Transport Canada Transports Canada

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(04/2013)

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

4th EDITION
2013

TC-1005071

Canada

Responsible Authority	Approval
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REVISIONS

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Revision No.	Date of Issue	Affected Pages	Author(s)	Brief Description of Change
1	**2005-03-31**	**16,17,20**	**M. Cook**	i) s21(2) new wording for average sulphur content of fuel and calculation thereof ii) s28(2) new coordinates for reporting to EC
2	**2009-10-01**	**Sections 1, 7, 14, 15, 19, 20, 21, 23, 24 and Schedule 2**	**T. Morris**	Updated to account for the introduction of the *Regulations for the Prevention of Pollution from Ships and for Dangerous Chemicals* and the *Ballast Water Control and Management Regulations.*
3	**2013-04-04**	**Sections 1, 7, 14, 15, 18, 19, 20, 22, 23, 24, 27, 28, Schedules 1, 2, 3**	**P. Topping**	Updated to account for the new *Vessel Pollution and Dangerous Chemicals Regulations*, a new definition of Arctic waters, new liability rules for fuel spills, new approach for managing liquid galley wastes, new provisions for managing grey water, sewage, air emissions, and ballast water. New schedule listing marine conventions ratified by 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 internal waters of Canada and the waters of the territorial sea of Canada and the exclusive economic zone of Canada, within the area enclosed by the 60th parallel of north latitude, the 141st meridian of west longitude and the outer limit of the exclusive economic zone; however, where the international boundary between Canada and Greenland is less than 200 nautical miles from the baselines of the territorial sea of Canada, the international boundary shall be substituted for that outer limit;

"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 substance deemed harmful to the marine environment and/or human life;

"garbage" means all kinds of victual, domestic and operational waste that are generated during the normal operation of a ship and are liable to be disposed of continuously or periodically. This definition includes plastics, dunnage, lining, and packing materials, solid food wastes and refuse such as paper products, rags, glass, metal, bottles, crockery and incinerator ash;

"greywater" means drainage from sinks, laundry machines, bath tubs, shower-stalls or dishwashers. It does not include sewage, or drainage from machinery spaces or workshop areas;

"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 and Hazardous Recyclable Material 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;

"MARPOL" means the *International Convention for the Prevention of Pollution from Ships* and its Annexes I through VI.

"may" refers to a condition or procedure that is allowed;

"sewage" means: (a) human body wastes and wastes (b) drainage and other wastes from toilets and other receptacle intended to receive or retain human body wastes such as urinals, and WC scuppers; (c) drainage from medical premises (dispensary, sick bay, etc.) via wash basins, wash tubs and scuppers located in such premises; 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 COMMITTMENTS

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;
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 *Vessel Pollution and Dangerous Chemical Regulations* 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.

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.

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 steam 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;

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 Annex I to MARPOL and the *Canada Shipping Act, 2001* requirements in the *Vessel Pollution and Dangerous Chemical Regulations* 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.

14.5 All cruise ships operating in Canadian jurisdiction that are over 1000 tons gross tonnage and use any petroleum products as fuel or for onboard operations, are required to have insurance to cover liability for damages arising from a petroleum spill and to carry a certificate of such insurance as set out under the *Marine Liability Act* or the *Bunkers Convention*. A cruise ship registered in a country that is not party to the *Bunkers Convention* must obtain a Canadian certificate prior to entering Canadian waters, to obtain this certificate please visit http://www.tc.gc.ca/eng/marinesafety/oep-environment-liability-menu-365.htm or email mi-am@tc.gc.ca.

15. GARBAGE

15.1 The *Vessel Pollution and Dangerous Chemicals Regulations* under the *Canada Shipping Act, 2001* prohibit the discharge of various types of garbage into waters under Canadian jurisdiction. 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 and for liquefied galley wastes capable of passing through a screen with openings no greater than 25 mm may be discharged while the ship is underway and proceeding at a speed no less than 6 knots and beyond 12 nautical miles from shore.

15.2 Cruise ships should:

1. employ improved reuse and recycling opportunities;
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 Animals 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.

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. GREYWATER

18.1 Cruise ships should take steps, where practical, to reduce the volume of greywater generated.

18.2 This section applies in respect of vessels in waters under Canadian jurisdiction other than Arctic waters.

18.3 This section does not apply in respect of a release of greywater that

(*a*) is necessary for the purpose of saving lives, securing the safety of a vessel or preventing the immediate loss of a vessel; or

(*b*) occurs as a result of an accident of navigation in which a vessel or its equipment is damaged, unless the accident occurs as a result of an action that is outside the ordinary practice of seafarers.

18.4 The authorized representative of a vessel must ensure that any release of greywater by or from the vessel into the water does not result in the deposit of solids in the water or leave a sheen on the water.

18.5 The authorized representative of a new passenger vessel that is carrying more than 500 passengers must ensure that any release of greywater by or from the vessel into the water

a) is passed through a marine sanitation device that meets the requirements of section 90; or
b) is made at a distance of at least three nautical miles from shore.

18.6 Every vessel that is fitted with a marine sanitation device in order to meet the requirements of 18 (5) above, must keep on board

a) a certificate of type approval
b) a manual that sets out the operational and maintenance procedures for the device.

18.7 Local discharge requirements or restrictions may be confirmed with the appropriate Marine Communications and Traffic Services Centre.

18.8 When greywater contains a substance having different discharge requirements the more stringent requirements shall apply.

18.9 For cruise ships that treat greywater in a separate stream from sewage, the areas for allowable discharge and standards shall be similar to the requirements set out for treated sewage as presented in section 19 below.

19. SEWAGE

19.1 Cruise ships shall comply with the discharge provisions of the *Vessel Pollution and Dangerous Chemicals Regulations* while in waters under Canadian jurisdiction other than Arctic waters, where cruise ships will comply with the *Arctic Waters Pollution Prevention Act*. In all cases cruise ships shall observe the following conditions.

1. Any sewage discharge from a cruise ship shall not:

   (i) cause a film, sheen or discolouration to develop on or in the water or its adjoining shorelines,

   (ii) cause sewage sludge or an emulsion to be deposited beneath the surface of the water or its adjoining shorelines, and

   (iii) contain any visible solids.

2. Biosolids or sludges that are produced by sewage treatment systems should be landed ashore, where possible, for disposal by a licensed facility or service or may be discharged under the same conditions as for untreated sewage.

19.2 Cruise ships operating in any waters under Canadian jurisdiction, other than the Arctic, are subject to the following requirements:

1. a cruise ship may discharge sewage through an approved treatment plant that produces an effluent with a fecal coliform count that is equal to or less than 14/100 ml, provided that test results of the plant are laid down in the ship's International Sewage Pollution Prevention Certificate;

2. except in designated sewage areas, a cruise ship may discharge sewage through a treatment plant approved in accordance with International Maritime Organization resolution MEPC.2(VI) or MEPC.159(55), provided that test results of the plant are laid down in the ship's International Sewage Pollution Prevention Certificate;

3. except in designated sewage areas, a cruise 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;

4. except in designated sewage areas, a cruise ship may discharge untreated sewage in coastal waters and Canadian internal marine waters at a distance of more than 12 nautical miles from shore, provided that sewage that has been stored in holding tanks and shall not be discharged instantaneously but at a moderate rate when the ship is making way and proceeding at not less than 4 knots;

5. in designated sewage areas, established in Schedule 2 to the *Vessel Pollution and Dangerous Chemicals Regulations,* a cruise ship may only discharge sewage though an advanced wastewater treatment system that produces an effluent with a fecal coliform count that is equal to or less than 14/100 ml; and

19.3 Cruise ships operating in Canada's Arctic jurisdiction are subject to the following requirements:

1. a cruise 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 250/100 ml in Arctic waters under Canadian jurisdiction provided that the effluent contains no disinfectant or other chemicals; and

2. as specified in the *Arctic Shipping Pollution Prevention Regulations,* untreated sewage may be discharged in Arctic waters.

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 that exceed regulatory requirements

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 *Vessel Pollution and Dangerous Chemicals Regulations* 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.

21.2 As of May 8, 2013, final regulations were published that implement Canada's portion of the North American Emission Control Area. Cruise ships in waters under Canadian jurisdiction that are south of 60° N, should use fuels with the lowest sulphur content available for the class of fuel that the ship's engines are designed for. The maximum sulphur content of marine fuel used by vessels in these waters must not exceed 1.00% until December 31, 2014. From January 1, 2015, onwards, the maximum sulphur content of marine fuel in these waters must not exceed 0.1%.

21.3 In Arctic waters north of 60°N, cruise ships should use the lowest should use fuels with the lowest sulphur content available for the class of fuel that the ship's engines are designed for. The maximum sulphur content of marine fuel used in these waters must not

exceed 3.00% until December 31, 2019. From January 1, 2020, onwards, the maximum sulphur content of marine fuel in these waters must not exceed 0.5%.

21.4 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 *Vessel Pollution and Dangerous Chemicals Regulations* 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.

21.5 Cruise ships operating in waters under Canadian jurisdiction south of 60 degrees north latitude may seek equivalences as set out in Regulation 4 of Annex VI to MARPOL.

21.6 Cruise ships unable to obtain fuel with the required sulphur content must notify Transport Canada Marine Safety and obtain available fuel with the next lowest sulphur content.

21.7 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 emissions.

21.8 Cruise ship operators are encouraged to participate in regional initiatives to reduce air emissions.

21.9 Regarding incinerator operations, cruise ships shall follow related International Maritime Organization guidelines and Annex VI to MARPOL.

21.10 As of May 8, 2013, cruise ships operating in waters under Canadian jurisdiction are required to have a Shipboard Energy Efficiency Management Plan that sets out measures for the ship to optimize its energy efficiency and reduce greenhouse gases.

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 in any one occurrence 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 *Vessel Pollution and Dangerous Chemicals Regulations*, 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.

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.

24.2 Cruises ships are encouraged to install ballast water treatment systems, as they are able to, that at least meet the standards set out in the *Ballast Water Control and Management Regulations*.

25. EQUIVALENT EQUIPMENT, PRACTICES AND PROCEDURES

25.1 Where a Canadian flagged cruise ship proposes to use or uses alternative compliance methods that are equivalent to international standards, such as improved systems for treating sewage and greywater, this shall be communicated to the Transport Canada Marine Safety office. A Marine Technical Review Board decision may be required.

25.2 Where a non-Canadian flagged cruise ship uses alternative compliance methods that are equivalent to international standards 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.

25.3 Where a non-Canadian flagged cruise ships is seeking an alternative compliance method to meet air emissions requirements under Annex VI to MARPOL for the North American Emission Control Area, this shall be communicated to Transport Canada Marine Safety in conjunction to seeking flag State approvals.

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.

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 required under MARPOL such 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 shall report any spill of pollutants in accordance with the Part 3 of the *Vessel Pollution and Dangerous Chemicals Regulations* through Guidelines for Reporting Incidents Involving Dangerous Goods, Harmful Substances and/or Marine Pollutants - TP 9834 E (2009), available at http://www.tc.gc.ca/eng/marinesafety/tp-tp9834-menu-3217.htm.

28.3 Cruise ships agree to provide, on request, annual reports on waste generation or fuels used to Transport Canada or Environment Canada, Headquarters.

28.4 Cruise ships may report problems regarding availability of waste reception or of required fuel to Transport Canada.

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 oil, noxious liquid substances and dangerous chemicals, sewage, garbage, pollutant substances, 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. *Marine Liability Act*

   Sets out requirements for insurance that ships must have, including for liability from oil spills.

7. *Migratory Birds Convention Act*

   Sets out establishment of Migratory Bird Areas within which shipping is controlled and pollution releases are prohibited.

8. *National Marine Conservation Area Act*

   Sets out establishment of Marine Conservation Areas within which shipping is controlled and pollution releases are prohibited.

9. *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.

10. *Transportation of Dangerous Goods Act*

    Sets out classification of dangerous goods and requirements for their labeling and handling.

11. *Canada Wildlife Act*

    Allows that shipping may be controlled and pollution releases prohibited with in marine or freshwater wildlife areas.

SCHEDULE 2 – ENVIRONMENTAL MARITIME CONVENTIONS RATIFIED BY CANADA

1. International Convention on the Prevention of Pollution from Ships (MARPOL)
    1. Annex 1 –Oil
    2. Annex II –Hazardous Noxious Substances in Bulk
    3. Annex III –Packaged Dangerous Goods
    4. Annex IV –Sewage
    5. Annex V –Garbage
    6. Annex VI –Air
2. International Convention for the Control of Harmful Antifouling Systems
3. International on the Civil Liability from the Carriage of Bunker Oils
4. International Convention for the Control and Management of Ships' Ballast Water and Sediments

SCHEDULE 3 – RELATED CANADIAN TECHNICAL GUIDANCE

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/
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/eng/marinesafety/tp-menu-515.htm
3. Transport Canada's 'Guidelines for the Operation of Passenger Vessels in Canadian Arctic Waters,' TP 13670
4. Transport Canada's 'Interim Standards For The Construction, Equipment and Operation Of Passenger Ships In Sea Ice Areas Of Eastern Canada,' TP 8941