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POLLUTION PREVENTION GUIDELINES FOR THE OPERATION OF CRUISE SHIPS UNDER CANADIAN JURISDICTION

3rd EDITION
2009



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Canada

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PREFACE

Canada is a significant destination for international and domestic cruise ships. Because these ships may accommodate thousands of passengers and crew, significant amounts of waste are generated. Provisions of the *Canada Shipping Act, 2001*, the *Arctic Waters Pollution Prevention Act*, the *Fisheries Act* and the *Canadian Environmental Protection Act, 1999*, and related regulations were developed to address environmental concerns regarding discharges from ships into waters under Canadian jurisdiction. While the current regulations apply to all ships, there are no requirements specifically set out for cruise ships.

It is recognized that the cruise industry, internationally, has made commitments to the goal of better protection of the environment and have developed guidance for best practices within its industry sector. These Guidelines build on the industry approach and provide a Canadian perspective. The intent is that the Guidelines should provide a clear indication to cruise ship operators of the procedures that they must develop in order to comply with Canadian legislation and at the same time include practices that the cruise ship operators have agreed to follow that exceed current regulatory requirements.

Transport Canada developed these Guidelines in consultation with the cruise ship industry, Fisheries and Oceans, Environment Canada and the Canadian Marine Advisory Council.

In the case of any disagreement or inconsistency between the provisions of these Guidelines and the provisions in Canadian legislation, the provisions of the legislation shall apply.

Comments or questions on these Guidelines should be referred to the originator of the document as shown on page i.

1. INTERPRETATION

1.1 In these Guidelines,

“**Arctic waters**” means the waters adjacent to the mainland and islands of the Canadian arctic within the area enclosed by the sixtieth parallel of north latitude, the one hundred and forty-first meridian of west longitude and a line measured seaward from the nearest Canadian land a distance of one hundred nautical miles, except that in the area between the islands of the Canadian arctic and Greenland, where the line of equidistance between the islands of the Canadian arctic and Greenland is less than one hundred nautical miles from the nearest Canadian land, that line shall be substituted for the line measured seaward one hundred nautical miles from the nearest Canadian land;

“**Canadian inland waters**” means all the rivers, lakes and other navigable fresh waters within Canada. For the purposes of section 14 of these Guidelines and for the definition of ‘waters under Canadian jurisdiction’, Canadian inland waters include the St. Lawrence River as far seaward as a straight line drawn

1. from Cap des Rosiers to West Point Anticosti Island, and
2. from Anticosti Island to the north shore of the St. Lawrence River along the meridian of longitude sixty-three degrees west,

but for the purposes of section 19 of these Guidelines, Canadian inland waters include the St. Lawrence River only as far seaward as a straight line drawn from Pointe-au-Père to Orient Point;

“**Canadian internal marine waters**” consist of the waters on the landward side of the baselines of the territorial sea of Canada other than Canadian inland waters, and include areas such as Juan de Fuca Strait, Strait of Georgia, Queen Charlotte Sound, Hecate Strait, the Gulf of St. Lawrence and the Bay of Fundy;

“**cruise ship**” means a passenger ship that has overnight accommodations for over 100 passengers who are not crew members but does not include a vessel engaged in passenger ferry service;

“**emergency**” means a situation which results or may result in an immediate danger to human life or an uncontrolled, unplanned or accidental release of hazardous substance;

“**garbage**” means solid galley waste, food waste, paper, rags, plastics, glass, metal, bottles, crockery, junk or similar refuse;

“**graywater**” includes drainage from the normal use of dishwasher, shower, laundry, bath and wash basin drains;

“**hazardous waste**” means anything that is no longer used for its original purpose and is intended for treatment, disposal, or recycling, including storage prior to treatment or disposal whose properties have the potential to harm the environment or human health and is subject to requirements by provincial, federal, or international jurisdictions, including:

1. anything that is a dangerous good, within the meaning of the *Transportation of Dangerous Goods Act*, 1992, or the International Maritime Dangerous Goods Code; and
2. anything that is defined as hazardous waste under the Export and Import of *Hazardous Wastes Regulations of the Canadian Environmental Protection Act*, 1999.

“**licensed facility or service**” means a facility or service authorized by the laws of its local jurisdiction to handle, store, manage, collect, transport, recycle or dispose of wastes of a given type.

“liquefied galley wastes” means galley wastes from sinks and dishwashers with constituents that are no more than 25 mm in diameter;

“may” refers to a condition or procedure that is allowed;

“sewage” means:

- (a) drainage and other wastes from any form of toilets, urinals, and WC scuppers;
- (b) drainage from medical premises (dispensary, sick bay, etc.) via wash basins, wash tubs and scuppers located in such premises;
- (c) drainage from spaces containing living animals; or
- (d) other waste waters when mixed with the drainages defined above;

“shall” refers to an absolute requirement to fully implement these Guidelines;

“should” refers to a condition or procedure that is recommended and ought to be met if possible; and

“waters under Canadian jurisdiction” includes Canadian inland waters, Canadian internal marine waters, as defined above, as well as the territorial sea of Canada and Canada’s exclusive economic zone as set out in the *Oceans Act*.

2. APPLICATION

2.1 These Guidelines apply to:

1. all Canadian registered cruise ships; and
2. all cruise ships registered in a country other than Canada when operating in waters under Canadian jurisdiction.

3. RESPONSIBILITY

3.1 It is the responsibility of the owner and operator of a cruise ship referred to at section 2 above to ensure that the ship complies with applicable Canadian law.

4. INDUSTRY COMMITMENTS

4.1 It is recognized that the cruise industry has made commitments to the goal of better protection of the environment.

4.2 Specific elements to meet this commitment could include:

1. compliance with applicable laws, regulations and these Guidelines;
 2. designing, constructing and operating ships, so as to minimize their impact on the environment;
 3. adopting and implementing improved technologies to exceed current requirements for protection of the environment;
 4. conserving resources through purchasing strategies and product management;
 5. optimizing energy efficiency through conservation and management;
 6. expanding waste reduction strategies to include reuse and recycling to the maximum extent possible so as to land ashore even smaller quantities of waste products;
 7. using only appropriately licensed firms to collect non-hazardous wastes;
 8. improving processes and procedures for collection and transfer of hazardous waste;
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9. not discharging hazardous wastes overboard, nor commingling or mixing with other waste streams;
10. landing ashore and disposing of any hazardous wastes through an appropriately licensed facility or service;
11. strengthening programs for monitoring and auditing of onboard environmental practices and procedures in accordance with the International Safety Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code);
12. consulting with port authorities on local initiatives, as individual cruise lines or through industry associations, to address environmental or other issues related to cruise ships and participating in such initiatives where possible; and
13. educating staff, guests and the public.

5. WASTE MANAGEMENT PRACTICES AND PROCEDURES

- 5.1 To fully implement these Guidelines, cruise ship operators shall adopt the following standards and programs for waste minimization, waste reuse and recycling, and waste stream management as set out in sections 7 through 28.
- 5.2 Cruise ship operators shall incorporate these waste management practices and procedures into their applicable Safety Management Systems.

6. FURTHER INFORMATION AND ADVICE

- 6.1 For further information on Canadian discharge requirements cruise ship operators should consult Transport Canada Marine Safety offices or Canadian Coast Guard Marine Communications and Traffic Services Centres. For further advice on Canadian requirements for handling or landing ashore specific wastes generated aboard, cruise ship operators should consult Environment Canada, as indicated in section 28.1.

7. PHOTO PROCESSING, INCLUDING X-RAY DEVELOPMENT FLUID WASTE

- 7.1 The discharge of silver into the marine environment shall be minimized through the use of best available technology suitable for ship-board use that will reduce the silver content of the waste stream or by treating all photo processing and x-ray development fluid waste (treated or untreated) as a hazardous waste and landing it ashore. The discharge of silver nitrate is prohibited under the *Regulations for the Prevention of Pollution from Ships and for Dangerous Chemicals* of the *Canada Shipping Act, 2001*.
 - 7.2 For waste streams associated with photo processing operations cruise ships shall either:
 1. land ashore used photographic and x-ray development fluids; or
 2. treat used photographic and x-ray development fluids to remove silver for recycling, in which case:
 - (a) the effluent from the recovery unit should contain less than 5 parts per million (ppm) silver; and
 - (b) the residues from the recovery unit should be landed ashore for disposal or recycling as hazardous waste, or as non-hazardous waste if it does not meet hazardous waste criteria.
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8. DRY-CLEANING WASTE FLUIDS AND CONTAMINATED MATERIALS

- 8.1 Cruise ships shall not discharge chlorinated dry-cleaning fluids, sludge, contaminated filter materials and similar dry-cleaning waste byproducts into the environment. Ventilation of solvent vapours should be consistent with accepted practices for safety and environmental protection.
- 8.2 Perchloroethylene (PERC) and other chlorinated dry-cleaning fluids, contaminated sludge and filter materials are hazardous waste and shall be landed ashore to a licensed facility or service.

9. PRINT SHOP WASTE FLUIDS

- 9.1 Cruise ships shall not discharge hazardous wastes from printing materials (inks) and cleaning chemicals into the environment.
 - 9.2 Whenever possible, printing methods and printing process chemicals that produce both less volume of waste and less hazardous waste products should be utilized on cruise ships.
 - 9.3 Shipboard printers should be trained in ways to minimize printing waste generated.
 - 9.4 Alternative printing inks such as soy based, non-chlorinated hydrocarbon based ink products should be used whenever possible.
 - 9.5 Print shop waste comprised of waste solvents, cleaners, cleaning cloths, or wastes with components that would be considered as hazardous as defined in these Guidelines, will be treated as hazardous waste, all other waste may be treated as non-hazardous.
 - 9.6 Cruise ships shall either:
 1. when using traditional or non-soy based inks and chlorinated solvents, treat all print shop waste as hazardous, and discharge ashore; or
 2. use non-toxic based printing ink such as soy based, non-chlorinated solvents, and other non-hazardous products to eliminate hazardous waste products in the shipboard printing processes.
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10. PHOTO COPYING AND LASER PRINTER CARTRIDGES

- 10.1 Cruise ships shall land ashore photocopying and laser printer cartridges to a licensed facility or service, unless properly incinerated in accordance with section 21.
- 10.2 To the maximum extent possible, photocopying and laser printer cartridges should be returned for recycling, credit or refilling.
- 10.3 Only such inks, toners and printing or copying cartridges that contain non-hazardous chemical components should be used and none of these cartridges or their components shall be disposed of by discharge into the marine environment.

11. UNUSED AND OUTDATED PHARMACEUTICALS

- 11.1 Unused or outdated pharmaceuticals from cruise ships' hospitals or stores or collected by ships' crews, subject to section 11.4, shall be landed ashore to a licensed facility or service.
- 11.2 Further guidance on this waste stream can be found in the Canadian Society of Hospital Pharmacists' Guidelines for the Handling and Disposal Hazardous Pharmaceuticals (Including Cytotoxic Drugs).
- 11.3 All expired pharmaceuticals should be handled in accordance with the guidelines identified in 11.2 or the manufacturer's instructions and all personnel handling this waste should receive training in the handling of these wastes.
- 11.4 Cruise ships shall:
 1. establish a reverse distribution system for returning unexpired, unopened, non-narcotic pharmaceuticals to the original vendor;
 2. appropriately destroy narcotic pharmaceuticals onboard the ship in a manner that is witnessed and recorded;
 3. land ashore hazardous pharmaceuticals to a licensed facility or service (pharmaceuticals having chemical compositions which prevent them from being incinerated or disposed of through the ship's sewer system are hazardous wastes); and
 4. dispose of other non-narcotic and non-listed pharmaceuticals through onboard incineration or landing ashore.

12. MERCURY CONTAINING PRODUCTS

- 12.1 As much as possible, the use of mercury containing products such as thermostat probes, switches, manometers, barometers, thermometers, vacuum gauges, and batteries should be reduced on cruise ships.
- 12.2 Once mercury containing products are no longer able to be used, or require disposal, cruise ships shall land them ashore as hazardous wastes for disposal to a licensed facility or service.
- 12.3 Cruise ships shall collect spent fluorescent and mercury vapor lamps and land them ashore for recycling or disposal through a licensed facility or service.

13. BATTERIES

- 13.1 Cruise ships shall:
 1. collect spent batteries and land them ashore for recycling or disposal through a licensed facility or service;
 2. recover discarded batteries from the passenger waste stream;
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3. keep the wet-cell battery-recycling program separate from the dry battery collection process; and
4. send intact wet-cell batteries back to the supplier where practical.

14. BILGE AND OILY WATER RESIDUES

- 14.1 Cruise ships have to meet or exceed the international requirements in MARPOL Annex I and the *Canada Shipping Act, 2001* requirements in the *Regulations for the Prevention of Pollution from Ships and for Dangerous Chemicals* for removing oil from bilge and wastewater prior to discharge, which stipulate among other things:
1. ships discharging oily wastes from machinery spaces in Canadian inland waters shall do so only when underway and when the filtering system is fitted with a stopping device which will ensure that the discharge is automatically stopped when the oil content of the effluent exceeds 5 parts per million.
 2. ships discharging oily wastes from machinery spaces in Canadian internal marine waters shall do so only when underway and when the filtering system is fitted with a stopping device which will ensure that the discharge is automatically stopped when the oil content of the effluent exceeds 15 parts per million.
- 14.2 While Canadian inland and internal marine waters are defined in Section 1, cruise ships may consult Transport Canada Marine Safety or the appropriate Marine Communications and Traffic Services Centre to confirm which requirements would apply.
- 14.3 No oil shall be discharged in Arctic waters. Delineation of Arctic waters is indicated on official navigation charts from the Canadian Hydrographic Service or may be confirmed with the appropriate Marine Communications and Traffic Services Centre.
- 14.4 All oil or oil residues which cannot be discharged in compliance with regulations, shall be retained onboard, incinerated in accordance with Section 21, or discharged to a licensed facility or service.

15. GARBAGE

- 15.1 The *Regulations for the Prevention of Pollution from Ships and for Dangerous Chemicals* under the *Canada Shipping Act, 2001* prohibit the discharge of all garbage into Canadian inland waters, Canadian internal marine waters and Arctic waters. The discharge of garbage into Canada's territorial sea and exclusive economic zone, other than Arctic waters, is only permitted when done in accordance with the provisions of Annex V of MARPOL, as follows:
1. floating garbage may be discharged if the discharge occurs as far as possible from the nearest land, but in no case shall the distance from nearest land be less than 25 nautical miles;
 2. garbage that does not float may be discharged if the discharge occurs as far as possible from the nearest land, but in no case shall the distance from nearest land be less than 12 nautical miles;
 3. garbage that has been passed through a comminuter or grinder such that it is capable of passing through a screen with openings no greater than 25 mm may be discharged if the discharge occurs as far as possible from the nearest land, but in no case shall the distance be less than 3 nautical miles;
 4. the discharges referred to in sections 15.1.1, 15.1.2 and 15.1.3 are not permitted if the garbage is plastic or contains plastic.
- 15.2 Cruise ships should:
1. employ improved reuse and recycling opportunities;
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2. reduce shipboard generated waste through such means as source reduction, purchasing practices, waste minimization and recycling; and
3. land garbage ashore or incinerate onboard in approved shipboard incinerators in accordance with section 21.

15.3 When landing garbage ashore, the *Health of Animal Regulations* under the *Health of Animals Act* requires that ship's refuse from other countries, except from the United States, be landed ashore as international garbage for disposal by a licensed facility or service.

15.4 Liquefied galley wastes are considered to be garbage under Canadian regulations, and therefore should normally only be discharged in the territorial sea or exclusive economic zone, other than Arctic waters, using the criteria specified in section 15.1.3. It is recommended that liquefied galley wastes be directed into a holding tank when the vessel is operating within an area where discharge is prohibited.

16. INCINERATOR ASH

- 16.1 Cruise ships should make efforts to reduce the production of incinerator ash by minimizing the generation of waste and maximizing recycling opportunities.
- 16.2 Proper hazardous waste management procedures including segregating hazardous wastes should be instituted onboard each ship to assure hazardous wastes are not introduced into the incinerator.
- 16.3 Cruise ships shall manage incinerator ash as hazardous waste and shall:
 1. not discharge it into waters under Canadian jurisdiction; and
 2. land it ashore to a licensed facility or service, unless documented evidence is available indicating the ash is non-hazardous, where then it may be landed ashore as non-hazardous waste.
- 16.4 Batteries should be removed from any waste that will be incinerated onboard.
- 16.5 The incinerator should be used primarily for solid galley waste, food waste, paper, cardboard, wood and plastics not recommended for recycling.

17. WASTEWATER RECLAMATION

- 17.1 Fresh water management techniques, in the form of both minimizing water usage and the potential reclamation and reuse of water for non-potable purposes, should include:
 1. the use of technical water (for example: air conditioning condensate) where possible;
 2. the use of water recovery systems (for example: filtering and reuse of laundry water – last rinse use for first wash);
 3. reclamation and reuse as technical water (flushing toilets, laundry, open deck washing) of properly treated and filtered wastewaters; and
 4. active water conservation (for example: use of reduced flow showerheads, vacuum systems for toilets, vacuum food waste transportation and laundry equipment that utilizes less water).

18. GRAYWATER

- 18.1 Cruise ships should take steps, where practical, to reduce the volume of graywater generated.
 - 18.2 Except in an emergency, the discharge of graywater should occur only while
 1. the cruise ship is underway and proceeding at a speed of not less than 6 knots;
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2. the cruise ship is not in port; and
 3. the cruise ship is not within 4 nautical miles from shore, or where geographically limited, such other distance as agreed to by Transport Canada Marine Safety.
- 18.3 Local discharge requirements or restrictions may be confirmed with the appropriate Marine Communications and Traffic Services Centre.
- 18.4 When graywater contains a substance having different discharge requirements the more stringent requirements shall apply.

19. SEWAGE

- 19.1 Cruise ships shall comply with the discharge provisions of the *Regulations for the Prevention of Pollution from Ships and for Dangerous Chemicals* while in waters under Canadian jurisdiction other than Arctic waters.
- 19.2 Canadian requirements for sewage discharge from cruise ships are generally consistent with the conditions set out in Annex IV of MARPOL, with the following exceptions:
1. as specified in the *Arctic Shipping Pollution Prevention Regulations*, untreated sewage may be discharged in Arctic waters;
 2. a limited number of designated sewage areas, mostly in inland waters, have been established in Schedule 4 to the *Regulations for the Prevention of Pollution from Ships and for Dangerous Chemicals* – in these areas discharge is permitted only though advanced wastewater treatment systems that produce an effluent with a fecal coliform count that is equal to or less than 14/100 ml;
 3. the discharge of untreated sewage is permitted in Canadian internal marine waters if the cruise ship is at least 12 nautical miles from shore and, in the case of a discharge from a holding tank, the discharge is made at a moderate rate while the cruise ship is en route at a speed of at least 4 knots;
 4. the discharge of sewage that is comminuted and disinfected using a marine sanitation device is permitted in Canadian internal marine waters if the cruise ship is at least 3 nautical miles from shore; and
 5. Canadian cruise ships that were built before May 3, 2007 and operate only domestically would not be required to meet all requirements related to sewage until May 3, 2012, but should endeavour to comply with all provisions prior to that time.
- 19.3 The requirements for the discharge of sewage from cruise ships in waters under Canadian jurisdiction may be summarized as follows:
1. a ship may discharge comminuted and disinfected sewage using a system approved by its flag Administration at a distance of more than 3 nautical miles from shore in coastal waters and Canadian internal marine waters (note that on the east coast, internal marine waters are considered to extend up the St. Lawrence River as far west as Pointe-au-Père and Orient Point) other than in Arctic waters and designated sewage areas,
 2. a ship may discharge untreated sewage in coastal waters and Canadian internal marine waters other than designated sewage areas at a distance of more than 12 nautical miles from shore, provided that sewage that has been stored in holding tanks shall not be discharged instantaneously but at a moderate rate when the ship is making way and proceeding at not less than 4 knots,
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3. a ship may discharge untreated sewage in Arctic waters even if within 12 nautical miles from shore,
 4. as the authorization in Arctic waters is specifically for sewage and not treated sewage, the use of marine sanitation devices, in particular those that would have residual disinfectant in the effluent, should be cautioned as the effluent may be considered to be 'waste' under the *Arctic Waters Pollution Prevention Act*,
 5. a ship may discharge through a sewage treatment plant approved in accordance with International Maritime Organization resolution MEPC.2(VI) or MEPC.159(55) in any waters under Canadian jurisdiction other than in designated sewage areas or Arctic waters, provided that test results of the plant are laid down in the ship's International Sewage Pollution Prevention Certificate,
 6. a ship may discharge through an approved sewage treatment plant that produces an effluent with a fecal coliform count that is equal to or less than 14/100 ml in any waters under Canadian jurisdiction other than in Arctic waters, provided that test results of the plant are laid down in the ship's International Sewage Pollution Prevention Certificate,
 7. a discharge made in accordance with sections 19.3.1, 19.3.5 or 19.3.6 shall not cause a film or sheen to develop on or cause a discolouration of the water or its adjoining shorelines, shall not cause sewage sludge or an emulsion to be deposited beneath the surface of the water or its adjoining shorelines, and shall not contain any visible solids, and
 8. a discharge made in accordance with section 19.3.2 shall not cause visible solids to be deposited upon the shoreline.
- 19.4 Biosolids or sludges that are produced by sewage treatment systems should be landed ashore, where possible, for disposal by a licensed facility or service.

20. ADVANCED WASTEWATER TREATMENT SYSTEMS

- 20.1 Some cruise lines have installed wastewater treatment systems that utilize advanced technologies designed to result in effluent discharges that are of a high quality and purity. Effluents of high quality and purity may be exempted from the discharge requirements noted in section 18 of these Guidelines, subject to confirmation from Transport Canada Marine Safety in accordance with section 25 of these Guidelines.
- 20.2 Recognizing that technology is progressing at a rapid rate, any new equipment or management practices that are equivalent to or better than those described in these Guidelines are encouraged.

21. AIR EMISSIONS

- 21.1 Cruise ships shall comply with the provisions of the *Regulations for the Prevention of Pollution from Ships and for Dangerous Chemicals* under the *Canada Shipping Act, 2001* that relate to air emissions. These provisions implement Annex VI of MARPOL and also include Canadian requirements regarding the emission of black smoke within 1 nautical mile of shore.
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- 21.2 Cruise ships should use fuels with the lowest sulphur content available for the class of fuel that the ship's engines are designed for. The desired goal for average sulphur content of all fuels (bunker and marine gas oil) used on board cruise ships during each cruise season is to not exceed 1.5% (calculated on a corporate fleet basis annually), subject to availability. The maximum sulphur content of bunker fuel should not exceed 3.0% and the maximum sulphur content of marine gas oil should not exceed 0.5% (Canadian regulations require that the sulphur content of any fuel oil shall not exceed 4.5%). Cruise ships shall report, annually, the sulphur contents and quantity of all fuel deliveries, both at Canadian and non-Canadian terminals, for any fuel being used while operating in waters under Canadian jurisdiction to Environment Canada as per section 28.2.
- 21.3 Cruise ships should adopt the best practical technology to achieve the lowest emissions possible. At a minimum, cruise ships shall meet the requirements of the *Regulations for the Prevention of Pollution from Ships and for Dangerous Chemicals* and Annex VI of MARPOL for:
1. diesel engines installed on cruise ships or that undergo a major conversion after January 1, 2000; and
 2. incinerators installed on cruise ships after January 1, 2000.
- 21.4 Cruise ships in port shall not use incinerators and should consider using shore power where it is available, safe, reliable and where it would produce less air pollution.
- 21.5 Cruise ship operators are encouraged to participate in regional initiatives to reduce air pollution.
- 21.6 Regarding incinerator operations, cruise ships shall follow related International Maritime Organization guidelines and Annex VI of MARPOL 73/78.

22. HALOCARBONS

- 22.1 Cruise ships shall comply with the *Federal Halocarbon Regulations, 2003* under the *Canadian Environmental Protection Act, 1999*, which among other things:
1. prohibits the release of chlorofluorocarbons (CFCs), Halons, hydrochlorofluorocarbons (HCFCs), and hydrofluorocarbons (HFCs), except to fight a fire not set for training purposes;
 2. requires releases of halocarbons in excess of 10 kg to be reported to Environment Canada as indicated in section 28.1.
- 22.2 Cruise ship operators may consider replacing CFCs and Halons with alternatives before scheduled refilling is required.
- 22.3 For further information on halocarbon, cruise ship operations may contact Environment Canada as indicated in section 28.1.

23. ANTI-FOULING PAINTS

- 23.1 In accordance with the International Convention on the Control of Anti-Fouling Systems on Ships, 2001 and the *Regulations for the Prevention of Pollution from Ships and for Dangerous Chemicals*, after January 1, 2003, cruise ships shall not apply or re-apply organotin compounds which act as biocides in anti-fouling systems.
- 23.2 Cruise ships shall either:
1. not bear organotin compounds on their hulls or external parts or surfaces; or
 2. bear a coating that forms a barrier to organotin compounds leaching from the underlying system.
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24. BALLAST WATER

- 24.1 Cruise ships shall comply with the provisions of Transport Canada's *Ballast Water Control and Management Regulations*. Cruise ships should also refer to the Transport Canada publication 'A Guide to Canada's Ballast Water Control and Management Regulations', TP 13617 for further information on Canadian requirements regarding the discharge of ballast water.

25. EQUIVALENT EQUIPMENT, PRACTICES AND PROCEDURES

- 25.1 Where a Canadian flagged cruise ship proposes to use or uses equivalent or other acceptable practices and procedures, such as improved systems for treating sewage and graywater, this shall be communicated to the Transport Canada Marine Safety office.
- 25.2 Where a non-Canadian flagged cruise ship uses equivalent or other acceptable practices and procedures that pertain to these Guidelines, this shall be communicated to Transport Canada Marine Safety during any Port State Control inspection or in advance of arriving in waters under Canadian jurisdiction.

26. TRAINING AND EDUCATIONAL MATERIALS

- 26.1 Cruise ship lines should develop programs that raise the level of environmental awareness on the part of both the passengers and the crew.
- 26.2 Training in shipboard safety and environmental management procedures should be provided for those directly involved in these areas.
- 26.3 Those directly responsible for processing wastes should be given instruction in their duties and responsibilities and in the operation of the various equipment and waste management systems.
- 26.4 Actions to train employees and increase passenger awareness should include:
1. announcements over the public address system and notices in ship newsletters that caution against throwing any waste overboard;
 2. signage and colorful posters placed in crew and passenger areas encouraging environmental awareness and protection;
 3. safety and environmental information booklets in crew cabins and crew lounges; and
 4. regular meetings of ship safety and environmental committees consisting of officers and crew from all departments to review methods of improving performance, including better and more effective environmental practices.
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27. RELATED INSPECTIONS

- 27.1 Transport Canada Marine Safety verifies compliance with Canadian legislation related to shipping as part of annual inspections of Canadian cruise ships and as part of Port State Control inspections of non-Canadian flagged cruise ships.
- 27.2 Compliance monitoring by Transport Canada may include passenger ship examinations that include review of environmental systems, Safety Management System documentation and such MARPOL-mandated documents as the Oil Record Book and the Garbage Record Book.

28. REPORTING

- 28.1 Cruise ships shall report any halocarbon release to Environment Canada using the following telephone numbers. Other spills or environmental emergencies may be reported to Environment Canada at these telephone numbers.

Region	Telephone number
Newfoundland and Labrador	800-563-2444
Nova Scotia, PEI, and New Brunswick	800-565-1633
Quebec	514-283-2333
Ontario	416-346-1971
Northwest Territories and Nunavut	867-920-8130
British Columbia and Yukon	604-666-6100

- 28.2 Cruise ships agree to provide, in either electronic or hardcopy format, an annual report of:
1. all discharges in Canadian waters and of landed wastes for garbage, sewage, oily wastes, and hazardous wastes; and
 2. all fuel deliveries received
- by every November 30, to Environment Canada, Marine Environment Branch, Ottawa, Ontario, KIA OH3, Facsimile: 819 953-0913, Email: cruiseships@ec.gc.ca. The required data to be contained in this report is provided in Schedule 3.
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SCHEDULE 1 – APPLICABLE CANADIAN LEGISLATION

1.1 The following federal acts and regulations are relevant to the environmental aspects of cruise ships operations in waters under Canadian jurisdiction:

1. *Arctic Waters Pollution Prevention Act*
Sets controls for operations and discharges in Arctic waters.
 2. *Fisheries Act*
Sets prohibition for discharging anything deleterious to fish or water frequented by fish.
 3. *Canada Shipping Act, 2001*
Sets out regulations controlling the management of garbage, oil, sewage, pollutant substances, packaged dangerous goods and air emissions and the reporting of pollution incidents.
 4. *Canadian Environmental Protection Act, 1999*
Sets out broad environmental protection provisions that emphasize pollution prevention and sustainable development.
 5. *Health of Animals Act*
Sets out regulations for disposal of international garbage to prevent the transmission of animal diseases.
 6. *Migratory Birds Convention Act*
Sets out establishment of Migratory Bird Areas within which shipping is controlled and pollution releases are prohibited.
 7. *National Marine Conservation Act*
Sets out establishment of Marine Conservation Areas within which shipping is controlled and pollution releases are prohibited.
 8. *Oceans Act*
Sets out marine boundaries of Canada and means for Marine Protected Areas within which shipping could be controlled and pollution releases prohibited or more stringently controlled.
 9. *Transportation of Dangerous Goods Act*
Sets out classification of dangerous goods and requirements for their labeling and handling.
 10. *Canada Wildlife Act*
Allows that shipping may be controlled and pollution releases prohibited with in marine or freshwater wildlife areas.
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SCHEDULE 2 – RELATED CANADIAN TECHNICAL GUIDANCE

- 1.1 Canadian Society of Hospital Pharmacists (CSHP) *Guidelines for the Handling and Disposal Hazardous Pharmaceuticals (Including Cytotoxic Drugs)* available from the CSHP's web site at <http://www.cshp.ca/>
 - 1.2 Transport Canada's 'A Guide to Canada's Ballast Water Control and Management Regulations', TP 13617 available on Transport Canada's web site at <http://www.tc.gc.ca/MarineSafety/tp/menu.htm>
 - 1.3 Transport Canada's 'Guidelines for the Operation of Passenger Vessels in Canadian Arctic Waters', TP 13670
 - 1.4 Transport Canada's 'Interim Standards For The Construction, Equipment and Operation Of Passenger Ships In Sea Ice Areas Of Eastern Canada', TP 8941
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SCHEDULE 3 – SAMPLE ANNUAL REPORT OF DISCHARGES AND LANDINGS IN CANADIAN JURISDICTION

ANNUAL REPORT OF WASTES LANDED ASHORE AND DISCHARGED IN CANADIAN JURISDICTION

GENERAL		Page _____ of _____		
	Name of ship			
	Registry			
	Official Number			
	Completed by			
	Port of Call	Number of Calls: _____		
	Dates of Calls			
1. ANNUAL QUANTITIES OF LANDED WASTES (indicate quantities and applicable units)				
		Annual Quantity	Name of service or facility	
	Garbage			
	International Garbage			
	Solid Hazardous Waste			
	Liquid Hazardous Waste			
	Pharmaceutical Waste			
	Sewage sludge			
	Sewage			
	Waste Oil			
	Bilge Water			
	Ballast			
2. RECEPTION FACILITIES				
	Where any unavailable?	Yes	No	
	For which waste types and what reason (e.g. lack of capacity, not in place)?			
	Please indicate any other problems encountered to access facilities			
3. ANNUAL DISCHARGES IN CANADIAN WATERS (enroute to the above port or leaving Canada from the above port)				
	General Location <i>Provide typical coordinates</i>	Substance <i>indicate sewage, graywater, ballast, galley waste, or bilge</i>	Annual Quantity	Method of treatment