GOVERNMENT OF BERMUDA
Bermuda Shipping and Maritime Authority

2019 – 004

BERMUDA MERCHANT SHIPPING GUIDANCE NOTICE

Polar Code Compliance

This Notice is intended for: Classification Societies, Ship Owners, Managers and Owners of Bermuda Registered Ships Intending to Operate in Polar Waters

Ref:
- MSC.385(94)
- SOLAS 74/88 as amended – Chapter XIV
- MSC.386(94)
- MEPC.264(68)
- MARPOL Annex I as amended – Chapter 11
- MARPOL Annex II as amended – Chapter 10
- MARPOL Annex IV as amended – Chapter 7
- MARPOL Annex V as amended – Chapter 3
- MEPC.265(68)
- MEPC.277(70)
- MEPC.295(71) Annex 21 – 2017 Guidelines for the Implementation of MARPOL Annex V
- MSC.1/Circ.1184 *Enhanced Contingency Planning for Passenger Ships Operating in Areas Remote from SAR Facilities*
- MSC.1/Circ.1519 *Guidance for assessing operational capabilities and limitations in ice*
- STCW Convention, Chapter V, Regulation V/4
- STCW Code, Section A-V/4
- IACS – Requirements Concerning POLAR CLASS
- WMO – Sea Ice Nomenclature

Summary
This Guidance Notice is issued to provide additional information relating to the Bermuda Maritime Administration's application and implementation of the Polar Code. This notice applies to all Bermuda registered ships intending to operate in polar waters.

Through compliance with the relevant requirements of the Polar Code any ship may operate in polar waters, however the less capable the vessel in terms of structure and equipment, the more constrained the vessel will be in its potential scope of operations.

This Notice was issued on 21st June 2019.

1 General

(1) The Polar Code is made up of two parts, Part A, which is mandatory and Part B, which contains guidance. Part A-I addresses safety related (SOLAS) requirements and Part A-II addresses pollution prevention (MARPOL) requirements, while Parts B-I and B-II provide guidance on implementation of the requirements laid out in Part A.

(2) Parts A-I and B-I are goals based, meaning that compliance can be achieved through a number of solutions, while Parts A-II and B-II are prescriptive, with the Code detailing how each requirement is to be met.

(3) For passenger ships, adherence to the requirements of the Polar Code, and issuance of the relevant documentation will be conducted by Bermuda Shipping and Maritime Authority.

(4) For cargo ships, adherence to the requirements of the Polar Code, and issuance of the relevant documentation will be conducted by the relevant Recognised Organisation (Classification Society) on behalf of the Bermuda Shipping and Maritime Authority.

2 Definitions

(1) Bergy Water - An area of freely navigable water in which ice of land origin is present in concentrations less than 1/10. There may be sea ice present, although the total concentration of all ice shall not exceed 1/10.

(2) Fast Ice – Sea ice which forms and remains fast along the coast, where it is attached to the shore, an ice wall, an ice front, between shoals or grounded icebergs

(3) Ice Free – No ice present. If any ice of any kind is present this term shall not be used.

(4) Ice Regime – An area with a relatively consistent distribution of ay mix of ice types, including open water.

(5) Ice Shelf – A floating ice sheet of considerable thickness showing 2 to 50 m or more above sea-level, attached to the coast.

(6) Maximum Expected Time of Rescue – The time adopted for the design of equipment and systems that provide survival support. This shall never be less than 5 days.

(7) Mean Daily Low Temperature (MDLT) – The mean value of the daily low temperature for each day of the *intended season of operations* within polar waters, over a minimum 10 year period. In certain locations within the Arctic or Antarctic polar regions it may not always be possible to obtain 10 year's worth of reliable temperature data, in such cases Bermuda Shipping and Maritime Authority may on a case by case basis, accept shorter temperature observation data sets from recognized sources.

(8) New Ship – Any ship, the keel of which is laid or which is at a similar stage of construction on or after 1st January 2017

(9) Open water - A large area of freely navigable water in which sea ice is present in concentrations less than 1/10. No ice of land origin is present.

(10) Polar Service Temperature (PST) – A temperature specified for a ship which is intended to operate in low air temperatures, which shall be at least 10°C below the lowest MDLT for the intended area and seasonal window of operation in polar waters.

(11) Ship Intended to Operate in Low Air Temperatures – A ship which is intended to undertake voyages to

or through areas where the MDLT is below -10°C. All such ships shall be assigned a PST, and it will be at least -20°C.

Note: These definitions are based on those in the Polar Code but reflect the Bermuda Administration's interpretation.

2 Application

(1) The Polar Code applies to all Bermuda Registered Ships operating in Antarctic Waters, as defined in SOLAS XIV/1.2, or Arctic Waters as defined in SOLAS XIV/1.3, irrespective of the season.

(2) The Polar Code entered into force on 1st January 2017 for new ships and on 1st January 2018 for existing ships. MARPOL related requirements (Part II) entered into force on 1st January 2017, for all ships.

(3) The Polar Code applies to all ships regardless of whether the ship is proceeding to a destination within polar waters or if the ship is only transiting polar waters.

(4) The Polar Code applies both to ships specifically built and strengthened for operations in ice (Ice Classed), and also to ships that previously were not required to comply with additional requirements when sailing in polar waters, before the Polar Code entered into force.

(5) It is expected that Port State Control regimes will verify the availability of the Polar Ship Certificate and its associated Record of Equipment for the Polar Ship Certificate for ships calling into destinations within polar waters as well as those transiting polar waters.

(6) The Polar Ship Certificate will be issued following review of the required documentation and a survey of the required equipment and processes on board the ship.

a) For passenger ships the Polar Ship Certificate will be harmonized to the Passenger Ship Safety Certificate and will be valid for 1 year, with an annual renewal survey.

b) For cargo ships the Polar Ship Certificate will be harmonized to the Safety Construction Certificate and will be valid for 5 years, with annual surveys.

3 The Polar Code – Important Concepts

3.1 Ship Categories

(1) The scope of application of the Polar Code is dependent upon the category into which the ship is considered to fall. These are broadly based on a vessel's ice classification rating.

a) Category A Ship – A ship designed for operation in polar waters in at least medium first-year ice, which may include old ice inclusions.

Note: Ships designed for the most severe ice conditions and ice thicknesses of up to 70 – 120cm. These ships will have an IACS Polar Class of PC1 – PC5.

b) Category B Ship – A ship not included in category A, designed for operation in polar waters in at least thin first-year ice, which may include old ice inclusions.

Note: Ships designed for less severe ice conditions that Category A, with ice thicknesses of 30 – 70cm. These ships will have an IACS Polar Class of PC6 – PC7.

c) Category C Ship – A ship designed to operate in open water or in ice conditions less severe than those included in categories A and B.

Note: Every ship that does not fall under categories A or B. These ships do not necessarily require ice strengthening and will most likely be either cargo ships looking to transit polar waters or existing passenger ships with itineraries calling into polar areas such as Greenland, Iceland, northern Canada or the Antarctic Peninsula during these region's respective summer seasons.

3.2 Operational Profile

(1) Definition of the ship's intended operational profile is an essential first step in completing the operational assessment.

(2) The operational assessment defines the scope of application of the Polar Code and is used as the basis for defining the operational limitations, operational assessment, Polar Water Operational Manual and applicable crew training requirements.

(3) The operational profile identifies the conditions that a ship is intended to operate in and consequently is the basis for applying the requirements of the Polar Code. If the Operational Profile is set too broadly the consequent requirements for the ship, its equipment and systems will be unnecessarily onerous. If the operational profile is set too narrowly, the ship may be overly restricted in the operations in polar waters that it is able to undertake.

(4) Items to consider when establishing the Operational Profile:

a) Area of Intended Operation

Used to identify expected ice conditions, air and sea temperatures, met-ocean data and remoteness from available Search and Rescue (SAR) assets, as well as the maximum latitude (which could affect provision of bridge equipment as well as whether extended periods of daylight or darkness are to be considered).

Note: The Polar Code (11.3.5) requires that when voyage planning, consideration is given to suitable places of refuge. If the only suitable refuge is outside of the intended operational area, then the area of intended operation should be expanded to include it.

Note: Latitude is included on the Polar Ship Certificate as an operational limitation.

b) Season

The anticipated season of operation, within the above defined area of operations is used to refine the data sets for temperatures required for the MDLT, as well as for expected ice conditions and met-ocean data.

Note: Expected air temperatures and ice conditions are likely to be the driving factors when considering the vessel's seasonal range of operations.

c) SAR Availability

From intended operational area and season range the available SAR assets that can be deployed in an emergency situation can be considered.

Note: The deployment and 'on scene' time of SAR services will drive the maximum expected time of rescue, which is listed on the Polar Ship certificate.

d) Environmental Conditions

From the operational area and season range the anticipated environmental and ice conditions may be anticipated.

Note: Data on temperature, ice conditions and the likelihood of ice accretion are required to set the operational limitations included in the Polar Ship Certificate.

Note: If ice accretion is considered a possibility, the relevant stability assessment will need to be

submitted/demonstrated to the Bermuda Shipping and Maritime Authority and any equipment associated with operational procedures to minimize ice accretion will need to be on board at the time of entering polar waters.

3.3 Operational Assessment

(1) The operational assessment is required by paragraph 1.5 of the Code in order to establish the operational limitations relevant to the ship. the Code also requires that an assessment is undertaken to ensure appropriate survival resources in the event that the ship must be abandoned.

(2) The operational assessment is an evaluation of how the ship's characteristics combined with the ship's, or company's operational procedures mitigates the hazards posed by the polar environment. It is the formalised method through which each hazard posed by the polar environment is reviewed and assessed, and appropriate mitigations identified. The Polar Code allows such mitigations to be achieved either through the provision of equipment or systems, or through implementation of on-board procedures.

Note: If additional shipboard procedures are proposed to mitigate hazards identified by the code, the personnel undertaking such tasks are to have these included in their on-board duties. When they are required to perform these tasks this will be defined as normal work and as such must comply with the hours of work and rest regulations mandated by the Maritime Labour Convention (MLC).

(3) There is no requirement for the operational assessment to be approved by The Administration; however it will be reviewed by Bermuda Shipping and Maritime Authority as part of the Owner/Manager's submission for the Polar Ship Certificate.

The operational assessment will be used to:

a) Determine and verify the operational limitations stated on the Polar Ship Certificate,

b) Verify that the identified mitigations against the hazards of the polar environment (be they equipment, systems or procedures) are sufficient,

c) Ensure that appropriate survival resources (personal and/or group) have been provided, and that they align with the expected operational profile of the ship.

(4) The Polar Code (Part I-B) provides guidance on the steps to be taken to develop the operational assessment:

a) Hazard Identification

i. While most of the relevant hazards are identified within the Polar Code, there is a requirement to identify additional hazards that may be applicable based on the anticipated operational profile.

ii. The purpose of this step is to determine which hazards identified by the Code apply to the ship, based on the intended Operational Profile. If the intended operational profile of the ship precludes operation in low air temperatures, then these associated hazards will not be relevant.

b) Analysis and Modelling of Risks

i. Most of the common risks of operating in a polar environment have been considered by the Code and compliance with the regulations is sufficient mitigation. However, the Code explicitly requires that mitigation measures for the following areas are identified as part of the operational assessment:

ii. Abandonment of the ship, as required by Chapter 8 of the Code, in order to identify the necessary survival resources.

iii. A process for defining when and how on-board procedures will be used to meet the requirements of the Code, in lieu of provision of systems or equipment.

iv. A process for assessing any other risks that may be applicable, that were not explicitly identified by the Code.

3.4 Operational Limitations

(1) Each ship issued a Polar Ship Certificate is assigned operational limitations to reduce the burden of complying with every requirement in the Polar Code. This allows mitigation of variation in the risks and hazards to shipping resulting from the wide range of possible environmental conditions, ice conditions and latitudes that could be encountered in polar regions.

(2) Each ship is assigned operational limitations to relieve the burden of having to mitigate every hazard and risk posed by the remoteness and the range of environmental extremes of the entire polar environment.

(3) The operational limitations are unique to each ship and are included on the Polar Ship certificate. They are determined based on the characteristics of the ship, taking into account any existing ice strengthening measures (Ice Class), its equipment and systems, and should be validated against the operational profile.

(4) Any additional requirements to meet local Flag or Coastal State restrictions[1] in the area that the ship intends to operate should be applied alongside, but not as part of the Polar Code requirements and as such should not form part of the operational limitations.

(5) It is the responsibility of Bermuda Shipping and Maritime Authority to ensure that the Polar Ship Certificate states appropriate limitations for the ship on the basis of its characteristics, equipment and systems, however, it is the responsibility of the Owner/Manager to undertake the operational assessment and set ship characteristics that will enable it to operate safely within the proposed operational profile.

(6) It is the ship Owner/Manager who proposes the operational limitations as part of the output of their operational assessment.

(7) Each ship is limited with respect to three criteria, as follows:

(8) <u>Ice Conditions</u>

a) Operational Limitations for ice conditions are primarily a function of the ship's Ice Class, which provides the basis for assessing limiting ice conditions and determining acceptable safe operating procedures. As the thicknesses of ice and the concentrations of types of ice vary in any given ice regime it is not practical to use ice type or ice thickness as a limitation. Therefore, the Code requires that a methodology be utilised to determine a set of operational limitations for operating in ice.

b) This Administration recommends that the methodology set out by MSC.1/Circ.1519, the Polar Operational Limit Risk Indexing System (POLARIS) be adopted, however other alternatives such as the Arctic Ice Regime Shipping System (AIRSS) or the Ice Navigation Ship certificate (Ice Passport) will be considered, subject to support by the vessel's Classification Society.

[1]Ships intending to operate in internal Greenland waters are required to have two fixed searchlights. These should be provided in addition to the two remotely rotatable searchlights required by the Polar Code.

c) The Bermuda Shipping and Maritime Authority recognise that while the Polar Code refers to IACS Polar Ship classes, there are many ice strengthened ships operating and built to different sets of requirements. In such cases this Administration will be guided by the ships Classification Society interpretation of which IACS class is most appropriate following their analysis.

d) Wording of the limitations for operation in ice stated on the Polar Ship Certificate will take the format recommended in MSC.Circ.1519.

(9) Temperature

a) Operational limitations for temperature are primarily a function of the ship's ability to function safely in low air temperatures (equipment, materials and systems).

b) Ships with an area of intended operation or season of operations where the MDLT is -10°C or warmer are not considered to be operating in low air temperatures. This is indicated in section 2.3 of the Polar Ship Certificate.

c) If ships are intended to operate in low air temperatures (colder than -10°C) then a PST should be defined and validated as part of the operational assessment. The PST will always be set as 10°C colder than the lowest MDLT for the area and season of operations. If the ship is intended to operate in low air temperatures the PST temperature is stated in 2.3.1 of the Polar Ship Certificate.

Note: Ships assigned a PST are required to be constructed of steel suitable for that temperature, for this reason it is unlikely that a non-ice strengthened ship would be assigned a PST.

d) The temperature limitation will reflect the MDLT identified as part of the operational profile and validated by the operational assessment.

e) Wording of the temperature limitations stated on the Polar Ship certificate will take the format recommended by IMO MSC94/3/8.

(10) High Latitudes

a) Operational limitations for high latitudes are defined primarily by the functionality of the ship's communication equipment and the ship's ability to navigate and effectively determine its course heading at high latitudes.

b) Paragraph 10.3.1.1 of the Code requires that the ship shall have communication equipment suitable for ship-to-ship and ship-to-shore communication, taking into account the limitations of communications systems in high latitudes.

Note: While **'**High latitudes' are not expressly defined within the Polar Code, additional requirements are stipulated for ships intending to operate at latitudes higher than 80°. It is anticipated that the effect of lower latitudes on communication, navigation and the continued availability of relevant ice and meteorological information will be considered as part of the operational assessment.

c) The Polar Code requires a global navigation system such as digital GPS or GLONASS for ships operating above 80º latitude. The Polar Code Record of Equipment requires an entry to be made for GNSS if operations above 80º latitude are expected.

d) Both aspects of the limitations for high latitudes rely on functioning communications and navigation equipment, and it is the availability of these that provides the limitation.

e) Limitations on the Polar Ship Certificate will be mandated by the limitations of the fitted equipment - as advised by the manufacturer.

f) Wording of the temperature limitations stated on the Polar Ship certificate will take the format recommended by IMO MSC94/3/8.

3.5 Polar Water Operational Manual (PWOM)

(1) The PWOM must be carried on board all ships when they are in Polar waters. On passenger ships it should be incorporated into the Master's Decision Support System.

(2) The PWOM should also be incorporated into the ship's Safety Management System, and as such will be within the scope of the ISM Code both for internal, company audits, and the external, Flag State audits. As such responsibility for maintaining the PWOM lies with the vessel operator.

(3) The PWOM may either be a separate, stand-alone document, or it may cross reference other procedures contained in other documents on board.

(4) The PWOM should address the following functional requirements of the Code:

a) It should provide specific information relating to operational procedures (identified through of the operational assessment) required to mitigate hazards stemming from the Polar environment, based on the operational profile

b) It must reference the methodology used to determine the ship's capabilities in ice (POLARIS, AIRSS etc), which is referenced in part 5.1 of the Polar Ship Certificate. Explanatory notes and practical guidance on the use of the chosen methodology is to be included. If the methodology is supplemented by any additional company or operator guidance this is to be included also

The PWOM should include additional guidance and procedures for when the above methodology produces an outcome of "operation subject to special considerations", or similar

c) It should contain procedures for when the ship is exposed to temperatures colder than the design limitations.

i. If the ship is only intended to operate in air temperatures of greater that -10ºC (no PST assigned), procedures still need to be developed (and included in the PWOM) for the possibility that the ship encounters temperatures lower than this, as per Polar code, Appendix II.

d) If the operational profile and the operational assessment allow for the possibility of ice breaker assistance, then the PWOM shall include risk based procedures for monitoring and maintaining safety during ice breaker operations.

e) It should contain procedures to be followed in normal operations to avoid encountering ice or other environmental conditions that exceed the ship's capabilities, including, but not limited to the following:

i. Voyage planning to avoid ice and or temperatures that exceed the ship's capabilities

ii. Receiving accurate and timely forecasts of environmental and ice conditions, if necessary

iii. Means to address limitations in meteorological, hydrographic or navigational information

iv. Operation of any equipment specifically required by the Code or identified as part of the operational Assessment to mitigate hazards of polar waters

v. Implementation of special measures to maintain equipment and systems under low

temperatures, icing or the presence of sea ice, as applicable depending on the parameters of the operational profile

vi. Contacting emergency responders for SAR, salvage, spill response

vii. For ships with ice strengthening, procedures for maintaining life support in the case of prolonged entrapment in ice

4. Life Saving Appliances

(1) The maximum expected time to rescue (ETR) shall never be less than 5 days.

Note: Additional food and water need only be provided in survival craft if the ETR is in excess of 5 days.
Note: EPIRB's certified to Res.A.810(10) are only required to have a battery life of 48 hours, so additional measures may be required to increase this to 5 days.

(2) Provisions for abandoning ship shall consider the possibility of abandonment onto water, ice or land.

(3) The requirement for consideration of abandonment onto water, ice or land may be discounted if the vessel is not ice strengthened (Category C), as the ice regimes the ship will be operating in would not be expected to support abandonment to ice.

(4) The above notwithstanding, personal survival equipment will still be required for ships intending to operate in low air temperatures (assigned a PST) as life-saving appliances cannot be considered to provide sufficient protection against the effects of cold, as required by 8.3.3.3.2.1-3.

(5) Liferafts are inferior to lifeboats for supporting survival in polar environments and as such, all liferafts shall be equipped with an inflatable floor.

(6) On ships assigned a PST each person assigned to liferafts shall also be provided with an insulated immersion suit.

(7) In all instances, immersion suits provided to meet the requirements of SOLAS III/7.3 (rescue boat and MES personnel) shall be of the insulated type.

(8) Launching of lifeboats by free-fall is not considered acceptable in ice infested waters and as such all cargo ships must be fitted with an alternate lowering mechanism sufficient for the lifeboat and its full complement of persons.

(9) All lifesaving equipment shall remain functional at the PST.

Note: The LSA Code requires life-saving appliances be tested to ensure that they remain operational down to -15ºC, so any ship assigned a PST (-20ºC or lower) will require the LSA equipment to be tested to the PST temperature.

5. Communication

(1) Ships intended for operation in low air temperatures (assigned a PST) require all rescue boats and life boats, whenever released for evacuation, to have a means for distress alerting, transmitting signals for location and for conducting on-scene communications.

Note: These requirements would be considered as met through provision of an EPIRB, SART and VHF radios for each boat

(2) Ships intended for operation in low air temperatures (assigned a PST) require all other survival craft (liferafts) to have a means for transmitting signals for location and for conducting on-scene

communications.

Note: These requirements would be considered as met through provision of a SART and VHF radios for each raft

(3) No additional requirements are mandated for the survival craft of ships not intended to operate in low air temperatures.

(4) All communication equipment required for use in survival craft shall be capable of operation during the maximum ETR.

Note: This requirement can be met through procedures specified in the PWOM, i.e. communication equipment is to be turned on at pre-agreed intervals to preserve battery life.

Note: Low temperatures can adversely affect battery life and this is also to be taken into consideration when planning to comply with the above requirement.

6. STCW and Crew Training Requirements

(1) Polar operations training is mandatory, as required by STCW Chapter V/4, as follows:

a) Passenger Ships

Ice Free Waters:	No additional training required
Open Waters:	Certificate in basic training for master, chief mate and officers in charge of a navigational watch A-V/4.1
Other Ice Regimes:	Certificate in advanced training for Master and Chief Mate. A-V/4.2 Certificate in basic training for officers in charge of a navigational watch A-V/4.1

b) Tankers

Ice Free Waters:	No additional training required
Open Waters:	Certificate in basic training for master, chief mate and officers in charge of a navigational watch A-V/4.1
Other Ice Regimes:	Certificate in advanced training for Master and Chief Mate. A-V/4.2 Certificate in basic training for officers in charge of a navigational watch A-V/4.1

c) Other Ships

Ice Free Waters:	No additional training required
Open Waters:	No additional training required
Other Ice Regimes:	Certificate in advanced training for Master and Chief Mate. A-V/4.2 Certificate in basic training for officers in charge of a navigational watch A-V/4.1

(2) A Bermuda Endorsement that reflects the above training is not required.

(3) As per 12.3.2 of the Polar Code, Bermuda Shipping and Maritime Authority will allow the use of appropriately trained personnel, other than the ship‘s crew (Ice Pilots) to reduce the applicable training requirements.

(4) Providers of basic and advanced training meeting the requirements of STCW A-V/4 will be accepted by

this Administration if they have been approved by one of the countries listed in Appendix 1 of Bermuda Shipping Notice YYYY-015.

7. MARPOL Annex I

(1) The discharge of any oily water is prohibited in Arctic or Antarctic waters - this means 0ppm discharge.

(2) Operation in Polar Waters shall be taken into account in the Oil Record Book and SOPEP/SMPEP through addition of an appendix listing the relevant Polar Code requirements.

(3) Specific interim requirements apply for existing ships of Category A (constructed before 1 January 2017) that cannot comply with the requirements prohibiting oily water discharge, until the first intermediate or renewal survey of the Polar Ship Certificate, whichever comes first, after 01 January 2018.

(4) New ships of Category A and B shall comply with the following:

a) Ships with aggregate oil fuel capacity of less than 600m^3 all oil fuel tanks with individual capacity greater than 30m^3 shall be separated from the outside shell by a distance of not less than 0.76m;

b) All oil residues (sludge) and bilge water tanks with individual capacity greater than 30m^3 shall be separated from the outside shell by a distance of not less than 0.76m;

c) Oil tankers of less than 5,000 tonnes deadweight shall have the entire cargo tank length protected with double bottom and wing tanks or void spaces complying with the requirements of Regulation 19 of MARPOL Annex I;

d) Ships other than oil tankers shall have all cargo tanks intended for the carriage of oil separated from the outside shell by a distance of not less than 0.76m.

8. MARPOL Annex II

(1) The discharge of noxious liquid substances, or mixtures containing such substances is prohibited in Arctic waters

(2) Operation in polar waters shall be taken into account in the Cargo Record Book and SMPEP.

(3) Carriage of noxious liquid substances in Type 3 tanks (IBC Code, 2.6 – Tanks without cargo tank protection) is subject to approval from Bermuda Shipping and Maritime Authority.

9. MARPOL Annex IV

(1) For Category C ships the regulations governing the discharge of sewage are the same as MARPOL IV regulation 11, with the exception that distances are measured from the nearest land, ice shelf, or fast ice.

(2) Existing and new Category A and B ships must comply with the same requirements that apply to passenger ships operating in special areas. i.e. discharge of sewage is prohibited unless through an approved sewage plant.

10. MARPOL Annex V

(1) Discharge of garbage within polar waters is to be conducted in accordance with the requirements of MARPOL V, Regulation 6, with the exception that distances are measured from the nearest land, ice shelf, or fast ice.

(2) The above notwithstanding, all discharges be as far as practicable from concentrations of ice exceeding 1/10, and in no instances, on to any ice.

(3) Operation in polar waters shall be taken into account, in the Garbage Record Book, Garbage Management Plan, and posted placards. Specifically, the ship's Garbage Management Plan shall refer to the requirements of paragraph 5.2 of Part II-A of the Polar Code for ships intended to operate in polar waters.

(4) The Garbage Record Book carried on board is to meet the format proscribed by MEPC.277(70)

(5) More information can be found in: MEPC.295(71) Annex 21 *2017 Guidelines for the Implementation of MARPOL Annex V*

11. Compliance with the Code and Certification

The route to receiving the Polar Ship Certificate is as follows:

(1) Initial Assessment

a) Document Review Process

i. Ship Manager/Operator to Submit the Operational Profile and/or operational assessment, Polar Water Operational Manual, SAR Procedures applicable to area of operations and intact stability calculations taking account of ice loading (if ice accretion is considered possible)

ii. Bermuda Shipping and Maritime Authority will review the submitted documentation and once agreed, produce the relevant Polar Ship Certification stating the assigned operational limitations

b) On Board Assessment

Bermuda surveyor attendance on board will be required to assess the following:

i. Compliance with the requirements of the Polar Code and verification of the equipment listed in the Record of Equipment for a Polar Ship

Note: Certain elements of the required equipment (e.g. passenger thermal protective aids) do not have to be on board at the time of survey

ii. The Polar Water Operational Manual is on board

iii. Appendix to the SOPEP incorporating the additional requirements of the Polar Code

iv. Appendix to the Garbage Management Plan incorporating the additional requirements of the Polar Code

v. Correct MARPOL signage

(2) Periodical Assessment

a) Document Review Process

i. Resubmission of above documents only required if the parameters of the operational profile/ operational assessment have changed. i.e. vessel is on a different itinerary

ii. Evidence of basic and/or advanced training for operations in polar waters, as required by Chapter 12 will be reviewed as part of the Polar Code renewal survey. As such the relevant documentation (from when the vessel was last in polar waters) needs to be retained on board for review.

b) On Board Assessment

i. Assessment of the vessel against the requirements of the Polar Code will be undertaken on an annual basis, at the same time as the Passenger Ship Safety Certificate renewal survey for passenger ships.

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