c) indication of points where the collection of Ballast Water samples representing the ballast carried by the vessel is possible;
- d) officer responsible on board for ensuring the Plan's correct implementation;
- e) be written in the vessel's working idiom. If the idiom used is not English, French or Spanish, a translation into one of these idioms shall be included; and
- f) be written in Portuguese in Brazilian vessels operating only in Brazilian jurisdictional waters. If these vessels begin operating also in long-range navigation, the Plan shall meet the provisions of previous subparagraph.

2.1.2 - Documentation

The Ballast Water Management Plan of Brazilian vessels and those chartered with a Temporary Enrollment Certificate (AIT) must be approved by a Ship Classification Society represented in the country, with delegated competence for acting on behalf of the Maritime Authority. Vessels of other flags shall have their plans approved by the flag country's Administration or organization recognized by the flag country's Administration.

2.2 - BALLAST WATER MANAGEMENT

2.2.1 - Inspection

Vessels making stopovers in Brazilian ports or terminals are subject to Naval Inspection for determining if the vessel meets these Standards.

2.2.2 - Forwarding of the Ballast Water Form

The Ballast Water Form (Annex A/Annex B), duly completed, must be forwarded to the Maritime Authority Agent of jurisdiction over the destination port, by the vessels' masters or their agents, within a maximum of two hours after the vessel is moored or anchored.

The vessel shall keep on board, for a period of at least 2 (two) years, a copy of this

form at the disposal of the Naval Inspection, according to item 4.2 of this Standard.

The Maritime Authority Agents, on their side, shall reroute- the forms, every month, to the Admiral Paulo Moreira Sea Studies Institute (IEAPM).

2.2.3 - General guidelines for exchanging ships' Ballast Water

When carrying out the Ballast Water exchange, one must keep in mind the aspects of crew and vessel safety and favorable meteorological conditions. The following measures should be taken:

a) the vessels shall carry out the Ballast Water exchange at no less than 200 nautical miles from the nearest land and in waters at least 200 meters deep, considering the procedures set forth in this Standard. Any of the following methods will be accepted for the Ballast Water exchange: Sequential, Continuous Flow and Dilution, as described in Annex C;

b) in cases where the vessel cannot carry out the Ballast Water exchange in compliance with subparagraph a, the exchange shall be effected the farthest possible from the nearest land and, in any case, at least 50 nautical miles and in waters at least 200 meters deep;

c) a vessel shall not be required to deviate from her voyage plan or delay the voyage in order to comply with the previous items' provisions. In this case, the vessel shall justify in accordance with the provisions of Chapter 1, item 1.2 of this Standard;

d) a vessel carrying out Ballast Water exchange shall not be required to meet subparagraphs a and b, if the Master decides in a reasonable way that such exchange would threaten the vessel's safety or stability, her crew or passengers due to adverse meteorological conditions, excessive efforts from the vessel, equipment failure or any other extraordinary condition;

e) when using the Continuous Flow or the Dilution method for the Ballast Water exchange, the vessel shall pump at least three times the tank's volume;

f) vessels carrying out a Ballast Water exchange shall do it with an efficiency of at least 95% of Ballast Water volumetric exchange;

g) only tanks/holds that already had their water exchanged may be deballasted;

h) vessels not exempted and not deballasting, considering emergency or particular situations in conformity with item 1.2, shall nevertheless, present the Ballast Water Form

(Annex A/Annex B);

i) the Ballast Water discharge is prohibited in Ecologically Sensitive Areas and in Nature Conservation Units (UC) or in other cautionary areas established by environmental or sanitation bodies in AJB, when plotted in a nautical chart; and

j) when, due to the vessel's route, it is not possible to meet the provisions of subparagraphs a and b, the vessel will not be exempted from performing the exchange of ballast water, and must do it at the deepest tract of her route.

2.2.4 - Ballast Water Management System (BWMS)

Vessels with an operational Ballast Water Management System, with the respective International Certificate valid, issued by the competent Flag Authority, considering the IMO developed Guidelines, are exempted from meeting the provisions of subparagraphs a, b, c, d, e, f, g and j of sub-item 2.2.3.

2.2.5 - Specific guidelines for platforms

a) semi-submersible and floating platforms, of drilling or production, are subject to Ballast Water exchange procedures, when arriving in Brazil coming from a foreign port or foreign or international waters;

b) production semi-submersible and floating platforms are exempted from Ballast Water exchange procedures, starting from the moment of their installation at the operation site and throughout the length of stay at it; and

c) drilling semi-submersible and floating platforms are exempted from Ballast Water exchange procedures, when their displacement occurs within the Brazilian Territorial Sea and Exclusive Economic Zone (ZEE).

2.2.6 - New Techniques

As new technologies and new Ballast Water management or treatment systems are being developed for avoiding, minimizing and controlling the carriage of alien aquatic or pathogenic organisms by the Ballast Water, provided they are assessed and accepted by the Maritime Authority, the DPC will timely establish the adequate normative instructions.

CHAPTER 3

PARTICULAR SITUATIONS

3.1 - EMERGENCIES

The provisions of this Standard will not apply when it is necessary to safeguard human life or the vessel's safety, in cases of force majeure due to situations of emergency or arising from meteorological conditions in the region.

3.2 - SAILING BETWEEN NATIONAL PORTS/TERMINALS

All vessels sailing between river ports/terminals of distinct hydrographic basins, when navigating by sea, shall carry out the Ballast Water exchange, if not carrying on board an operational BWMS with the respective International Certificate valid.

For the purpose of this Standard, the hydrographic basins and their existing river ports/terminals shall be considered, in accordance with Annex D.

CHAPTER 4

MONITORING

4.1 - MONITORING SYSTEM

The Monitoring System is an essential component of the Ballast Water Management and, consequently, it must be based on the management scheme adopted, coherent with international practice and capable of assessing if the Port State requirements have been met and, if negative, to ensure that adequate measures or sanctions are adopted.

In cases of violation of this NORMAM, denunciation, emergencies, or when justified by relevant circumstances, the Maritime Authority Agents shall take measures ensuring that the vessel will not discharge Ballast Water, until she is able to do so without posing a threat of harming the environment, public health, property or resources.

4.2 - CONTROL

4.2.1 - Procedure

The Ballast Water exchange control must be effected starting from checking the Ballast Water Management Plan and the Ballast Water Form (Annex A/Annex B). The Ballast Water Record Book and the International Certificate, when existing, shall be analyzed, for the records of ballast operations carried out and for its validity, respectively.

The Maritime Authority Agent may verify the following topics:

- a) in the Ballast Water Management Plan, check the Ballast Water exchange method adopted by the vessel;
- b) check if the Ballast Water Form (Annex A/Annex B) was correctly filled out;
- c) check the International Certificate's validity, if existing, issued by the Flag State's competent Authority, with duration not exceeding five years;
- d) audit the Ballast Water Record Book, if existing, and the vessel's records necessary for gathering other information (such as the Log Book, Engine Diary, Ship Position Book and the Tank Daily Sounding Book);
- e) check if the Ballast Water exchange was carried out according to the procedures set forth in this Standard;

f) collect Ballast Water samples for future assessment, if deemed necessary, and always in compliance with the provisions of item 4.1 of this Standard; and

g) as a means of checking/confirming the information obtained in the Form (Annex A/Annex B), the Maritime Authority Agent may sample the water of ballast tanks/holds to verify the water salinity, using a refractometer.

4.2.2 - Standardization

Both the International Certificate and Ballast Water Record Book shall follow the standards provided in the Convention's Appendices I and II.

4.3 - EXECUTION INSTRUMENTS

4.3.1 - Procedure

Violation of any prescription of this Standard is forbidden inside AJB, and sanctions are established according to national laws. In any such occurrence, the Maritime Authority Agent shall establish an administrative procedure in compliance with the law. He may further take measures to warn, detain or prohibit the vessel's entry in a port or terminal.

At the Maritime Authority Agent's discretion, however, the vessel may be granted permission to exit the port or terminal in order to discharge or exchange Ballast Water, in accordance with the procedures required in this Standard.

4.3.2 - Penalties and sanctions

The fees applied upon failure to comply with this Standard will be determined according to the infraction's seriousness, in coherence with other penalties used internationally in shipping and in accordance with values established in Decree No. 6,514 of July 22, 2008.

4.3.3 - Naval Inspection

The Maritime Authority Agents shall verify the fulfillment of the present Standards, on occasion of the Naval Inspection in Brazilian and foreign vessels.

4.4 - VIOLATION

Every action or omission that breaches any of the rules established in this NORMAM constitutes a violation.

4.5 - VERIFICATION OF VIOLATIONS

A violation and the person accountable will be determined:

- a) at the moment it is committed or during an inspection;
- b) by later finding; and
- c) by an Administrative Process.

4.6 - PERSONS RESPONSIBLE

The following are accountable for violations provided in this Standard:

- a) the vessel's owner, either natural or legal person, or a lawful representative;
- b) the shipowner or vessel operator, if not rigged or operated by the owner; and
- c) the natural or legal person, public or private, lawfully representing the vessel and/or platform.

4.7 - COMPETENCE

4.7.1 - Maritime Authority Agents

It is for the Maritime Authority Agents (Art. 70, §1 of Law No. 9,605/1998) to draw environmental violation records and establish administrative processes.

4.7.2 - Director of Ports and Coasts

It is for the DPC, as REPRESENTATIVE OF THE MARITIME AUTHORITY FOR ENVIRONMENTAL ISSUES, to judge, at the highest level, the appeals on fees applied for violations to this Standard.

4.8 - SPECIFIC STANDARDS AND PROCEDURES FOR ESTABLISHING AN ADMINISTRATIVE PROCESS

4.8.1 - Administrative Process

The Administrative Process, provided in Art. 70 of Law No. 9,605/1998, has in its scope the verification of facts reported to the Maritime Authority, for the finding of possible violations and their authors, as well as violations found in the act and during inspections.

The administrative process provided for in these Standards will be guided by principles of lawfulness, purpose, motivation, reasonableness, proportionality, morality, ample defense, contradictory, juridical safety, public interest and efficiency, as well as by the criteria mentioned in the sole paragraph of art. 2 of Law No. 9,784 of January 29, 1999.

4.8.2 - Deadlines for the finding of Environmental Violations (Article 71 of Law No.9,605/98)

a) Violation Record:

I - Once the occurrence of an environmental administrative violation is verified, a violation record will be drawn-up (Annex E), of which the violator shall be given knowledge, ensuring the contradictory and ample defense;

II - The violator may offer defense against the violation record, within the deadline of twenty days counted from the acknowledgment date;

III - The defense will be formulated in writing and shall contain the facts and juridical basis contradicting the violation record and accompanying instruments, as well as the specification of evidence the violator intends to produce in his/her favor, duly justified;

IV - The violator may be represented by a lawyer or proxy lawfully appointed, attaching to the defense, for such purpose, the respective power of attorney. A deadline of up to ten days may be requested for this attachment;

V - The defense will not be acknowledged when presented:

i) after the deadline;

ii) by someone not legitimated; or

iii) before a non-competent body or environmental entity;

VI - It will be for the violator to proof the facts alleged by him/her. The judging authority may require presentation of the necessary convincing evidence;

VII - The defense being offered or not, the judging authority will judge the violation record within thirty days, deciding on the application of penalties;

VIII - The non-observance of the judgment deadline does not void the judging authority's decision and the process;

IX - Once the violation record is judged, the violator will be notified by mail with return receipt or any other valid means, ensuring his/her acknowledgment of the deadline of five days counted from reception of the notification, for paying the fine or presenting an appeal.

The Violation Record shall be signed by the violator, proxy or legal representative and by witnesses. If the Violator refuses to sign, the Maritime Authority Agent will record this fact with the presence of two witnesses. If not able to sign, the Record will be signed by request. In cases of evasion or absence of the person responsible for the administrative violation, without an identified proxy, the recording agent will apply the provisions of previous paragraph. The violation record will be forwarded by mail with return receipt or any other valid means ensuring its acknowledgment.

b) Appeal Request at the highest administrative level:

I - if the defense is not upheld or the violator disagrees with the penalty imposed, he may appeal from the decision through an appeal request at the highest administrative level, before the judging Authority, addressed to the Director of Ports and Coasts (DPC) within twenty days from the date of notification on the decision of the Maritime Authority Agent. The DPC will have thirty days for issuing his decision, duly substantiated, counting from the date the appeal request was received;

II - an appeal of any nature will be addressed to the authority who issued the decision. The latter, if not reconsidering within the deadline of five days, will forward it to the superior authority (Art. 56 of Law No. 9,784/99);

III - The appeal will not be acknowledged when interposed:

- i) after the deadline;
- ii) before a non-competent environmental body or authority
- iii) by someone not legitimated; and

IV - in case of an appeal interposed against a decision in administrative procedures related to legal instruments other than Law No. 9,605/1998, the appeal levels and deadlines set forth in the respective instruments shall be observed.

4.9 - APPLICATION OF PENALTIES

- a) Administrative violations are punished with the ordinary fine;
- b) If the violator commits two or more violations at the same time, the corresponding sanctions will be applied cumulatively;
- c) The ordinary fine will be applied to the violator:
 - I - for irregularities committed; and
 - II - for hampering the monitoring action of the Maritime Authority Agents.
- d) The fine will be based on the impaired legal object;
- e) The value of the fine will be that stipulated by Decree No. 6,514/2008, in the minimum of R\$ 5,000.00 (five thousand reals), and the maximum of R\$ 50,000,000.00 (fifty million reals);
- f) When drawing up the violation record, the Maritime Authority Agent will indicate the fine applicable to the case, as well as other sanctions established in this Standard, observing:
 - I - the seriousness of facts, considering the motives for violation and its consequences to the public health and the environment;
 - II - previous records of the violator, related to compliance with environmentally related laws; and
 - III - the violator's economic situation.
- g) When analyzing the appeal, the Maritime Authority Agent may, regularly or by provocation and independently of collecting the fine applied, maintain or decrease its value respecting the limits established for the violation items, observing the above provisions, or even cancel the record if any illegality is found, or revoke it according with criteria of convenience and opportunity;
- h) The Maritime Authority Agent, when analyzing the administrative process of the Violation Record, will observe, where applicable, the provisions of Articles 14 and 15 of Law No. 9,605 of February 12, 1998; and

i) If a new environmental violation is committed by the same violator in the five years subsequent to the previous violation record draw-up, it will imply:

I - application of the fine in triple if the same violation is committed; or

II - application of the fine in double if a distinct violation is committed".

4.10 - LISTING AS ACTIVE DEBT TO THE TREASURY

The non-payment of the fine imposed will imply the violator's listing in the Active Debt to the Treasury, according to Art. 41 of Law No. 6,830/80 ("Fiscal Execution Law").

4.11 - OMITTED CASES

Cases omitted or not foreseen in these Standards will be resolved by the DPC.

ANNEX A

FORMULÁRIO PARA INFORMAÇÕES RELATIVAS À ÁGUA UTILIZADA COMO LASTRO

Troca de Água de Lastro

Troca de Água de Lastro Retificador

Sistema de Tratamento de Água de Lastro

Sistema de Tratamento de Água de Lastro Retificador

1. INFORMAÇÕES SOBRE O NAVIO

Nome do Navio:	Porto de Chegada:
Nº IMO / Indicativo de Chamada:	Data de Chegada ao Porto:
Bandeira:	Último Porto e País:
Tipo do Navio / Arqueação Bruta (AB):	Próximo Porto e País:
Proprietário:	Agente:

2. INFORMAÇÕES SOBRE A ÁGUA E OS TANQUES DE LASTRO

Nº Total de Tanques a Bordo:	Nº de Tanques em Lastro:
Nº de Tanques com Troca de Água de Lastro:	Nº de Tanques sem Troca de Água de Lastro:
Total de Água de Lastro a Bordo (m³):	Capacidade Total de Água de Lastro (m³):

3. INFORMAÇÕES SOBRE A TROCA DA ÁGUA DE LASTRO (Registrar todos os tanques que serão deslastrados no Porto de chegada – Se nenhum, passe para o item 5)

Tanques (*) (Listar separadamente os diversos tanques)	INFORMAÇÕES SOBRE A ORIGEM DA ÁGUA DE LASTRO					INFORMAÇÕES SOBRE A TROCA DA ÁGUA DE LASTRO						INFORMAÇÕES SOBRE A DESCARGA DA ÁGUA DE LASTRO			
	Data dd/mm/aa	Porto ou Lat/Long	Volume (m³)	Temp. (°C)	Salinidade	Data dd/mm/aa	Lat/Long (Ponto final)	Volume (m³)	% de Troca	Profund. Local (m)	Método de Troca (**)	Data dd/mm/aa	Porto ou Lat/Long	Volume (m³)	Salinidade

(*) Código para Tanques de Água de Lastro: Tanque de Colisão AV = FP / Tanque de Colisão AR = AP / Duplo Fundo = DB / Lateral = WT / Lateral Superior = TS / Porão = CH / Outros – O
(**) Método de Troca: Diluição (1) / Fluxo Contínuo (2) / Sequencial (3)

3.1. OUTRAS INFORMAÇÕES SOBRE A TROCA DA ÁGUA DE LASTRO

Se não houve troca da Água de Lastro, indicar outra(s) ação(ões) de controle efetuada(s):

Se não tiver sido efetuada nenhuma, indicar porque não:

4. INFORMAÇÕES SOBRE O SISTEMA DE TRATAMENTO DE ÁGUA DE LASTRO

Nome Comercial do Sistema:	Data da Instalação:
Fabricante:	Data de Validade do Certificado Internacional:

5. INFORMAÇÕES COMPLEMENTARES:

Existe a Bordo o Plano de Gerenciamento de Água de Lastro? () SIM () NÃO	
O Plano de Gerenciamento de Água de Lastro foi Implementado? () SIM () NÃO	

NOME E POSTO DO OFICIAL RESPONSÁVEL (LETRA DE IMPRENSA)

ASSINATURA

ANNEX B

BALLAST WATER REPORTING FORM

Ballast Water Exchange

Rectifier
Ballast Water Exchange

Ballast Water Treatment System

Rectifier
Ballast Water Treatment System

1. SHIP INFORMATION

Vessel Name:	Arrival Port:
IMO Number / Call Sign:	Arrival Date at the Port:
Flag:	Previous Port and Country:
Type of Vessel / Gross Tonnage:	Next Port and Country:
Owner:	Agent:

2. BALLAST WATER AND TANKS INFORMATION

Total Number. of Ballast Tanks on Board:	Number of Tanks in Ballast:
Number of Tanks with Ballast Water Exchange:	Number of Tanks without Ballast Water Exchange:
Total Ballast Water on Board (m ³):	Total Ballast Water Capacity (m ³):

3. BALLAST WATER HISTORY (Register all tanks that will discharge ballast water on the arrival port – If none go to item 5)

Tanks (*) (List multiple sources per tank separately)	BALLAST WATER SOURCE INFORMATION					BALLAST WATER EXCHANGE INFORMATION						BALLAST WATER DISCHARGE INFORMATION			
	Date dd/mm/yy	Port or Lat/Long	Volume (m ³)	Temp. (°C)	Salinity	Date dd/mm/yy	Lat/Long (Endpoint)	Volume (m ³)	% Exchange	Local Depth (m)	Exchange Method (**)	Date dd/mm/yy	Port or Lat/Long	Volume (m ³)	Salinity

(*) Codes for Ballast Water Tanks: Forepeak = FP / Aft peak = AP / Double Bottom = DB / Wing = WT / Topside = TS / Cargo Hold = CH / Other – O
(**) Exchange Method: Dilution (1) / Flow Through (2) / Empty/Refill (3)

3.1. OTHER INFORMATION ON BALLAST WATER EXCHANGE

If exchanges were not conducted, state other control action(s) taken:

If no action was taken, state why not:

4. INFORMATION ON BALLAST WATER TREATMENT SYSTEM

System's Brand Name:	Installation Date:
Manufacturer:	International Certificate's Expiration Date:

5. ADDITIONAL INFORMATION:

Is There a Ballast Water Management Plan on Board? () YES () NO	Copy of the International Convention on Board? () YES () NO
Was the Ballast Water Management Plan Implemented? () YES () NO	Copy of the IMO Resolution A.868 (20) on Board? () YES () NO

_____ RESPONSIBLE OFFICER'S NAME AND TITLE (CAPITAL LETTER)

SIGNATURE

ANNEX C

BALLAST WATER EXCHANGE METHODS

The Ballast Water exchange in ocean areas presently provides means of limiting the transfer of aquatic species by the water used as ballast. Three methods have been identified to carry out the Ballast Water exchange at sea:

1. Sequential Method - the ballast tanks are emptied and filled again with oceanic water;

2. Continuous Flow Method - the ballast tanks are simultaneously emptied and filled, through the pumping of oceanic water; and

3. Brazilian Dilution Method - the Ballast Water loading is made through the tank's top and, simultaneously, the discharge is made from the tank's bottom, at the same flow rate, in such a way that the water level in the ballast tank is controlled to stay constant.

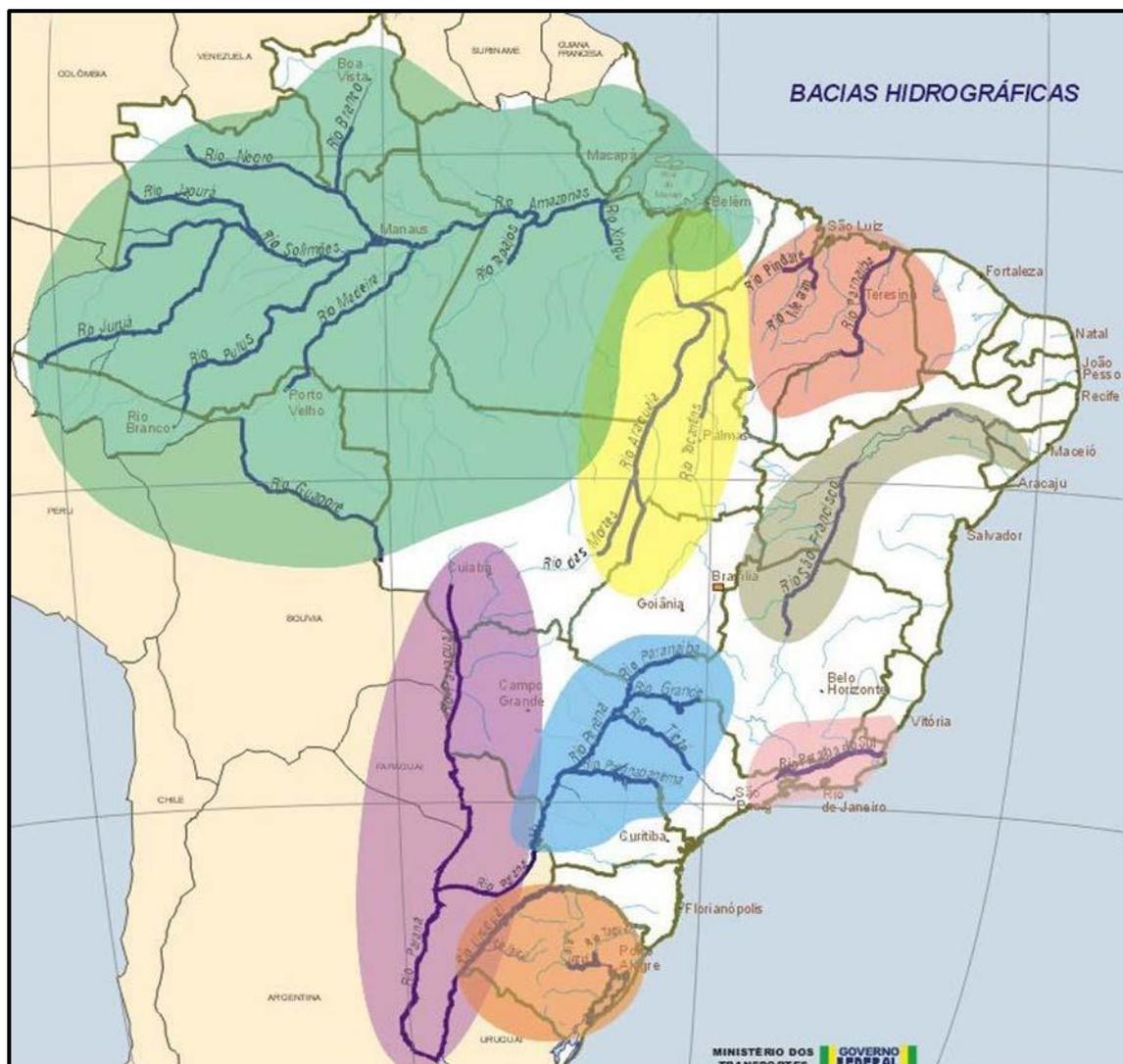
ANNEX D

HYDROGRAPHIC BASINS IN BRAZIL AND MAIN RIVER PORTS AND TERMINALS

MAIN RIVER PORTS AND TERMINALS

STATES	PORTS AND TERMINALS
AMAZON	Port of Eirunepé
	Terminal of Itacoatiara
	Port of Manaus
	Port of Parintins
	Port of Tabatinga
BAHIA	Port of Juazeiro
MATO GROSSO	Port of Cáceres
	Port of Corumbá and Ladário
MATO GROSSO DO SUL	Port of Porto Murtinho
MINAS GERAIS	Port of Pirapora
PARÁ	Port of Santarém
PERNAMBUCO	Port of Petrolina
RORAIMA	Port of Caracaráí
RONDÔNIA	Port of Porto Velho
RIO GRANDE DO SUL	Port of Cachoeira do Sul
	Port of Charqueadas
	Port of Estrela
	Port of Porto Alegre
	International Port of Porto Xavier

MAP WITH THE MAIN RIVER BASINS OF BRAZIL



Legend

- Amazon river basin
- Araguaia-Tocantins river basin
- Parnaíba river basin
- São Francisco river basin
- Paranaíba do Sul river basin
- Paraná river basin
- Paraguai river basin
- Uruguai river basin

**HYDROGRAPHIC BASINS AND THEIR RESPECTIVE
RIVER PORTS AND TERMINALS**

HYDROGRAPHIC BASINS	PORTS AND TERMINALS
AMAZON RIVER BASIN	Port of Eirunepé
	Terminal of Itacoatiara
	Port of Manaus
	Port of Parintins
	Port of Tabatinga
	Port of Santarém
	Port of Caracaraí
	Port of Porto Velho
SÃO FRANCISCO RIVER BASIN	Port of Juazeiro
	Port of Pirapora
	Port of Petrolina
PARAGUAI RIVER BASIN	Port of Cáceres
	Port of Corumbá and Ladário
	Port of Porto Murtinho
URUGUAI RIVER BASIN	Port of Cachoeira do Sul
	Port of Charqueadas
	Port of Estrela
	Port of Porto Alegre
	International Port of Porto Xavier

ANNEX E

ENVIRONMENTAL VIOLATION RECORD

BRAZILIAN NAVY DIRECTORATE OF PORTS AND COASTS	Number:	Date of Record:
	Notification No.:	
Name of Violator:		
Responsible person/Agent:		
Vessel Name:		Enrollment:
Port of Enrollment:		
Violation Date:	Violation Time:	Violation Place:
Framework	Framework Description	
EXCERPT OF THE ADMINISTRATIVE PROCEDURE'S LEGAL INSTRUMENT TO BE OBSERVED ACCORDING TO THE TYPE OF RECORD		
I am aware of the present recording and deadline to present defense.		
On _ / _ (s) _		