This document is a portion of the *Cruise Ship Discharge Assessment Report* (*Assessment Report*), published on December 29, 2008. The reference number is EPA 842-R-07-005. The entire Assessment Report can be accessed at http://www.epa.gov/owow/oceans/cruise_ships/disch_assess.html.

Cruise Ship Discharge Assessment Report

Section 1: Introduction

December 29, 2008

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1.1 Overview

Cruise ships operate in every ocean worldwide, often in pristine coastal waters and sensitive marine ecosystems. Cruise ship operators provide amenities to their passengers that are similar to those of luxury resort hotels, including pools, hair salons, restaurants, and dry cleaners. As a result, cruise ships have the potential to generate wastes similar in volume and character to those generated by hotels.

The cruise industry is one of the world's fastest growing tourism sectors, with the number of cruise ship passengers growing nearly twice as fast as any other travel sector over the last 10 years (CELB, 2003). In addition, average ship size has been increasing at the rate of roughly 90 feet every five years over the past two decades (Bell, 2007). Larger cruise ships can accommodate even more passengers, as well as the crew necessary to service the passengers and maintain the ships. According to Macleod (2007), the next generation of ships, the first of which will be ready in 2009, will carry more than 8000 passengers. As the cruise industry continues to expand, there is an increasing concern about the impacts cruise ships may have on the marine environment, including water quality and other marine resources.

In March 2000, an environmental advocacy group called the Bluewater Network, representing 53 environmental organizations, submitted a petition to the U.S. Environmental Protection Agency (EPA) requesting that EPA identify and take regulatory action on measures to address pollution by cruise ships. Specifically, the petition requested an in-depth assessment of the volumes and characteristics of cruise ship waste streams; analysis of their potential impact on water quality, the marine environment, and human health; examination of existing federal regulations governing cruise ship waste streams; and formulation of recommendations on how to better control and regulate these waste streams. The petition also included specific requests related to sewage, graywater, oily bilge water, solid wastes, and hazardous wastes, as well as monitoring, record-keeping, and reporting. In addition, the petition requested that EPA prepare a report of the requested assessment. In August 2000, the Bluewater Network submitted an addendum to the petition regarding air pollution from cruise ships. EPA subsequently denied this portion of the petition as unnecessary, in light of the Agency's pending Clean Air Act actions for marine diesel engines.

This Cruise Ship Discharge Assessment Report (Assessment Report) concludes EPA's response to the petition from Bluewater Network. This Assessment Report examines five primary cruise ship waste streams -- sewage, graywater, oily bilge water, solid waste, and hazardous waste. For each waste stream, the Assessment Report discusses (1) what the waste stream is and how much is generated; (2) what laws apply to the waste stream; (3) how the waste stream is managed; (4) potential environmental impacts of the waste stream; (5) on-going actions by the federal government to address the waste stream; and (6) a wide range of options and alternatives to address the waste stream from cruise ships in the future. Though this report includes discussion of some proprietary treatment technologies for the abatement of pollution from cruise ships, that

discussion in no way constitutes an endorsement by EPA of any non-federal entity, its products, or its services.

The most significant new analysis provided in this Assessment Report relates to the generation and treatment of sewage and graywater onboard cruise ships. Pursuant to federal legislation entitled "Certain Alaskan Cruise Ship Operations" (33 U.S.C. 1901 Note), EPA has carried out a multi-year project to determine whether revised or additional standards for sewage and graywater discharges from large cruise ships operating in Alaska are warranted under that legislation. Much of the information and data collected for the Alaska effort are summarized in this Assessment Report.

There are a number of other waste streams that may be generated onboard cruise ships, some of which may be considered incidental to the normal operation of a vessel (e.g., ballast water, deck runoff, hull coat leachate). This Assessment Report does not present an assessment of any of these other waste streams. However, as part of a separate effort, on December 19, 2008, EPA finalized a Vessel General Permit (VGP) under section 402 of the Clean Water Act (CWA) for discharges incidental to the normal operation of a vessel. On July 31, 2008, the President signed legislation (Pub. L. 110-299) that, except for ballast water, exempts commercial fishing vessels (of any length) and other commercial vessels shorter than 79 feet from CWA permitting for such discharges for a period of two years (during which time EPA has been directed to conduct further study and analysis). Under a court decision, effective December 19, 2008, absent a statutory exclusion such as provided by Pub. L. 110-299, discharges incidental to the normal operation of commercial vessels will no longer be excluded from CWA permitting requirements. Thus, the VGP will include discharges incidental to the normal operation of cruise ships 79 feet or more in length, and such discharges will become subject to CWA permitting requirements as of December 19, 2008.

1.2 Other EPA Cruise Ship Efforts

In addition to developing this Assessment Report, EPA has engaged in a number of activities addressing the potential environmental impacts of cruise ships. These efforts are summarized below.

Cruise Ship White Paper, August 2000
This White Paper provided preliminary information regarding cruise ship discharges and waste management practices in response to the petition submitted by the Bluewater Network on March 17, 2000. The White Paper can be accessed at:
www.epa.gov/owow/oceans/cruise_ships/white_paper.pdf.

Cruise Ship Public Hearings, September 2000
As part of its effort to gather information on cruise ship discharges and waste management practices, EPA, together with the Coast Guard and other federal agencies, solicited public input from industry officials, government agencies, environmental groups, and concerned citizens through three regional public information hearings in Los Angeles, CA (September 6, 2000);

Juneau, AK (September 8, 2000); and Miami, FL (September 12, 2000). Summaries and transcripts of these public hearings can be accessed at: www.epa.gov/owow/oceans/cruise_ships/publichearings.html.

Cruise Ship Plume Tracking Survey, Summer 2001

EPA conducted a survey to study the dilution of discharges from cruise ships in June 2001. This survey tracked plumes of water containing Rhodamine WT dye released through normal wastewater effluent discharge systems in ships operating off the Florida coast to provide information on dilution of cruise ship discharges in offshore waters. This survey also provided preliminary information on whether cruise ship treated sewage or graywater discharge plumes behave as predicted by a model developed for Alaska waters. The Cruise Ship Plume Tracking Survey Report can be accessed at: www.epa.gov/owow/oceans/cruise_ships/plumerpt2002/plumereport.pdf.
The Cruise Ship Plume Tracking Survey Plan can be accessed at: www.epa.gov/owow/oceans/cruise_ships/surveyplan.pdf.

Cruise Ship Hazardous Waste Tracking System, December 2001

On December 4, 2001, EPA Headquarters requested that the Agency's Regions assign a single tracking number for each cruise ship entering waters of multiple states for purposes of the Resource Conservation and Recovery Act (RCRA). RCRA imposes management requirements on generators, transporters, and other handlers of hazardous waste. Cruise ships regularly use chemicals for operations ranging from routine maintenance to passenger services, such as dry cleaning, beauty parlors, and photography labs. Thus, cruise ships are potentially subject to RCRA requirements to the extent those chemicals result in the generation of hazardous wastes. Under RCRA, each state assigns a hazardous waste tracking number to each cruise ship that enters its waters. However, assignment of tracking numbers by multiple states can result in a single ship having several different tracking numbers for the same waste. Assigning a single tracking number for each cruise ship entering waters of multiple states for purposes of RCRA should result in improved tracking of hazardous wastes generated on cruise ships, increased compliance with RCRA requirements, as well as reduce paperwork for the cruise ships. The EPA memorandum of December 4, 2001, can be accessed at: www.epa.gov/owow/oceans/cruise_ships/haz_tracking.html.

Evaluation of Standards for Sewage and Graywater Discharges from Cruise Ships in Alaska

On December 12, 2000, Congress passed HR 4577, "Departments of Labor, Health and Human Services, and Education, and Related Agencies Appropriations Act, 2001," which contained Title XIV, a section called "Certain Alaskan Cruise Ship Operations" (33 U.S.C. 1901 Note) (Title XIV). Title XIV established enforceable discharge standards for sewage and graywater from large cruise ships (those authorized to carry 500 or more passengers for hire) while operating in the Alexander Archipelago and the navigable waters of the United States in the State of Alaska and within the Kachemak Bay National Estuarine Research Reserve. This law authorizes EPA to develop revised and/or additional standards for these discharges in Alaska.

Pursuant to Title XIV, EPA has carried out a multi-year project to determine whether revised and/or additional standards for sewage and graywater discharges from large cruise ships operating in Alaska are warranted under that law. EPA sampled wastewater from four cruise

ships that operated in Alaska during the summers of 2004 and 2005. The purpose of this sampling was to characterize graywater and sewage generated onboard and to evaluate the performance of various advanced sewage and graywater treatment systems. EPA also distributed a "Survey Questionnaire to Determine the Effectiveness, Costs, and Impacts of Sewage and Graywater Treatment Devices for Large Cruise Ships Operating in Alaska" to all cruise ships authorized to carry 500 or more passengers for hire that operated in Alaska in 2004. The information collected by the survey includes general vessel information; sources of graywater and sewage; ship-board plumbing systems; data on the effectiveness of sewage and graywater treatment systems in removing pollutants; and costs of these systems.

Using these sampling results, survey responses, and other relevant information, EPA is performing environmental, economic, and engineering analyses to determine whether revised or additional standards in Alaska are warranted under Title XIV. EPA anticipates announcing its determination and making its analyses publicly available in 2009. Much of the information and data collected for EPA's effort under Title XIV are summarized in this Assessment Report. Additionally, as part of this effort, EPA in conjunction with the Alaska Department of Environmental Conservation, conducted a scientific survey in July 2008 using EPA's Ocean Survey Vessel *Bold* to (1) measure the dilution of Advanced Wastewater Treatment (AWT) discharges from stationary cruise ships, and (2) evaluate the potential environmental impact of nutrients in AWT discharges. EPA anticipates making the results of these studies publicly available in 2009. More information, including EPA's 2004 and 2005 Alaska cruise ship sampling results, EPA's Generic Sampling and Analysis Plan, and EPA's cruise ship survey questionnaire, can be accessed at: www.epa.gov/owow/oceans/cruise_ships/sewage_gray.html.

1.3 Applicable International Conventions and Related U.S. Laws and Regulations

Because of the international nature of maritime commerce, many of the customs, practices, rules, and regulations associated with vessel operations including manning, construction, design, equipment, safety, and pollution prevention are developed through uniform international agreements and conventions. A majority of cruise ships operating in United States waters are flagged in foreign nations, and application of domestic laws proceeds from an international agreement to which the United States is a party. In 1948, the United Nations established the predecessor to the International Maritime Organization, which entered into full force in 1958, to promote cooperation among governments and the shipping industry, to improve maritime safety, and to prevent marine pollution.

One of the major international agreements relevant to cruise ship pollution is the International Convention for the Prevention of Pollution from Ships, as modified by the Protocol of 1978, also known as MARPOL 73/78, or simply MARPOL. Six Annexes of the Convention cover various sources of pollution from ships and provide a framework for international objectives. However, these Annexes are only in force when ratified and implemented by the flag state. The vast majority of cruise lines operating in United States ports are foreign flag vessels. Cruise ships flagged under countries that are signatories to MARPOL are subject to its requirements, regardless of where they sail, and member nations are responsible for vessels registered under their respective nationalities.

The Act to Prevent Pollution from Ships (APPS; 33 U.S.C. § 1901 et seq.) is the federal law implementing those provisions of MARPOL that have been ratified by the United States. APPS applies to all U.S. flagged ships anywhere in the world, and to all foreign flagged vessels while operating in the navigable waters of the United States or while at a port or terminal under the jurisdiction of the United States. Additionally, MARPOL Annex V requirements are applicable in the exclusive economic zone. The Coast Guard generally has the primary responsibility to prescribe and enforce the regulations necessary to implement APPS in the United States.

This report provides detail regarding relevant MARPOL provisions in subsequent chapters; MARPOL includes annexes addressing, among other things, oil pollution, sewage, and garbage. MARPOL is implemented domestically through APPS (33 U.SC. 1901 et seq.), and the regulations found at 33 CFR Subchapter O -- Pollution. Additionally, the International Convention for the Safety of Life at Sea (SOLAS), which addresses maritime safety with a wide range of measures to improve vessel safety including design, construction, and equipment standards, includes provisions for a vessel to have a pollution prevention policy as part of its Safety Management System (SMS).

A vessel operating internationally under the flag of a country that is a party to SOLAS must develop and maintain onboard an SMS. SMS documents are developed consistent with the International Safety Management (ISM) Code. The functional requirements of the SMS include, among other things, procedures for internal audits on the operation of the SMS, as well as procedures and processes for management review of company internal audit reports and correction of non-conformities that are reported by these or other reports (33 CFR 96.240(f) and (g)). The SMS also documents the responsible person's safety and pollution prevention policy (33 CFR 96.220(a)(1)). Domestically, large passenger vessels that operate internationally are required to develop and retain such SMS documents onboard (46 U.S.C. §§ 3203-05 and 33 CFR Part 96). If the vessel does not have a Safety Management Certificate or copy of the Document of Compliance (DOC), the vessel is subject to detention, civil penalty, and if trying to enter the port, denial of port entry (33 CFR 96.380(b) and (c) and 96.390). In addition, the Coast Guard can board a vessel to ensure that crew and personnel are following the procedures of the SMS while a vessel is operating in U.S. waters (33 CFR 96.380(a)(2)). If a vessel's crew or shore-based personnel do not follow the SMS plan, a vessel may be detained in port or, in some cases, denied entry (46 U.S.C. § 3205(d); 33 CFR 96.380-.390). Substantial non-compliance of a ship's SMS to the requirements of the ISM Code is indicative of a major non-conformity (ISM Code 1.1.10). By definition, a major non-conformity is a deviation from SMS requirements that poses a serious threat to personnel or ship safety, or a serious risk to the environment; it requires immediate corrective action. For U.S. vessels, the SMS and DOC certificates are subject to revocation for non-compliance (33 U.S.C. § 3205(c)). Though failure to maintain SMS documents onboard a vessel is subject to a civil penalty, United States Code does not provide for administrative, civil, or criminal penalties, or injunctive remedies, for failure to follow the SMS plan. Several cruise ships with robust environmental standards as part of their SMS have been criminally prosecuted for deliberate substantive MARPOL and CWA violations, as well as for negligent violations.

Each flag state is responsible for ensuring that vessels operating under its flag are in compliance with their SMS. Often, flag states establish criteria and procedures for third party organizations to act on their behalf to perform safety management audits and certification functions that otherwise would be conducted by the flag state (as mentioned above, the Coast Guard has done this for U.S. flagged ships; see 33 CFR 96.400(a)). Cruise lines sometimes rely on third party verification companies (also known as classification societies) such as Det Norske Veritas, Lloyds Register, and the American Bureau of Shipping to certify that SMS documents conform with applicable requirements. If a foreign vessel (most cruise ships) has a major non-conformity under the ISM Code, the vessel is subject to detention and denial of port entry (33 CFR 96.380).

1.4 Federal Environmental Enforcement History Regarding Cruise Ships

As part of a wide-ranging vessel pollution initiative begun in 1993, the U.S. Department of Justice, in conjunction with the Coast Guard and Environmental Protection Agency's Criminal Investigation Division, has worked on a vessel pollution enforcement initiative designed to detect, investigate, and prosecute illegal vessel discharges of oily wastes, plastics, and other wastes that are in violation of U.S. environmental laws, including those implementing international treaties, as well as related criminal violations. Relevant federal environmental statutes include CWA, APPS, RCRA, the Ports and Waterways Safety Act, and recent legislation addressing Certain Alaskan Cruise Ship Operations, several of which are discussed further in this Assessment Report. The federal enforcement effort has resulted in numerous criminal convictions of every segment of the maritime industry, including the cruise ship industry, for knowing violations of these environmental statutes.

All large cruise ships calling on U.S. ports are subject to the requirements of MARPOL and APPS, and are required to have an SMS addressing pollution prevention. However, the lack of enforcement of these requirements by individual cruise ships has resulted in criminal violations of the law. Convictions for environmental pollution by cruise lines were obtained in 1995, 1998, 1999, 2000, 2001, 2002, 2004, and most recently in 2006.

The United States has obtained convictions for deliberate environmental crimes, false statements, and obstruction of justice by the largest cruise lines operating the largest cruise ships, as well as some smaller cruise lines operating smaller vessels. The most common violations consist of the knowing and willful making of materially false statements in a ship's Oil Record Books (a log in which all overboard discharges are required to be recorded) in order to conceal intentional discharges made in violation of MARPOL (see subsection 4.2.1). The cruise ship prosecutions have involved as much as hundreds of thousands of gallons of oil-contaminated waste per ship per year, and in some cases have involved violations of multiple ships in a fleet. Other convictions have involved the deliberate discharge of pollutants without a permit within the navigable waters of the United States, including specifically, waste oil, plastics, sewage, and hazardous chemicals such as dry cleaning solvents, printing solvents, and photochemicals discharged through graywater systems in violation of CWA.

In most cases, environmental violations, including cruise ships with falsified logs and use of equipment and procedures to bypass treatment systems, were not previously discovered during

prior, numerous inspections by port states, the vessel's flag state, or classification society. These prosecutions are widely credited with helping to raise awareness within the cruise ship industry of the importance of environmental compliance, and have led to the installation of new equipment on many ships. Convicted companies were placed on probation and required to develop and implement enhanced environmental compliance measures, including additional outside audits.

1.5 Cruise Lines International Association's Commitment to Reduce Potential Environmental Impacts

The Cruise Lines International Association (CLIA) is a trade association formed in 1975 to promote the benefits of cruising. According to CLIA, it is now the world's largest cruise association, comprising 24 major cruise lines serving North America and representing 97% of the cruise capacity marketed from North America. CLIA reports that member companies have agreed to adopt voluntary CLIA environmental standards for their cruise ships. According to CLIA, these environmental standards exceed the requirements of U.S. and international laws (CLIA, 2003). CLIA reports that the standards address, among others, the following waste streams: graywater and blackwater (sewage) discharges; bilge and oily water residues; incinerator ash; hazardous chemical waste such as photo processing fluid and dry-cleaning chemicals; unused and outdated pharmaceuticals; used batteries; burned out fluorescent and mercury vapor lamps; and glass, cardboard, and aluminum and steel cans. The CLIA standards entitled, "Cruise Industry Waste Management Practices and Procedures," include an attachment reflecting a 2006 revision (CLIA, 2006). Implementation of the CLIA membership commitment to address these waste streams is intended to occur via incorporation of the CLIA environmental protection policies into responsible persons' SMS documents.

CLIA has acknowledged violations of environmental laws by cruise lines, and believes that these violations have served as an important warning for the industry. As a result of the violations and associated penalties, CLIA member lines have strengthened their environmental policies and procedures. CLIA reports, for example, that its members have committed to the following principles:

- Designing, constructing, and operating vessels to minimize their impact on the environment;
- Developing improved technologies to exceed current requirements for protection of the environment;
- Implementing a policy goal of zero discharge of MARPOL Annex V solid waste products (garbage) by use of more comprehensive waste minimization procedures to significantly reduce shipboard-generated waste;
- Expanding waste reduction strategies to include reuse and recycling to the maximum extent possible, to deposit smaller quantities of waste products ashore;
- Improving processes and procedures for collection and transfer of hazardous waste; and
- Strengthening comprehensive programs for monitoring and auditing of onboard environmental practices and procedures, in accordance with the ISM Code for the Safe Operation of Ships and for Pollution Prevention.

The CLIA environmental standards are designed to increase compliance with regulatory regimes, and in some cases incorporate voluntary standards and procedures that go beyond what is required by law or regulation. CLIA does not describe the manner in which the voluntary standards are to be implemented into a company's SMS, or impose consequences for failing to incorporate the standards into a member line vessel's SMS, or comply with the standards once incorporated. Further, the standards do not provide for a CLIA-sponsored inspection or verification mechanism. All cruise ships that were criminally convicted had incorporated environmental standards into their SMS. Although CLIA standards are discussed in the subsequent sections of this report, EPA does not have an independent basis to determine the nature and extent of compliance by CLIA member lines, which is not required by state or federal law. Nevertheless, EPA appreciates efforts by the cruise ship industry and regulated community to improve the environmental compliance by CLIA member lines, and hopes that the waste management measures undertaken by the cruise line industry will benefit the environment and will set an example for cruise ship operators that are not members of CLIA.

1.6 Possible Options and Alternatives to Generally Address Cruise Ship Discharges

Based on the public comments received on the draft of this report as well as other information gathered, listed below are a wide range of options and alternatives that address cruise ship waste streams generally, rather than any particular waste stream (i.e., sewage, gray water, oily bilge water, solid waste, or hazardous waste) specifically. Identification of any particular option does not imply any EPA recommendation or preference for future action, or that EPA has determined that any of these options are necessary or feasible, or that EPA believes a change to the status quo is warranted, or that EPA or any other entity has the legal authority to implement that option.

Research

- Establish a detailed nationwide sampling, testing, and monitoring program to gather data on the volume of discharges, concentration of pollutants or effluent, and locations of most frequent discharges in terms of volume and/or toxicity.
- Conduct a programmatic environmental review of the cruise industry under the National Environmental Policy Act to assess the full breadth of environmental and cumulative impacts from cruise ships on the marine environment and human health.
- Increase studies on the detriment to human health and the effect on the nation's coastal zones and marine protected areas, including analysis of cumulative impacts, from cruise ships.
- Continue research and development on promising treatment technologies for the management of cruise ship waste steams.
- Engage the cruise ship industry to conduct more research directed at cruise ship discharges.
- Direct research to geographic areas that may be impacted by cruise ship discharges.
- Require additional analyses to further understand ship discharge impacts on the beach-going public.
- Direct future assessments of cruise ship discharges to the potential cumulative impacts from multiple cruise ships, the impacts of discharges from stationary cruise ships, and the

impacts of discharges on enclosed and low-flushing environments, such as bays and harbors.
- Design cruise ships to be "environmentally friendly."

Enforcement and Compliance
- Improve monitoring and inspections.
- Strengthen established enforcement mechanisms.
- Reward passengers who aid in the detection of illegal activities by alerting authorities.
- Provide instruction regarding duties, responsibilities, and operation of the various equipment and waste management systems to those directly responsible for processing wastes. Actions to train employees and increase passenger awareness should include:
    - announcements over the public address system and notices in ship newsletters that caution against throwing any waste overboard;
    - signage and posters placed in crew and passenger areas that encourage environmental awareness and protection;
    - placing safety and environmental information booklets in crew cabins and crew lounges; and
    - 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.
- Charge a passenger fee to put a marine engineer onboard cruise ships, especially when sailing in pristine waters, to observe ship waste treatment practices, verify logbook entries, examines discharges, and ensure that the ships are maintaining their waste water treatment systems.
- Allow for state personnel to inspect cruise ship pollution control equipment, in addition to Coast Guard inspections.
- Encourage a uniform national approach for environmental regulations pertaining to cruise ship discharges to reduce conflicting regulations as cruise ships travel from port to port.
- Encourage discussions with the Coast Guard and industry to ensure that proposals for new regulations are operationally feasible and will not compromise vessel safety.
- Require cruise ships to immediately report discharges (both intentional and accidental) of wastes into state waters or into waters immediately adjacent to state waters.

Industry Standards Development for Cruise Lines
- Work with CLIA and/or other cruise ship trade associations or individual cruise lines to further develop waste management practices and procedures to be incorporated into Safety Management System plans. Enhanced practice and procedures could include:
    - establishing discharge standards stricter than presently required;
    - setting voluntary standards where none exist now; and
    - regular sharing of information with the public on environmental performance.
- Encourage cruise line trade associations to develop verification mechanisms that assure industry standards, practices, and procedures for pollution abatement are implemented faithfully, as well as specify and enforce adverse consequences for inadequate implementation of those standards.
- Offer public recognition to cruise ships that implement environmentally-friendly practices beyond what is currently required. The voluntary program could include:

- discharge standards stricter than required (for sewage, gray water, oily bilge water, and others);
- setting voluntary standards where none exist now;
- requirements for the use of low-sulfur fuel and emission control technologies;
- an agreement to prohibit the discharge of any solid waste to the marine environment;
- collection and sharing of data on characteristics and volumes of discharges and environmental impacts;
- independent third-party verification of implementation of waste management practices; and
- a Code of Conduct or incentives program to encourage pollution prevention conduct.

Other

- Encourage verifiable "beyond compliance" agreements between states and individual cruise lines pertaining to cruise ship discharges into state waters.
- Encourage verifiable "beyond compliance" agreements between individual port authorities and individual cruise lines pertaining to cruise ship discharges into waters near ports.
- Facilitate cooperative efforts to increase the availability of port reception facilities for all waste types.
- Establish an interagency Cruise Ship Pollution Prevention and Enforcement Program:
  - assign a lead agency to implement the program, including on-board inspections;
  - work within existing regulatory and enforcement programs through cross-media coordination; and
  - assess a regulatory fee to fund the program.
- Charter and convene a cruise ship Federal Advisory Committee Act committee (perhaps consisting of EPA, Coast Guard, industry, public interest groups, states, and other appropriate shareholders) to develop improved environmental performance by cruise ships.

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