TP 11663E

Transport Canada Transports Canada

GUIDELINES FOR THE OPERATION OF TANKERS AND BARGES IN CANADIAN ARCTIC WATERS (INTERIM)

APRIL 1997

Transport Canada
Prairie & Northern Region, Marine

Canada

PREAMBLE

The following passage is taken from the preamble to the Arctic Waters Pollution Prevention Act...

> “Whereas Parliament recognizes that recent developments in relation to the exploration of the natural resources of arctic areas, including the natural resources of the Canadian arctic, and the transportation of those resources to the markets of the world are of potentially great significance to international trade and commerce and to the economy of Canada in particular;
>
> And whereas Parliament at the same time recognizes and is determined to fulfil its obligation to see that the natural resources of the Canadian arctic are developed and exploited and the arctic waters adjacent to the mainland and islands of the Canadian arctic are navigated only in a manner that takes cognizance of Canada’s responsibility for the welfare of the Inuit and other inhabitants of the Canadian arctic and the preservation of the peculiar ecological balance that now exists in the water, ice and land areas of the Canadian arctic;
>
> Now therefore, Her Majesty, by and with the advice and consent of the Senate and House of Commons of Canada enacts as follows...”

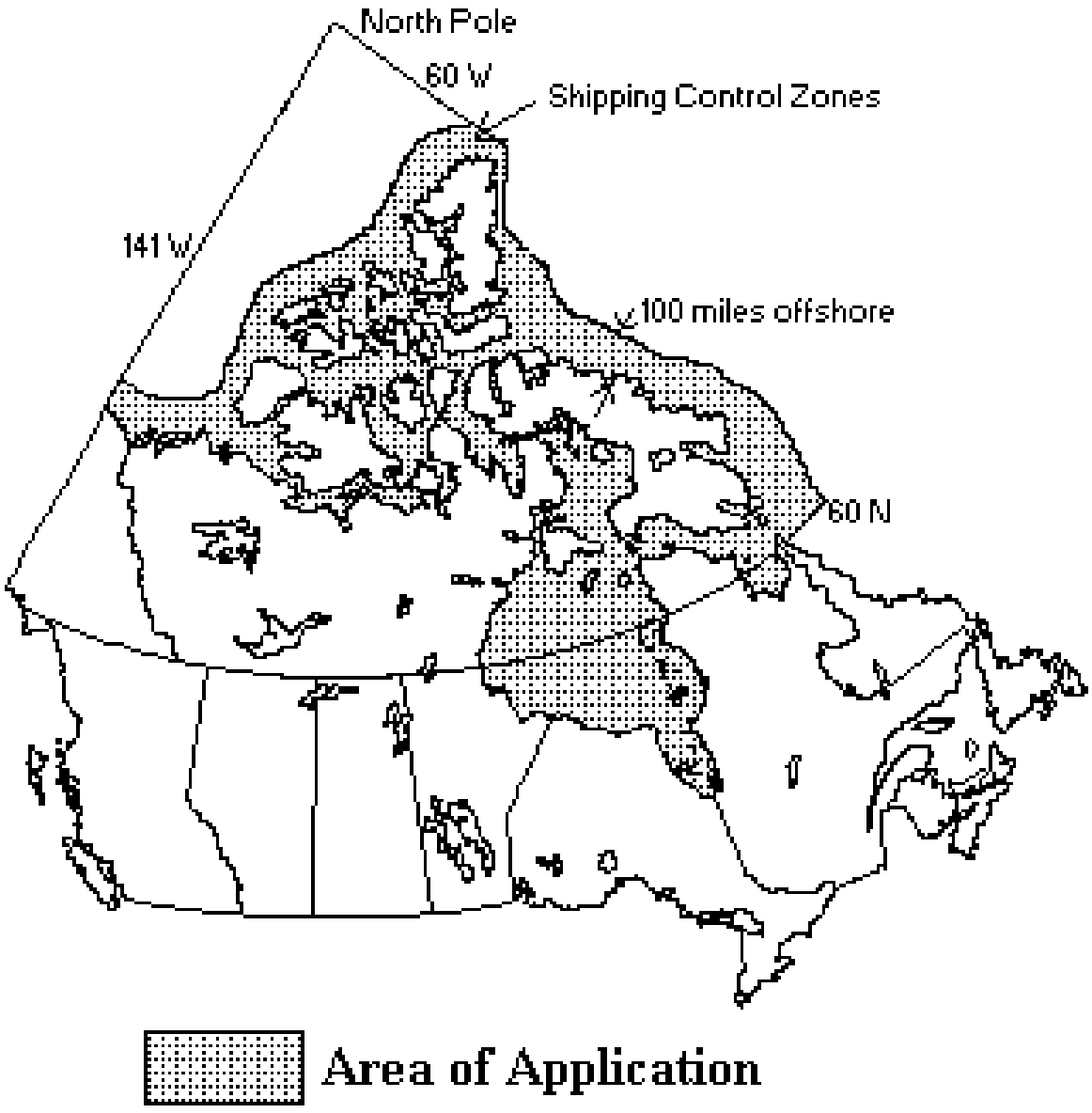
TABLE OF CONTENTS

Section		Title	Page
i)		Definitions	4
ii)		Map of Applicable Area	5
iii)		Tanker Categories and Loading Restrictions	6
iv)		Tanker Cross Sections	7
v)		Barge Loading Arrangements	8
vi)		Abbreviations	9
1.0		**Introduction**	10
2.0		**Background**	10
3.0		**Compliance With Regulations**	10
4.0		**Application**	10
5.0		**Construction**	10
	5.1	Tankers	10
	5.2	Barges	11
	5.3	General	11
6.0		**Operation**	12
	6.1	Tankers	12
	6.2	Barges	12
	6.3	General	12
	6.4	Ice Navigator	12
	6.5	Reporting	13
	6.6	Crew Training	13
7.0		**Oil Cleanup Equipment**	13
8.0		**Emergency Response Plan**	13
9.0		**Documentation**	14
10.0		**Monitoring**	14
11.0		**Ice Regime System**	14
12.0		**Chartering**	14
13.0		**Company Audits**	15
14.0		**Liability and Compensation**	15
15.0		**Enquiries**	15

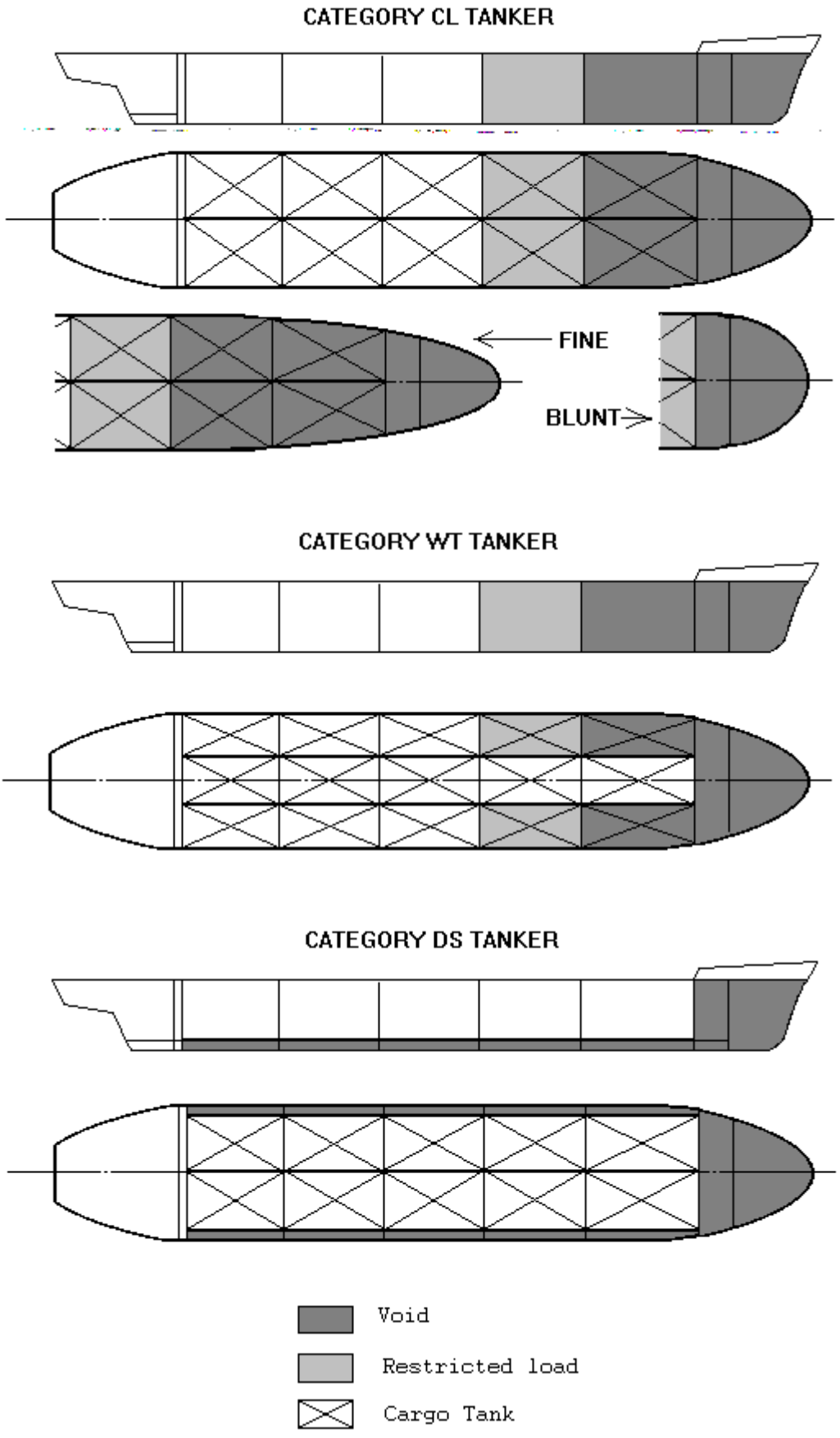
DEFINITIONS

Barge	A tank vessel with no means of self-propulsion installed.
Canadian Arctic Waters	All waters defined in section 4.0.
Category CL	A single-skinned tanker having only a centreline longitudinal bulkhead in way of the cargo tanks.
Category DS	A double-skinned tanker having a double side and double bottom arrangement in way of the cargo tank area. The double-skin compartments are assumed to be maintained void under normal voyage conditions.
Category WT	A single-skinned tanker having two (2) longitudinal bulkheads in way of the cargo tanks making port and starboard wing tanks plus a centre tank to form the transverse section through the cargo area.
Existing Trade Tank Vessel	Any tank vessel not included in the definition of "New Trade Tank Vessel" below.
New Trade Tank Vessel	A tank vessel entering the Canadian Arctic trade for the first time after July 1, 1993.
Oil	Means oil of any kind or in any form, and, without limiting the generality of the foregoing, includes petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes.
Tanker	A self-propelled tank vessel.
Tank Vessel	Any ship or barge in which the greater part of the cargo space is constructed or adapted for the carriage of liquid cargoes in bulk that is not, for the time being, carrying a cargo other than oil in that part of its cargo space.
Type A, B, C and D.	These structural classifications have the same meanings as defined in the ASPPR.

MAP OF APPLICATION

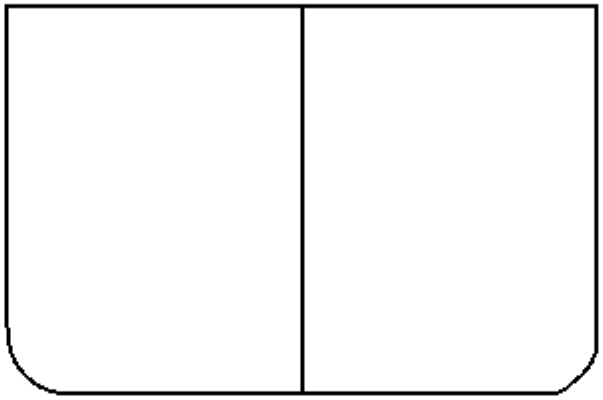


TANKER CATEGORIES AND LOADING RESTRICTIONS

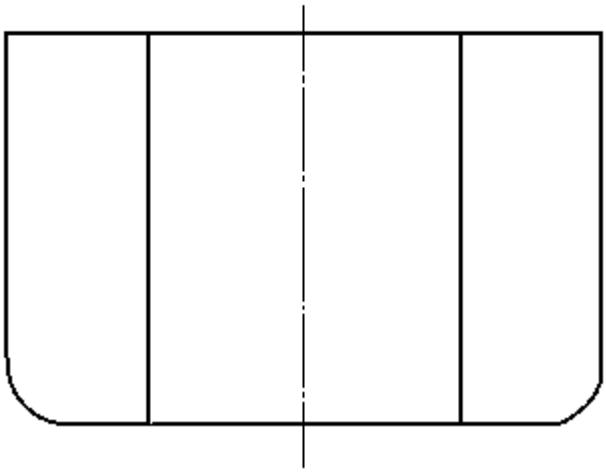


TANKER CROSS SECTIONS

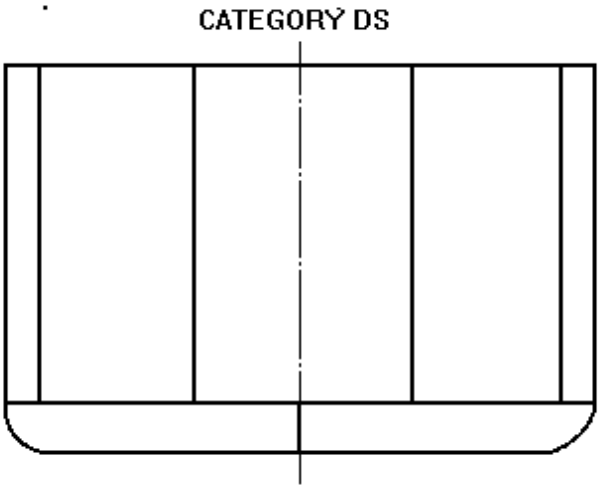
CATEGORY CL



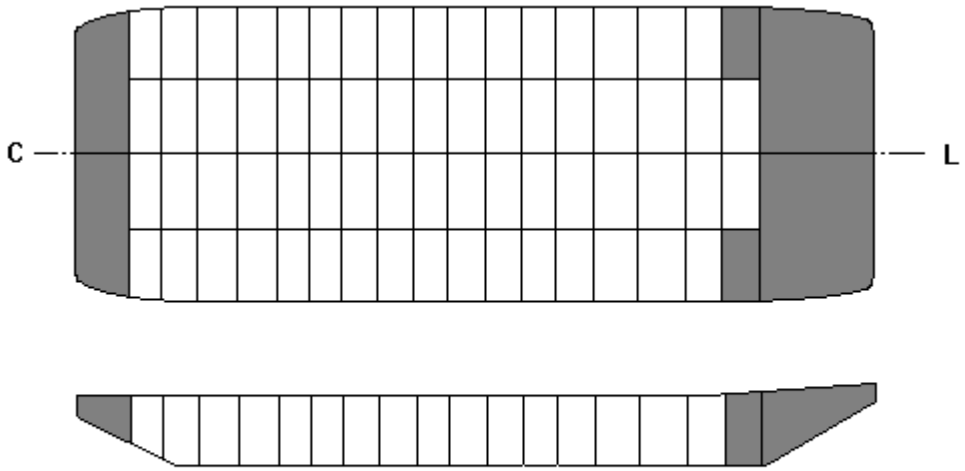
CATEGORY WT



CATEGORY DS

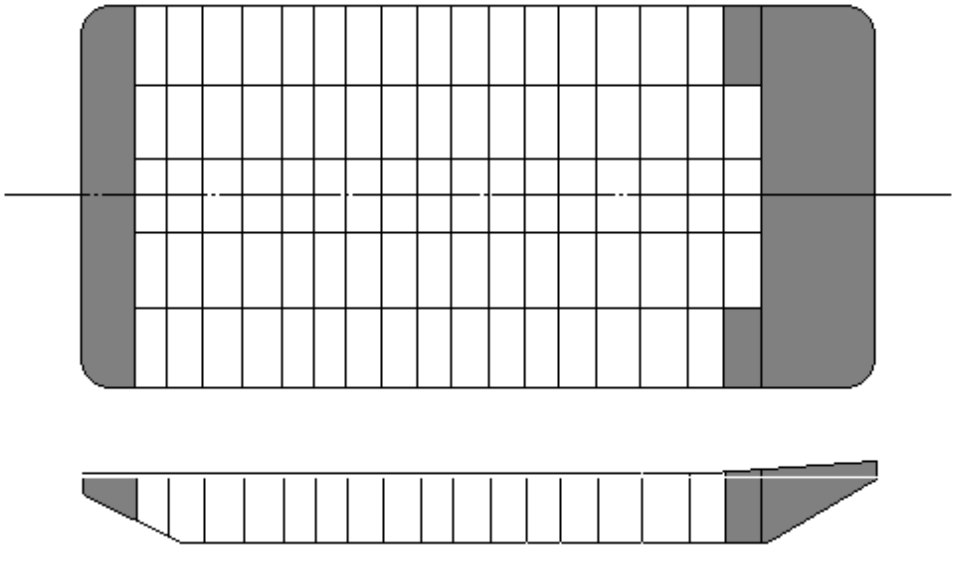


BARGE LOADING ARRANGEMENTS



TYPICAL BARGE TANK ARRANGEMENT

Void



TYPICAL BARGE TANK ARRANGEMENT

Void

ABBREVIATIONS

ASPPR	Arctic Shipping Pollution Prevention Regulations
CCG	Canadian Coast Guard
CMAC	Canadian Coast Guard Marine Advisory Council
IMO	International Maritime Organization
MARPOL	International Convention for the Prevention of Pollution from Ships, 1973, and the 1978 Protocol relating thereto (IMO -1973/78)

GUIDELINES FOR THE OPERATION OF TANKERS AND BARGES IN CANADIAN ARCTIC WATERS (INTERIM)

1.0 Introduction

These Guidelines provide an increased standard of protection against oil spills in all tank vessels operating in Canadian Arctic waters in anticipation of the requirements of the IMO MARPOL Convention, Annex 1, Regulations 13(F) and 13(G), and the U.S. Oil Pollution Act of 1990. The Guidelines set an additional level of protection for the environment against oil spills as an interim measure until comparable double-hulling requirements come into force in the Arctic.

2.0 Background

The impending introduction of new, more onerous requirements for oil tankers trading world-wide resulted in the setting up of the CMAC-Industry/CCG Tanker Design Working Group to develop a Canadian response. At its meeting in September 1992, this group agreed to establish the CMAC-Arctic Tanker Operations Working Group to investigate alternatives to accelerated double-hulling of existing tankers and barges operating in Canadian Arctic waters. These Interim Guidelines for the operation of tankers and barges in Arctic waters were generated by this group.

3.0 Compliance with Regulations

Nothing in these Guidelines supersedes regulatory requirements. These Guidelines are to be considered as additional to requirements made elsewhere. The basis for these Guidelines is compliance with MARPOL 1973/78 Annexes I and II, except for levels of discharge. (There is a zero discharge regime in effect in the Arctic Shipping Safety Control Zones.)

4.0 Application

These Guidelines will apply to all tank vessels larger than 150 gross register tons while operating in the following coastal waters:

a) Any Shipping Safety Control Zone; and

b) All the waters of Hudson Bay, Ungava Bay and James Bay.

Sections 4 to 10 inclusive and 14 of these Guidelines will take effect on July 1, 1993. Sections 11, 12 and 13 will take effect June 1, 1995.

5.0 Construction

5.1 Tankers

Tankers operating in Canadian Arctic waters are to be classified according to tank arrangement as well as by structural strength. Classification by tank arrangement will be according to the definitions at the beginning of these Guidelines. Structural strength is to be determined according to the requirements of the Arctic Shipping Pollution Prevention Regulations (ASPPR) for ships of Types A, B, C or D.

5.1.1 New trade tankers of category CL (single-skinned, centreline bulkhead) are not permitted to trade in Canadian Arctic waters.

Existing trade tankers of category CL navigating in Canadian Arctic waters must be of at least Type B construction.

5.1.2 New trade and existing trade tankers of category WT (single-skinned, wing tank) must be of at least Type C construction.

5.1.3 New trade and existing trade tankers of category DS (double-skinned) must be of at least Type D construction.

5.1.4 All tankers operating in Canadian Arctic waters must be fitted with a 150mm high coaming surrounding the main deck at the gunwale, in way of the cargo tanks. Where the presence of a coaming is demonstrated to adversely affect the stability or the structural integrity of the tanker, the coaming may be less than 150 mm high in keeping with the size of the tanker.

5.1.5 All other structural and equipment requirements of the Oil Pollution Prevention Regulations and the ASPPR are to be complied with according to the class or Type of vessel.

5.2 Barges

Barges operating in Canadian Arctic waters are generally highly compartmentalized.

5.2.1 New trade barges for operation in Arctic coastal waters must be double hulled and constructed according to the structural provisions (100% section modulus - ocean going) of the ASPPR for the appropriate ice conditions.

5.2.1.1 For existing trade barges to operate outside their present trading area, consideration will be given according to section 5.3.

5.2.2 New trade and existing trade barges shall be fitted with adequate oil containment coamings surrounding all loading and unloading sites. Sufficient permanent or portable containment devices are to be in place in way of ullage pipes during tank loading operations to contain operational spills.

5.2.3 All barges are to comply with the provisions of the "Standards and Guidelines for the Construction, Inspection and Operation of Barges That Carry Oil in Bulk," TP11960E.

5.3 General

New trade tankers or barges of single-skinned construction, but of a higher structural type or class than specified above, of special arrangement or of nearly new construction could be considered by Coast Guard for entry only on a case by case basis, taking into account their patterns of trade.

New trade tank vessels of all categories are to be constructed of notch-tough steels of Type D or equivalent in hull areas deemed necessary by classification societies to prevent shell rupture because of brittle fracture.

6.0 Operation

6.1 Tankers

6.1.1 No tanker shall carry fuel or oil cargo in any compartment in direct contact with the side shell plating, which extends forward of the shoulder, that is the area where shell plating can be most damaged by ice impact caused by the forward motion of the ship. Such compartments are to be at least 760 mm wide at the summer load waterline. Normally, this requirement will include tanks as far aft as Nº 1 port and starboard cargo wing tanks. (See diagrams at the beginning of these Guidelines.)

6.1.2 The tanks specified in Section 6.1.1 may contain clean ballast water.

6.1.3 Any oil in the side compartments directly aft of the shoulder in category CL or WT tankers is to be loaded such that the resultant level of the contents is at least one (1) metre below the vertical location of the summer load waterline.

6.2 Barges

6.2.1 No barge is to carry oil in any of the following compartments:

a) all forepeak compartments, provided they reach the full depth of the barge. Otherwise, the tanks directly aft of the forepeak, which reach full depth, are also to be kept void;

b) the forward port and starboard wing tanks (usually described as Nº1); and

c) all aft peak compartments. (See diagrams at the beginning of these Guidelines.)

6.3 General

6.3.1 Sufficient reserve capacity is to be retained on board all tank vessels to accommodate cargo from another compartment should that compartment suffer damage. As well:

a) reserve capacity may include the void compartments specified above;

b) reserve volume is to be equal to at least 5% of the cargo capacity of the tank vessel, and preferably as large as the largest cargo compartment in the ship; and

c) compartments containing ballast water do not qualify for the calculation of reserve capacity except for the ullage space in such compartments.

6.3.2 Arrangements should be in place in all tank vessels to effect emergency transfer of cargo from a damaged compartment into the reserve capacity in the event of damage.

6.4 Ice Navigator

All tankers and tugs towing barges navigating within Canadian Arctic waters shall have on board an ice navigator. An ice navigator is a person who:

a) fulfills the qualifications specified for this position in the ASPPR; and

b) has had sufficient experience navigating in ice covered waters to satisfy the owner of the vessel as to the overall safety of the operation.

6.5 Reporting

All written reports made pursuant to these Guidelines are to conform to the requirements of the "Guidelines for the Reporting Incidents Involving Dangerous Goods, Harmful Substances and/or Marine Pollutants-1992" TP 9834E.

6.6 Crew Training

6.6.1 All deck officers on tankers and tugs shall be able to relate the structural capability of the ice class or type of their vessel to the worst ice conditions for which it was designed. Relevant educational material is contained in the 1992 edition of “Ice Navigation in Canadian Waters.”

6.6.2 Senior members of the deck crew must be familiar with tank vessel operations in Arctic waters and a sufficient number must be adequately trained in the techniques of oil spill cleanup. Ships not meeting this requirement are to be provided with supplementary personnel with the requisite capabilities.

7.0 Oil Cleanup Equipment

Every tanker or barge in Canadian Arctic waters shall:

a) carry sufficient equipment to clean up operational on-deck spills; and

b) have at its disposal sufficient boom and clean-up equipment for minor spills at remote loading/unloading and transfer sites.

8.0 Emergency Response Plan

Owners of all tank vessels are to ensure that an emergency response plan is developed for each vessel navigating in Canadian Arctic waters. These plans are to be submitted to CCG for record and comment and are to include at least the following provisions:

a) procedures for reporting;

b) identification of the person who activates the plan;

c) a logical initial response to possible occurrences based on the equipment and crew onboard;

d) the extent of crew training and exercises;

e) a reasonable crew response capability in terms of volume of spilled oil that could be cleaned up under specific circumstances; and

f) means of access to damaged stability/subdivision calculations to enable a rapid, accurate assessment of any damage situation to be made by pollution cleanup and other authorities.

9.0 Documentation

The vessel is to have on board the appropriate charts and publications including the following:

a) the 1992 edition of *Ice Navigation in Canadian Waters* (TP 5064E);

b) the latest edition of the *Canadian Arctic Waters Oil Transfer Guidelines* (TP 10783E);

c) the *Arctic Ice Regime Shipping System* (AI,255) *Standards* (TP 12259E);

d) the *Guidelines for the Reporting Incidents Involving Dangerous Goods, Harmful Substances and/or Marine Pollutants -1992* (TP 9834E);

e) the *Standards and Guidelines for the Construction, Inspection and Operation of Barges That Carry Oil in Bulk* (TP 11960E) (only necessary on tugs towing barges); and

f) these *Guidelines for the Operation of Tankers and Barges in Canadian Arctic Waters (Interim)*. (TP 11663E).

10.0 Monitoring

The monitoring of compliance with these Guidelines will be carried out by Pollution Prevention Officers on an ongoing basis by means of inspection and/or NORDREG inquiry.

11.0 Ice Regime System

Voyages are to be conducted so as to conform with the *Arctic Ice Regime Shipping System* (AIRSS) *Standards* (TP 12259E), when this system takes effect.

12.0 Chartering

Tankers and barges chartered for Arctic operations are to comply with the Chartering Guidelines when available (under development).

13.0 Company Audits

Companies operating tankers or barges in Canadian Arctic waters should do so in accordance with the standard IMO 680, conduct an audit of management practices, or be certified under ISO 9000 or CSA standard CAN 3 Z299, or a similar code, at the earliest opportunity prior to 1995.

14.0 Liability and Compensation

These Guidelines are not to be construed as negating any responsibility on the part of ship owners, charterers or cargo owners for civil liability and compensation for pollution as defined in Section 6 of the *Arctic Waters Pollution Prevention Act (Chapter A-12 Revised Statutes of Canada 1985)*.

All vessels are assumed to be in class with a recognized classification society.

15.0 Enquiries

All enquiries concerning these Guidelines are to be directed to:

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