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CG-MMC Policy Letter
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From: M. Medina
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To: National Maritime Center

Subj: GUIDELINES FOR QUALIFICATIONS OF PERSONNEL FOR ISSUING STCW ENDORSEMENTS FOR BASIC AND ADVANCED POLAR CODE OPERATIONS

1. Purpose. This policy letter provides guidance for qualifications of personnel for the issuance of Merchant Mariner Credential (MMC) endorsements in accordance with the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended (STCW) for Basic and Advanced Polar Code Operations. These endorsements are required for deck officers on ships operating in areas subject to the International Code for Ships Operating in Polar Waters (Polar Code).

2. Action. The Coast Guard will use this policy as a guide to issue Polar Code Operations endorsements for deck officers engaged on ships subject to the Polar Code.

3. Directives Affected. CG-OES Policy Letter No. 01-16 "Guidelines for Training of Personnel on Ships Subject to the Polar Code" is cancelled.

4. Background.

   a. For the purpose of these guidelines the term Polar Waters means ocean waters as defined in the Polar Code.

   b. Current shipping trends show an increase in the number of seagoing ships transiting remote polar regions. This affects both the safety of life at sea and protection of the marine environment, and has become a growing global concern. In addition to the daily challenges of normal shipboard operations, ships operating in polar areas are subject to unpredictable and poor weather conditions, degraded navigation tools, increased threats to operating equipment and increased stability concerns.

   c. The 2010 amendments to STCW include non-mandatory guidance on training for deck and engineer officers serving on ships operating in polar waters to address the need for specialized competency on such vessels. The guidance is in Section B-V/g of the STCW Code.

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d. In response to the challenges faced by these ships and the concern for their safe operation, the International Maritime Organization (IMO) adopted the International Code for Ships Operating in Polar Waters, commonly referred to as the Polar Code, which contains both mandatory and non-mandatory provisions. This code addresses safety and environmental requirements for ships and the level of training required for deck officers serving on them. The mandatory training contained in the Polar Code is risk-based depending on the type of ship and the ice conditions in the area of operation. Implemented internationally through the Safety of Life at Sea (SOLAS), Prevention of Pollution from Ships (MARPOL), and STCW conventions, the Polar Code came into force on January 1, 2017.

e. The STCW Convention and Code is the instrument that provides the international standards for seafarer training. Through the work of the IMO's Sub-committee on Human Element, Training and Watchkeeping, amendments to the STCW Convention and Code were developed to define the training requirements supporting the implementation of the Polar Code. In order to obtain input from U.S. stakeholders and to facilitate the development of the United States' position to the IMO on the training requirements in support of the Polar Code, the Coast Guard solicited input from the Merchant Marine Personnel Advisory Committee (MERPAC). MERPAC developed recommendations on minimum standards of competence and sea service requirements for Polar Code training at the basic and advanced levels. MERPAC's recommendations provided the basis of the United States' position in shaping the relevant amendments to the STCW Convention and which are the basis of this policy.

f. Enclosure (1) provides the training and manning information contained in Chapter 12 of the Polar Code. Prior to being assigned duties on board a ship operating in an area subject to the Polar Code, except when the vessel will be in ice free waters, all deck officers should hold the appropriate STCW endorsement for polar water operations in accordance with the Polar Code.

g. The STCW amendments in support of the Polar Code provide minimum standards of competence, sea service and training requirements for certification at the basic and advanced levels. They also contain transitional provisions for mariners with experience operating in polar waters to meet the new requirements. These amendments enter into force on July 1, 2018. After this date deck officers on ships operating in polar waters will be required to have an MMC endorsement in Basic or Advanced Polar Code operations. Enclosure (2) provides the STCW amendments in support of the Polar Code.

h. To address the gap between the time the Polar Code entered into force (January 2017) and the time the supporting STCW amendments enter into force (July 2018), the Coast Guard provided CG-OES Policy Letter No. 01-16, "Guidelines for Training of Personnel on Ships Subject to the Polar Code" (81 FR 7552, Feb. 12, 2016). The policy was an interim measure to ensure there would be sufficiently trained U.S. mariners by the time the Polar Code entered into force. The Coast Guard did not issue endorsements to mariners who completed training in accordance with that policy.

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i. Cognizant of the approaching date that the STCW amendments enter into force the Coast Guard will utilize the information in this policy letter to issue STCW endorsements in Basic and Advanced Polar Code Operations to deck officers. These endorsements are not currently mandated by Coast Guard regulation, however since the United States is a signatory to the STCW Convention, vessel owners and operators should be aware that their vessels are subject to foreign port state control actions including detention if mariners are not compliant with the STCW Convention and Code. The Coast Guard will issue Polar Code Operations endorsements to mariners who have voluntarily fulfilled the STCW requirements and request the endorsement.

5. Discussion.

a. The amendments to the STCW Convention and Code include sea service, recency, and training requirements, as well as the minimum standards of competence at the basic and advanced levels for deck officers. There are no additional training or endorsement requirements for personnel assigned to the engineering department.

b. Mariners who can demonstrate that they meet the training and standards of competence requirements of STCW A-V/4, previously published in CG-OES Policy Letter No. 01-16 and provided in Enclosure (2) of this policy letter, will be considered to have met the respective training and competence portions of the requirements for the MMC endorsements in Basic or Advanced Polar Code Operations. Enclosure (3), paragraph (1) discusses the training requirements for Basic Polar Code Operations and Enclosure (4), paragraph (1) discusses the training requirements for Advanced Polar Code Operations.

c. The STCW amendments provide transitional provisions for mariners who commenced seagoing service in Polar Waters prior to July 1, 2018. Before being assigned duties on board a ship operating in polar waters mariners may have completed training consistent with the guidance contained in section B-V/g of the STCW Code applicable to ships operating in polar waters. Until July 1, 2020, mariners who provide evidence of completing this training, in accordance with the guidance, will be considered to have met the respective transitional provisions for the MMC endorsements in Basic or Advanced Polar Code Operations. Enclosure (3), paragraph (2) discusses the transitional provisions for Basic Polar Code Operations and Enclosure (4), paragraph (2) discusses the transitional provisions for Advanced Polar Code operations.

d. The National Maritime Center (NMC) will process applications for STCW endorsements for Basic and Advanced Polar Code Operations. Applications for Polar Code endorsements should be submitted in accordance with requirements described in Enclosures (3) and (4). There are no national endorsements issued for Polar Code operations.

e. The National Maritime Center will evaluate and approve courses in accordance with this guidance. Coast Guard approved courses for Polar Code operations should include both the training and competence requirements for the endorsements. Providers who had courses evaluated by NMC under CG-OES Policy Letter 01-16 and who received a letter attesting to the course content meeting the requirements of the STCW amendments do not need to resubmit

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courses for a new approval. The National Maritime Center will reissue existing course review letters as a course approval in accordance with 46 CFR 10.402.

6. Disclaimer. While the guidance contained in this document may assist the industry, public, Coast Guard, and other Federal and State regulators in applying statutory and regulatory requirements the guidance is not a substitute for applicable legal requirements nor is it a regulation itself.

7. Changes. This policy letter will be posted on the web at http://homeport.uscg.mil Changes to this policy will be issued as necessary. Suggestions for improvement of this policy should be submitted in writing to Commandant, U.S. Coast Guard Headquarters, Office of Merchant Mariner Credentialing (CG-MMC) at the address listed on the first page.

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Encl: (1) Excerpts of Chapter 12 of the International Code for Ships Operating in Polar Waters
(2) Amendments to the STCW Convention and Code defining the minimum standards of competence in basic and advanced training for ships operating in Polar Waters.
(3) Qualification and application for STCW endorsements in Basic Polar Code Operations
(4) Qualification and application for STCW endorsements in Advanced Polar Code Operations

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Enclosure (1) EXCERPTS OF CHAPTER 12 OF THE INTERNATIONAL CODE FOR SHIPS OPERATING IN POLAR WATERS[1]

1 GENERAL

This enclosure includes the risk assessment that determines the level of training required for deck officers on ships subject to the Polar Code. The assessment accounts for the type of ship and the ice conditions in the area of operation. Accordingly, each deck officer onboard a ship operating in polar waters should complete the training appropriate for the position they fill.

2 TRAINING REQUIREMENTS

12.1 Goal

The goal of this chapter is to ensure that ships operating in polar waters are appropriately manned by adequately qualified, trained and experienced personnel.

12.2 Functional requirements

In order to achieve the goal set out in paragraph 12.1 above, companies shall ensure that masters, chief mates and officers in charge of a navigational watch on board ships operating in polar waters shall have completed training to attain the abilities that are appropriate to the capacity to be filled and duties and responsibilities to be taken up, taking into account the provisions of the STCW Convention and the STCW Code, as amended.

12.3 Regulations

12.3.1 In order to meet the functional requirement of paragraph 12.2 above while operating in polar waters, masters, chief mates and officers in charge of a navigational watch shall be qualified in accordance with chapter V of the STCW Convention and the STCW Code, as amended, as follows:

Ice conditions	Tankers	Passenger ships	Other
Ice Free	Not Applicable	Not Applicable	Not Applicable
Open Waters	Basic training for master, chief mate and officers in charge of a navigational watch	Basic training for master, chief mate and officers in charge of a navigational watch	Not Applicable
Other Waters	Advanced training for master and chief mate. Basic training for officers in charge of a navigational watch	Advanced training for master and chief mate. Basic training for officers in charge of a navigational watch	Advanced training for master and chief mate. Basic training for officers in charge of a navigational watch.

[1] A complete copy of the Polar Code is available at http://www.imo.org/en/MediaCentre/HotTopics/polar/Pages/default.aspx.

12.3.2 The Administration may allow the use of a person(s) other than the master, chief mate or officers of the navigational watch to satisfy the requirements for training, as required in paragraph 12.3.1, provided that:

.1 this person(s) shall be qualified and certified in accordance with regulation II/2 of the STCW Convention and section A-II/2 of the STCW Code, and meets the advance training requirements noted in the above table;

.2 while operating in polar waters the ship has sufficient number of persons meeting the appropriate training requirements for polar waters to cover all watches;

.3 this person(s) is subject to the Administration's minimum hours of rest requirements at all times;.

.4 when operating in waters other than open waters or bergy waters, the master, chief mate and officers in charge of a navigational watch on passenger ships and tankers shall meet the applicable basic training requirements noted in the above table; and

.5 when operating in waters with ice concentration of more than 2/10, the master, chief mate and officers in charge of a navigational watch on cargo ships other than tankers shall meet the applicable basic training requirements noted in the above table.

12.3.3 The use of a person other than the officer of the navigational watch to satisfy the requirements for training does not relieve the master or officer of the navigational watch from their duties and obligations for the safety of the ship.

12.3.4 Every crew member shall be made familiar with the procedures and equipment contained or referenced in the PWOM[2]relevant to their assigned duties.

[2] Polar Waters Operating Manual (PWOM).

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Enclosure (2) AMENDMENTS TO THE STCW CONVENTION AND CODE DEFINING THE MINIMUM STANDARDS OF COMPETENCE IN BASIC AND ADVANCED TRAINING FOR SHIPS OPERATING IN POLAR WATERS[3]

The information in this enclosure contains the amendments to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended (STCW) and the Seafarers' Training, Certification and Watchkeeping (STCW) Code. These amendments support the training requirements of the International Code for Ships Operating in Polar Waters (Polar Code).

1 GENERAL

These amendments were approved by IMO at the ninety fifth session of the Maritime Safety Committee in June of 2015, and were adopted in July 2016 into the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended (STCW) and the Seafarers' Training, Certification and Watchkeeping (STCW) Code. The amendments will enter into force on July 1, 2018.

2 Amendments to the STCW Convention

CHAPTER I

General provisions

1 In regulation I/1.1, the following new definitions are added:

".42 *Polar Code* means the International Code for Ships Operating in Polar Waters, as defined in SOLAS regulation XIV/1.1.

.43 *Polar waters* means Arctic waters and/or the Antarctic area, as defined in SOLAS regulations XIV/1.2 to XIV/1.4."

2 In regulation I/11, after the existing paragraph 3, the following new paragraph is inserted and the subsequent paragraphs are renumbered accordingly:

"4 Every master or officer shall, for continuing seagoing service on board ships operating in polar waters, meet the requirements of paragraph 1 of this regulation and be required, at intervals not exceeding five years, to establish continued professional competence for ships operating in polar waters in accordance with section A-1/11, paragraph 4 of the STCW Code."

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[3] For information on how to obtain a complete copy of these documents, please see http://www.imo.org/en/Publications/Pages/Home.aspx.

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CHAPTER V

Special training requirements for personnel on certain types of ships

4. In chapter V, the following new regulation is added:

"**Regulation V/4**

Mandatory minimum requirements for the training and qualifications of masters and deck officers on ships operating in polar waters.

1 Masters, chief mates and officers in charge of a navigational watch on ships operating in polar waters shall hold a certificate in basic training for ships operating in polar waters, as required by the Polar Code.

2 Every candidate for a certificate in basic training for ships operating in polar waters shall have completed an approved basic training for ships operating in polar waters and meet the standard of competence specified in section A-V/4, paragraph 1, of the STCW Code.

3 Masters and chief mates on ships operating in polar waters, shall hold a certificate in advanced training for ships operating in polar waters, as required by the Polar Code.

4 Every candidate for a certificate in advanced training for ships operating in polar waters shall:

.1 meet the requirements for certification in basic training for ships in polar waters;

.2 have at least two (2) months of approved seagoing service in the deck department, at management level or while performing watchkeeping duties at the operational level, within polar waters or other equivalent approved seagoing service; and

.3 have completed approved advanced training for ships operating in polar waters and meet the standard of competence specified in section A-V/4, paragraph 2 of the STCW Code.

5 Administrations shall ensure that a Certificate of Proficiency is issued to seafarers who are qualified in accordance with paragraphs 2 or 4, as appropriate.

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Transitional provisions

6 Until 1 July 2020, seafarers who commenced approved seagoing service in polar waters prior to 1 July 2018 shall be able to establish that they meet the requirements of paragraph 2 by:

.1 having completed approved seagoing service on board a ship operating in polar waters or equivalent approved seagoing service, performing duties in the deck department at the operational or management level, for a period of at least three months in total during the preceding five years; or

.2 having successfully completed a training course meeting the training guidance established by the Organization for ships operating in polar waters.*

7 Until 1 July 2020, seafarers who commenced approved seagoing service in polar waters prior to 1 July 2018 shall be able to establish that they meet the requirements of paragraph 4 by:

.1 having completed approved seagoing service on board a ship operating in polar waters or equivalent approved seagoing service, performing duties in the deck department at management level, for a period of at least three months in total during the preceding five years; or

.2 having successfully completed a training course meeting the training guidance established by the Organization for ships operating in polar waters* and having completed approved seagoing service on board a ship operating in polar waters or equivalent approved seagoing service, performing duties in the deck department at the management level, for a period of at least two months in total during the preceding five years."

*Refer to Section B-V/g of the STCW Code.
*Refer to Section B-V/g of the STCW Code.

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3 Amendments to the STCW Code

CHAPTER I

General provisions

1 In section A-I/11, after the existing paragraph 3, a new paragraph 4 is added as follows:

"4 Continued professional competence for masters and officers on board ships operating in polar waters, as required under regulation I/11, shall be established by:

.1 approved seagoing service, performing functions appropriate to the certificate held, for a period of at least two months in total during the preceding five years; or

.2 having performed functions considered to be equivalent to the seagoing service required in paragraph 4.1; or

.3 passing an approved test; or

.4 successfully completing an approved training course or courses."

CHAPTER V –

Standards regarding special training requirements for personnel on certain types of ships

4 A new section A-V/4 is added as follows:

"Section A-V/4
Mandatory minimum requirements for the training and qualifications of masters and deck officers on ships operating in polar waters

Standard of competence

1 Every candidate for certification in basic training for ships operating in polar waters shall be required to:

.1 demonstrate the competence to undertake the tasks, duties and responsibilities listed in column 1 of table A-V/4-1; and

.2 provide evidence of having achieved:

.1 the minimum knowledge, understanding and proficiency listed in column 2 of table A-V/4-1; and

.2 the required standard of competence in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-V/4-1.

2 Every candidate for certification in advanced training for ships operating in polar waters shall be required to:

.1 demonstrate the competence to undertake the tasks, duties and responsibilities listed in column 1 of table A-V/4-2; and

.2 provide evidence of having achieved:

.1 the minimum knowledge, understanding and proficiency listed in column 2 of table A-V/4-2; and

.2 the required standard of competence in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-V/4-2.

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Table A-V/4-1

Specification of minimum standard of competence in basic training for ships operating in polar waters

Column One	Column Two	Column Three	Column Four
Competence	**Knowledge, Understanding, proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Contribute to safe operation of vessels operating in polar waters	*Basic knowledge of ice characteristics and areas where different type of ice can be expected in the area of operation:* 1. Ice physics, terms, formation, growth, aging and stage of melt; 2. Ice types and concentrations; 3. Ice pressure and distribution; 4. Friction from snow covered ice. 5. Implications of spry-icing; danger of icing up, precautions to avoid icing up and options during icing up; 6. Ice regimes in different regions. Significant differences between the Arctic and the	Examination and assessment of evidence obtained from one or more of the following: 1. approved in-service experience 2. approved training ship experience 3. approved simulator training, where appropriate 4. approved training	Identification of ice properties and their characteristics of relevance for safe vessel operation. Information obtained from ice information and publications is interpreted correctly and properly applied. Use of visible and infrared satellite images. Use of egg charts. Coordination of meteorological and oceanographic data with ice data. Measurements and observations of weather and ice conditions are accurate and appropriate for safe passage

	Antarctic, first year and multiyear ice, sea ice and land ice; 7. Use of ice imagery to recognize consequences of rapid change in ice and weather conditions; 8. Knowledge of ice sky and water blink; 9. Knowledge of differential movement of icebergs and pack ice; 10. Knowledge of tides and currents in ice; 11. Knowledge of effect of wind and current on ice.		
	Basic knowledge of vessel performance in ice and low air temperature: 1. Vessel characteristics; 2. Vessel types, hull designs; 3. Engineering requirements for operating in ice;	Examination and assessment of evidence obtained from one or more of the following: 1. approved in-service experience 2. approved training ship experience	Identification of vessel characteristics and limitations under different ice conditions and cold environmental impact. Procedures are made for risk assessment before entering ice.

	4. Ice strengthening requirements; 5. Limitations of ice-classes; 6. Winterization and preparedness of vessel, including deck and engine; 7. Low-temperature system performance; 8. Equipment and machinery limitation in ice condition and low air temperature; 9. Monitoring of ice pressure on hull; 10. Sea suction, water intake, superstructure insulation and special systems.	3. approved simulator training, where appropriate 4. approved training	Awareness of fresh water ballast freezing in ballast tanks. Actions are carried out in accordance with accepted principles and procedures to prepare the vessel and the crew for operations in ice and low air temperature. Communications are clear, concise and effective at all times in a seamanlike manner.
	Basic knowledge and ability to operate and manoeuvre a ship in ice: 1. Safe speed in the presence of ice and icebergs; 2. Ballast tank monitoring;	Examination and assessment of evidence obtained from one or more of the following: 1. approved in-service experience 2. approved training ship experience	Use Polar Code and Polar Water Operations Manual to correctly determine the recommended procedures to load/offload cargo/passengers in low temperatures, monitor ballast water for icing, monitor engine

	3. Cargo operations in the polar waters; 4. Awareness of engine loads and cooling problems; 5. Safety procedures during ice transit.	3. approved simulator training, where appropriate 4. approved training	temperatures, anchor watch concerns in ice, and transit near ice. Interpretation and analysis of information from radar is in accordance with sharp lookout and with special caution regarding identification of dangerous ice features. Information obtained from navigational charts, including electronic charts, and publications is relevant, assessed, interpreted correctly and properly applied. The primary method of position fixing is frequent and the most appropriate for the prevailing conditions and routing through ice. Performance checks and tests of navigation and communication systems comply with recommendations for high latitude and

			low air temperature operation.
Monitor and ensure compliance with legislative requirements	*Basic knowledge of regulatory considerations:* 1. Antarctic Treaty and the Polar Code; 2. Accident reports concerning vessels in polar waters; 3. IMO standards for operation in remote areas;	Examination and assessment of evidence obtained from one or more of the following: 1. approved in-service experience 2. approved training ship experience 3. approved simulator training, where appropriate 4. approved training	Locate and apply relevant portion of the Polar Water Operational Manual Communication is in accordance with local/regional and international standard procedures. Legislative requirements related to relevant regulations, codes and practices are identified.
Apply Safe working practices respond to emergencies	*Basic knowledge of crew preparation, working conditions and safety:* 1. Recognize limitations of search and rescue readiness and responsibility, including radio area A4 and its SAR communication facility limitation; 2. Awareness of contingency planning;	Examination and assessment of evidence obtained from one or more of the following: 1. approved in-service experience 2. approved training ship experience 3. approved simulator training, where appropriate 4. approved training	Identification and initial actions on becoming aware of hazardous situations for vessel and individual crew members. Actions are carried out in accordance with Polar Water Operational Manual, accepted principles and procedures to ensure safety of operations and avoid pollution to the marine environment.

	3. How to establish and implement safe working procedures for crew specific to polar environments such as low temps, ice covered surfaces , personal protective equipment, use of buddy system, and working time limitations; 4. Recognize dangers when crews are exposed to low temperatures; 5. Human factors including cold fatigue, medical-first aid aspects, crew welfare; 6. Survival requirements including the use of personal survival equipment and group survival equipment; 7. Awareness of the most common hull and equipment damages and how to avoid these; 8. Superstructure-deck icing, including effect on stability and trim;		Safe working practices are observed and appropriate safety and protective equipment is correctly used at all times. Response actions are in accordance with established plans and are appropriate to the situation and nature of the emergency. Correctly identifies and applies legislative requirements related to relevant regulations, codes and practices. Appropriate safety and protective equipment is correctly used Defects and damages are detected and properly reported

	9. Prevention and removal of ice including the factors of accretion; 10. Recognize fatigue problems due to noise and vibrations; 11. Identify need for extra resources, such as bunker, food, and extra clothing.		
Ensure compliance with pollution-prevention requirements and prevent environmental hazards	*Basic knowledge of environmental factors and regulations:* 1. Identify particular sensitive sea areas regarding discharge; 2. Identify areas where shipping is prohibited or should be avoided; 3. Special areas in MARPOL; 4. Recognize limitations oil-spill equipment; 5. Plan for coping with increased volumes of garbage, bilge water, sewage, etc.;	Examination and assessment of evidence obtained from one or more of the following: 1. approved in-service experience 2. approved training ship experience 3. approved simulator training, where appropriate 4. approved training	Legislative requirements related to relevant regulations, codes and practices are identified. Correctly identify/select the limitations on vessel discharges contained in the Polar Code. Correctly applies Polar Water Operations Manual/ Waste Management Plan to determine limitations on vessel discharges and plans for storing waste Identify references that detail areas to be avoided, such as

	6. Lack of infrastructure. 7. Oil spill and pollution in ice, including consequences;		wild life refuge, ecological heritage parks, migratory pathways, etc. (MARPOL, Antarctic Treaty, etc.) Identify factors that must be considered to manage waste stream during Polar voyages

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Table A-V/4-1

Specification of minimum standard of competence in advanced training for ships operating in polar waters

Column One	Column Two	Column Three	Column Four
Competence	**Knowledge, Understanding, proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Plan and conduct a voyage in Polar Waters	*Knowledge of voyage planning and reporting:* 1. Information sources; 2. Reporting regimes in polar waters; 3. Development of safe routing and passage planning to avoid ice where possible; 4. Ability to recognize the limitations of hydrographic information and charts in polar regions and whether the information is suitable for safe navigation; 5. Passage planning deviation and modification for dynamic ice conditions;	Examination and assessment of evidence obtained from one or more of the following: 1. approved in-service experience 2. approved training ship experience. 3. approved simulator training, where appropriate. 4. approved training	The equipment, charts and nautical publications required for the voyage are enumerated and appropriate to the safe conduct of the voyage. The reasons for the planned route are supported by facts obtained from relevant sources and publications, statistical data and limitations of communication and navigational systems. Voyage plan correctly identified relevant polar regulatory regimes and need for ice-pilotage or/and icebreaker assistance. All potential navigational hazards

	Knowledge of equipment limitations: 1. Understand and identify hazards associated with limited terrestrial navigational aids in polar regions; 2. Understand and recognize high latitude errors on compasses; 3. Understand and identify limitations in discrimination of radar targets and ice-features in ice-clutter; 4. Understand and recognize limitations of electronic positioning systems at high latitude; 5. Understand and recognize limitations in nautical charts and pilot descriptions; 6. Understand and recognize limitations in communication systems.		are accurately identified. Positions, courses, distances and time calculations are correct within accepted accuracy standards for navigational equipment.

Manage the safe operation of vessels operating in polar waters	*Knowledge and ability to operate and manoeuvre a ship in ice:* 1. Preparation and risk assessment before approaching ice, including presence of icebergs, and taking into account wind, darkness, swell, fog and pressure ice; 2. Conduct communications with an icebreaker and other vessels in the area and with Rescue Coordination Centres 3. Understand and describe the conditions for the safe entry and exit to and from ice or open water, such as leads or cracks, avoiding icebergs and dangerous ice conditions and maintaining safe distance to icebergs 4. Understand and describe ice ramming procedures – including double and single ramming passage;	Examination and assessment of evidence obtained from one or more of the following: 1. approved in-service experience 2. approved training ship experience. 3. approved simulator training, where appropriate. 4. approved training	All decisions concerning navigating in ice are based on a proper assessment of the ship's manoeuvring and engine characteristics and the forces to be expected while navigating within a polar waters. Demonstrate communications skills, request ice routing, plot and commence voyage through ice. All potential ice hazards are correctly identified. All decisions concerning berthing anchoring, cargo and ballast operations are based on a proper assessment of the ships manoeuvring and engine characteristics and the forces to be expected and in accordance with the Polar Code guidelines and applicable international agreements.

	5. Recognize and determine the need for bridge watch team augmentation based upon environmental conditions, vessel equipment and vessel ice class; 6. Recognize the presentations of the various ice conditions as they appear on radar. 7. Understand icebreaker convoy terminology, and communications, and take icebreaker direction and move in convoy; 8. Understand methods to avoid besetment and to free beset vessel, and consequences of besetment; 9. Understand towing and rescue in ice, including risks associated with operation; 10. Handling ship in various ice concentration and coverage, including risks associated with		Safely demonstrate progression of a vessel through ice, manoeuvring vessel through moderate ice concentration (range of 1/10 to 5/10). Safely demonstrate progression of a vessel through ice, manoeuvring vessel through dense ice concentration (range of 6/10 to 10/10). Operations are planned and carried out in accordance with established rules and procedures to ensure safety of operation and avoid pollution of the marine environment. Safety of navigation is maintained through sailing strategy and adjustment of ship's speed and heading through different types of ice. Actions are understood to permit use of anchoring system in cold temperatures

	navigation in ice, and turning-backing; avoidance; etc.; 11. Use of different type of propulsion and rudder systems, including limitations to avoid damage when operating in ice; 12. Use of heeling and trim-systems.; hazards in connection with ballast and trim in relation with ice; 13. Docking and undocking in ice covered waters, including hazards associated with operation and the various techniques to safely and undock in ice covered waters; 14. Anchoring in ice, including the dangers to anchoring system – ice accretion to hawse pipe and ground tackle; 15. Recognize conditions which impact polar visibility and may		Actions are carried out in accordance with accepted principles and procedures to prepare for icebreaker towing, including notch towing.

	give indication of local ice and water conditions, including sea smoke, blink and refraction.		
Maintain safety of the ship's crew and passengers and the operational condition of life-saving, firefighting and other safety systems	*Knowledge of safety:* 1. Understand the procedures and techniques for abandoning the ship and survival on the ice and in ice-covered waters; 2. Recognize limitations on fire-fighting systems and life saving appliances due to low air temperatures, 3. Understand unique concerns in conducting emergency drills in ice and low temperatures; 4. Understand unique concerns in conducting emergency response in ice and low air and water temperatures.	Examination and assessment of evidence obtained from one or more of the following: 1. approved in-service experience 2. approved training ship experience. 3. approved simulator training, where appropriate. 4. approved training.	Response measures are in accordance with established plans and procedures, and are appropriate to the situation and nature of the emergency.

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Enclosure (3) Qualification and Application for STCW Endorsements for Basic Polar Code Operations

1. **Qualification for Endorsements:**
   a. To qualify for an STCW endorsement in Basic Polar Code Operations applicants should provide evidence of satisfactory completion of a Coast Guard approved course in Basic Polar Code Operations. The course should meet the training and standard of competence specified in section A-V/4 paragraph 1 of the STCW Code. (See Enclosure 2 to this document).
   b. Mariners who met the training and standard of competence for Basic training specified in the previously published CG-OES Policy Letter No. 01-16, will be considered to have met the requirement of paragraph 1.(a) of this enclosure for an original endorsement. This training should be documented via course completion certificates or company letters.

2. **Transitional Provisions:** Until July 1, 2020, applicants who commenced approved seagoing service in polar waters prior to July 1, 2018 may provide evidence of one of the following to qualify for an endorsement in Basic Polar Code operations:
   a. Three months of seagoing service at the management level or as Officer in Charge of a Navigational Watch (OICNW), as defined in 46 CFR 10.107 within the previous 5 years while operating within polar waters, or
   b. Evidence of completing training consistent with the guidance for ships operating in polar waters of section B-V/g of the STCW Code. This training should be documented via course completion certificates or company letters.

3. Application for New Endorsements: Applications should be submitted in accordance with the requirements of 46 CFR 10.209 noting the following information:
   a. A chemical test as described in 46 CFR 10.231(b) is not required for this endorsement
   b. As per 46 CFR 10.219 there are no fees associated with the issuance of this endorsement
   c. As per 46 CFR 10.231(c)(1) a completed signed CG-719B "Application for Merchant Mariner Credential" is required
   d. As per 46 CFR 10.231(c)(2) proof that the mariner either holds a valid TWIC or has applied for a TWIC is required
   e. Sea service letters should be submitted in accordance with 46 CFR 10.232 and should include the number of days served on a vessel operating in polar waters.
   f. Applicants should hold an STCW endorsement as Master, Chief Mate or OICNW listed in 46 CFR 11.304.

4. **Endorsements:** Qualified Applicants will have their MMC endorsed with STCW Regulation V/4-1 and a capacity of Basic Polar Code Operations. Endorsements will be issued for a period that coincides with the validity period of the MMC as per 46 CFR 10.231(b) unless the mariner submits an application for a renewal in accordance with 46 CFR 10.227.

Subj: GUIDELINES FOR QUALIFICATIONS OF PERSONNEL FOR ISSUING STCW ENDORSEMENTS FOR BASIC AND ADVANCED POLAR CODE OPERATIONS

Enclosure (4) Qualification and application for STCW Endorsements for Advanced Polar Code Operations

1. **Qualification for Endorsements:**
   a. To qualify for an STCW endorsement in Advanced Polar Code Operations applicants should provide evidence of satisfactory meeting the requirements for an endorsement in Basic Polar Code Operations as described in enclosure (3); and
   b. Provide evidence of completion of a Coast Guard approved course in Advanced Polar Code Operations. The course should meet the training and standard of competence specified in section A-V/4 paragraph 2 of the STCW Code (See Enclosure 2 to this document); and
   c. Provide evidence of 2 months of seagoing service at the management level or as an Officer in Charge of Navigational Watch (OICNW), as defined in 46 CFR 10.107 while operating in polar waters.
   d. Mariners who have met the training and standard of competence for Advanced training specified in the previously published CG-OES Policy Letter No. 01-16, will be considered to have met the requirement of paragraph 1(b) of this enclosure for an original endorsement. This training should be documented via course completion certificates or company letters.

2. **Transitional Provisions:** Until July 1, 2020, applicants who commenced approved seagoing service in polar waters prior to July 1, 2018 may provide evidence of one of the following to qualify for an endorsement in Advanced Polar Code operations:
   a. Three months of seagoing service at the management level as defined in 46 CFR 10.107 within the previous 5 years while operating within polar waters, or
   b. Two months of seagoing service at the management level as defined in 46 CFR 10.107 within the previous 5 years while operating within polar waters and evidence of completing training consistent with the guidance for ships operating in polar waters of section B-V/g of the STCW Code. This training should be documented via course completion certificates or company letters.

3. **Application for New Endorsements:** Applications should be submitted in accordance with the requirements of 46 CFR 10.209 noting the following information:
   a. A chemical test as described in 46 CFR 10.231(b) is not required for this endorsement
   b. As per 46 CFR 10.219 there are no fees associated with the issuance of this endorsement
   c. As per 46 CFR 10.231(c)(1) a completed signed CG-719B “Application for Merchant Mariner Credential” is required
   d. As per 46 CFR 10.231(c)(2) proof that the mariner either holds a valid TWIC or has applied for a TWIC is required
   e. Sea service letters should be submitted in accordance with 46 CFR 10.232 and should include the number of days served on a vessel operating in polar waters.
   f. Applicants should hold an STCW endorsement for Master, Chief Mate or OICNW listed in 46 CFR 11.304.

Subj: GUIDELINES FOR QUALIFICATIONS OF PERSONNEL FOR ISSUING STCW ENDORSEMENTS FOR BASIC AND ADVANCED POLAR CODE OPERATIONS

4. **Endorsements:** Qualified Applicants will have their MMC endorsed with STCW Regulation V/4-2 and a capacity of Advanced Polar Code Operations. Endorsements will be issued for a period that coincides with the validity period of the MMC as per 46 CFR 10.231(b) unless the mariner submits an application for a renewal in accordance with 46 CFR 10.227.