MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding is entered into this 24 day of October 2002 by and between the State of Hawaii and the North West CruiseShip Association, hereinafter referred to as NWCA, representing Carnival Cruise Lines, Celebrity Cruises, Crystal Cruises, Holland America Line, Norwegian Cruise Line, Princess Cruises, Royal Caribbean Cruise Line, World Explorer, Radisson Seven Seas and Seabourn, as representatives of the Cruise Industry in Hawaii.

Whereas the State of Hawaii is charged with the responsibility of protecting and conserving Hawaii's environmental resources in relation to the Cruise Industry's environmental practices in Hawaii; and

Whereas, the NWCA is a non-profit entity organized for the purpose of representing member cruise lines which operate in and about Hawaii, whose current membership is identified in ***Appendix I***; and

Whereas, the NWCA has adopted the **"Cruise Industry Waste Management Practices and Procedures"** as promulgated by the Cruise Industry's trade association, the International Council of Cruise Lines, herein referred to as ICCL, which practices and procedures are attached hereto as ***Appendix II***; and

Whereas, NWCA cruise vessels operate in international waters and move passengers to destinations worldwide and, consequently, those cruise vessel waste management practices must take into account environmental laws and regulations in many jurisdictions and international treaties and conventions; and

Whereas, the NWCA and the State of Hawaii have met to develop waste management practices that preserve a clean and healthy environment and demonstrate the Cruise Industry's commitment to be a steward of the environment; and

Whereas, research is ongoing to establish the impact of ships' wastewater discharges on the ocean environment, and the results of this research will be taken into account in periodic review of the wastewater discharge practices described in this memorandum of understanding; and

Whereas, the cruise industry recognizes Hawaii's fragile marine environment and is committed to help protect this environment;

Now therefore, based upon mutual understanding, the parties enter into this Memorandum of Understanding to implement the following environmental goals, policies and practices:

Definition of terms for the purpose of this agreement:

"air emissions" refers to the airborne releases associated with the operation of the vessel;

"blackwater" means waste from toilets, urinals, medical sinks and other similar facilities;

"cruise ship" means any vessel that is owned or operated by a member of the NWCA;

"garbage" means solid galley waste, paper, rags, plastics, glass, metal, bottles, crockery, junk or similar refuse;

"graywater" includes drainage from dishwasher, shower, laundry, bath and washbasin drains;

"Hawaii marine areas" means those waters between the shoreline of the Hawaiian Islands and any point 4 nautical miles beyond the 100 fathom contour line as illustrated in Appendix III;

1. The State of Hawaii accepts the ICCL Industry Standard E-0l -01, titled ***Cruise Industry Waste Management Practices and Procedures (Appendix II)*** as ICCL member policy in the management of solid waste, hazardous wastes and wastewaters. In addition to the ICCL Practices, the members of NWCA operating in Hawaii agree to comply with the following unique practices among the Hawaiian Islands:

1.1 Wastewater Management

In recognition of the sensitive nature of Hawaii's marine environment, the NWCA agrees to prohibit the discharge of untreated black water, treated black water or gray water within the Hawaii marine area as defined above. ***(Appendix III)***.

Exception from this prohibition is as follows:

If the effluent from an advanced wastewater treatment system on board a ship meets standards for continuous discharge as set under federal Law - Title XIV - Certain Alaskan Cruise Ship Operations, Section 1404 Limitations on Discharge of Treated Sewage or Graywater, Subsection (c) (1), (2), (3), (4) ***(Appendix VII)***, the effluent from such advanced wastewater treatment systems may be discharged in the Hawaii marine area while the ship maintains a minimum speed of six knots and while the ship is more than one nautical mile from shore.

Prior to the discharge of effluent by a ship utilizing an advanced treatment system in the situation described above, the cruise ship company must first provide to the State of Hawaii test results as are required under the above referenced federal law to verify that the system meets or exceeds the federal law standards as described.

The NWCA and the State of Hawaii will continue discussions to determine whether maintaining these restrictions on advanced wastewater treatment systems is consistent with best available scientific information on the environmental effects of the discharges.

1.2 Solid Waste, Hazardous Waste Management:

The NWCA has adopted the ICCL policy guidelines as stipulated above. NWCA Ships sailing in Hawaiian waters will comply with these policies and best practices as presented in these standards. ***(Appendix II)***

NWCA member ships operating in Hawaiian waters will eliminate, to the maximum extent possible, the disposal of wastes described under MARPOL Annex V into the marine environment through improved reuse and recycling opportunities. Where reuse and recycling are not feasible, waste will be discharged into the marine environment only if it has been properly processed and can be discharged in accordance with MARPOL, the ICCL best management practices, and other prevailing requirements. Whenever a member ship offloads solid waste in Hawaii, it shall ensure that such offloading be done in compliance with all state and local laws.

1.3 Air Emissions

1.3.1 NWCA members agree that their ships will not use their incinerators in any Hawaiian ports for the combustion of any waste materials.

1.3.2 NWCA members agree to limit visible emissions, excluding condensed water vapor, as follows:

Ships will not exceed 20% opacity for periods of time exceeding 6 minutes in any 60-minute period (Continuous emission monitor or EPA Method 9) except for the following:

a. When the ship is maneuvering to or from the dock or anchor,[1]
b. In the event of a navigational or safety concern on the ship,
c. When an equipment failure occurs[2]. In the case of an equipment failure, the cruise line will upon request, provide information to the State that describes the subject equipment, the malfunction, the corrective actions taken and the start and end times of the malfunctioning period.

Note:
Depending on current, wind and port congestion, it may be necessary to have full engine capacity on standby to assure safe port navigation or compensate for equipment failure. In such cases of full engine deployment and low engine loads, higher than normal particulate emissions can result.

Footnotes

1. *Maneuvering is defined for the purpose of this MOU as: On departure from the dock or anchorage, maneuvering will commence with the startup of the additional engines required for safe ship handling on its departure from the dock or anchor. It will cease once the ship has established its course and*

speed towards the open sea and is clear of the last port navigational markers. On arrival, maneuvering will commence when the engine configuration for entering the port has been set by the Captain. It may call for additional engines to assure adequate power to allow for safe ship handling during docking procedures, or anchoring, and will cease when the ship is safely secured to the dock, or at anchor, and the additional engines are shut down.

2. *Equipment failure (for example – boiler, engine injector or turbo failure) can cause periodic excess particulate matter. Some discretion from the visual emission standards is allowed if the failure has occurred on the current or previous voyage, as long as the repairs are waiting for either technical support or a critical spare part.*

1.3.3 NWCA ships will have opacity-metering and recording capability and will continuously monitor the stack's visible emissions while sailing in Hawaiian waters.

1.3.4 The State of Hawaii recognizes that, as of the execution of this memorandum, there are no Cruise Steamships plying the waters of Hawaii. Notwithstanding the foregoing, NWCA members agree that they shall not discharge soot within 1,000 yards of the Hawaii coastline. Cruise Steamships shall not cause or permit the discharge if it would have been practical to emit the discharge before or after leaving land or if an alternative method could have been employed.

1.3.5 The NWCA member ships generally take on fuel in California, British Columbia, and Hawaii ports. The sulfur content of the fuel currently available at these locations is less than 2.8% by weight. It is the intent of the member cruise lines to continue to bunker their ships in these ports with fuel with a sulfur content of less than 2.8% by weight. If such fuel becomes unavailable in those ports, or is unavailable for any NWCA ship coming to Hawaii from other ports, the ship will advise the State of Hawaii in writing.

2. The State of Hawaii acknowledges that the waste management practices and procedures referenced and/or contained in section 1 above meet or exceed the standards set forth in Hawaii laws and applicable Hawaii regulations as pertaining to ship operations.

3. The State of Hawaii and the NWCA understand that the U.S. Coast Guard (USCG) has Federal jurisdiction over environmental matters in navigable waterways in the United States and conducts passenger ship examinations that include review of environmental systems, Safety Management System (SMS) documentation and such MARPOL-mandated documents as the Oil Record Book and the Garbage Record Book. Additionally, NWCA member cruise vessels will integrate such industry standards into SMS documentation that ensure compliance through statutorily required internal and third party audits.

4. The USCG has developed guidelines relating to the inspection of waste management practices and procedures, which have been adopted by the cruise industry. The State of Hawaii accepts the USCG Navigation and Vessel Inspection Circular and Environmental Systems Checklist ***(Appendix IV)***, which will be incorporated into USCG 840 Guidebook as the procedure to conduct waste management inspections on board cruise vessels. To reduce administrative burden on the cruise ship industry, the State of Hawaii agrees to first request from the USCG any records for cruise vessels entering Hawaii territorial waters. Should records described above not be made available by the USCG, the cruise ship will provide them to the State.

5. The ICCL in consultation with NWCA is working with the Environmental Protection Agency (EPA) to develop a national practice for the assigning of an EPA Identification Number to the generator of hazardous wastes, which recognizes the multi-jurisdictional itineraries of a cruise vessel. Conceptually, the EPA has agreed that issuing a national identification number to cruise vessels operating in the U.S. is an acceptable procedure. EPA also proposes that the state where company offices are located may issue the national identification numbers provided the criteria and information submitted required for obtaining the number is standard for the United States. The State of Hawaii and NWCA agree to a uniform application procedure for the EPA national identification number in accordance with the Resource Conservation Recovery Act (RCRA) ***(Appendix V)***. The State of Hawaii shall have the right to inspect all such records upon written request to the cruise vessel operator. The State of Hawaii recognizes that in some cases EPA Identification Numbers may not be required under federal law because of the small amounts of waste generated.

6. The NWCA has adopted a uniform procedure for the application of RCRA to cruise vessels entering Hawaii ***(Appendix VI)***. The State of Hawaii accepts this procedure as the appropriate process for vendor selection and management of hazardous wastes in Hawaii. NWCA member lines agree to provide an annual report regarding the total hazardous waste offloaded in Hawaii by each cruise vessel.

7. The State of Hawaii and NWCA agree that all records required by RCRA for cruise vessels entering Hawaii territorial waters shall be available to the State of Hawaii upon written request to the cruise vessel operator.

8. The State of Hawaii recognizes that waste management practices are undergoing constant assessment and evaluation by cruise industry members. It is understood by the STATE OF HAWAII and the NWCA that the management of waste streams will be an on-going process, which has as its stated objectives both waste minimization and pollution prevention. Consequently, all parties agree to continue to work with each other in good faith to achieve the stated objectives. This may require additional meetings with federal regulators to discuss specific issues applicable to the cruise industry in the U.S.

9. The NWCA acknowledges that its operating practices are required to comply with the applicable provisions of the Marine Mammal Protection Act and the Invasive Species Act.

10. The State of Hawaii agrees that the performance required by the NWCA under the terms of this Memorandum of Understanding shall be directed only to its member cruise lines.

The NWCA acknowledges that its members operate cruise vessels engaged in cruise itineraries greater than one day duration; and further that its members do not operate one-day attraction ships or casino gambling ships.

11. All parties acknowledge that ongoing discussions of environmental goals are recognized as a necessary component to the successful implementation of management practices for waste minimization and reduction.

12. All parties acknowledge that this MOU is not inclusive of all issues, rules or programs that may arise in the future. The State of Hawaii reserves the right to enter into additional MOU to address or refine such issues, or to pursue appropriate legislation. All parties agree to at least one annual meeting to review the effectiveness of the MOU. The State of Hawaii and NWCA reserve the right to cancel this MOU upon 90 days written notice.

IN RECOGNITION OF THE MUTUAL UNDERSTANDINGS DISCUSSED HEREIN; THE PARTIES HERETO AFFIX THEIR SIGNATURES ON THIS 24th DAY OF October 2002.

BENJAMIN J. CAYETANO
Governor, State of Hawaii

JOHN HANSEN
President, North West CruiseShip Association

APPENDICES
MEMORANDUM OF UNDERSTANDING

Appendix I	List of NWCA Member Lines
Appendix II	ICCL Standards
Appendix III	Navigational Chart of Hawaiian Waters denoting 4 nm outside demarcation of the 100 fathom zone
Appendix IV	USCG Navigation & Vessel Inspection Circular and Environmental Systems Checklist
Appendix V	Uniform application procedure for EPA National ID Number as per Resource Conservation Recovery Act
Appendix VI	Uniform procedure for the application of RCRA to cruise vessels entering Hawaii
Appendix VII	Title XIV – Certain Alaskan Cruise Ship Operations, Section 1404 Limitations on Discharge of Treated Sewage or Graywater, Subsection (c) (1), (2), (3), (4)

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Carnival Cruise Lines

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Crystal Cruises

Holland America Line – Westours

Norwegian Cruise Line

Princess Cruises

Radisson Seven Seas Cruises

Royal Caribbean International

Seabourn Cruises

World Explorer Cruises

INTERNATIONAL COUNCIL
OF CRUISE LINES

ICCL INDUSTRY STANDARD E-01-01 (Revision 1)

CRUISE INDUSTRY WASTE MANAGEMENT PRACTICES AND PROCEDURES

The members of the International Council of Cruise Lines are dedicated to preserving the marine environment and in particular the pristine condition of the oceans upon which our vessels sail. The environmental standards that apply to our industry are stringent and comprehensive. Through the International Maritime Organization, the United States and other maritime nations have developed consistent and uniform international standards that apply to all vessels engaged in international commerce. These standards are set forth in the International Convention for the Prevention of Pollution from Ships (MARPOL). In addition, the U.S. has jurisdiction over vessels that operate in U.S. waters where U.S. laws such as the Resource Conservation and Recovery Act and the Federal Water Pollution Control Act apply. The U.S. Coast Guard enforces both international conventions and domestic laws.

The cruise industry commitment to protecting the environment is demonstrated by the comprehensive spectrum of waste management technologies and procedures employed on its vessels.

ICCL members are committed to:

a. Designing, constructing and operating vessels, so as to minimize their impact on the environment;

b. Developing improved technologies to exceed current requirements for protection of the environment;

c. Implementing a policy goal of zero discharge of MARPOL, Annex V solid waste products by use of more comprehensive waste minimization procedures to significantly reduce shipboard generated waste;

d. 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;

e. Improving processes and procedures for collection and transfer of hazardous waste; and

f. Strengthening comprehensive 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).

INDUSTRY WASTE MANAGEMENT STANDARDS: ICCL member cruise vessel operators have agreed to incorporate the following standards for waste stream management into their respective Safety Management Systems.

1. Photo Processing, Including X-Ray Development Fluid Waste: *Member lines have agreed to minimize the discharge of silver into the marine environment through the use of best available technology that will reduce the silver content of the waste stream below levels specified by prevailing regulations.*

2. Dry-cleaning waste fluids and contaminated materials: *Member lines have agreed to* prevent *the discharge of chlorinated dry-cleaning fluids, sludge, contaminated filter materials and other dry-cleaning waste byproducts into the environment*

3. Print Shop Waste Fluids: *Member lines have agreed to prevent the discharge of hazardous wastes from printing materials (inks) and cleaning chemicals into the environment.*

4. Photo Copying and Laser Printer Cartridges: *Member lines have agreed to initiate procedures so as to maximize the return of photo copying and laser printer cartridges for recycling. In any event, these cartridges will be landed ashore.*

5. Unused And Outdated Pharmaceuticals: *Member lines have agreed to ensure that unused and/or outdated pharmaceuticals are effectively and safely disposed of in accordance with legal and environmental requirements.*

6. Fluorescent And Mercury Vapor Lamp Bulbs: *Member lines have agreed to prevent the release of mercury into the environment from spent fluorescent and mercury vapor lamps by assuring proper recycling or by using other acceptable means of disposal.*

7. Batteries: *Member lines have agreed to prevent the discharge of spent batteries into the marine environment.*

8. Bilge and Oily Water Residues: *Member lines have agreed to meet and exceed the international requirements for removing oil from bilge and wastewater prior to discharge.*

9. Glass, Cardboard, Aluminum and Steel Cans: *Member lines have agreed to eliminate the maximum extent possible, the industry will eliminate the disposal of MARPOL Annex V wastes into the marine environment through improved reuse and recycling opportunities. They have further agreed that waste will be discharged into the marine environment unless it has been properly processed and can be discharged in accordance with MARPOL and other prevailing requirements.*

10. Incinerator Ash: *Member lines have agreed to reduce the production of incinerator ash by minimizing the generation of waste and maximizing recycling opportunities.*

11. Graywater: *Member lines have agreed that graywater will be discharged only while the ship is underway and proceeding at a speed of not less than 6 knots; that graywater will not be discharged in port and will not be discharged within 4 nautical miles from shore or such other distance as agreed to with authorities having*

jurisdiction or provided for by local law except in an emergency, or where geographically limited. Member lines have further agreed that the discharge of graywater will comply with all applicable laws and regulations.

12. Blackwater: *Member lines have agreed that blackwater will be discharged only while the ship is underway and proceeding at a speed of not less than 6 knots and in accordance with applicable regulations; and that treated Blackwater will not be discharged in port and will not be discharged within 4 nautical miles from shore or such other distance as agreed to with authorities having jurisdiction or provided for by local law, except in an emergency, or where geographically limited. Member lines have further agreed that the discharge of blackwater will comply with all applicable laws and regulations.*

To improve environmental performance, some member cruise lines are field-testing wastewater treatment systems that utilize advanced technologies. These onboard wastewater treatment systems are designed to result in effluent discharges that are of a high quality and purity; for example, meeting or surpassing secondary and tertiary effluents and reclaimed water. Effluents meeting these high standards would not be subjected to the strict discharge limitations previously discussed.

Each ICCL cruise vessel operator has agreed to utilize one or more of the practices and procedures contained in the attached "*Cruise Industry Waste Management Practices and Procedures*" in the management of their shipboard waste streams. Recognizing that technology is progressing at a rapid rate, any new equipment or management practices that are equivalent to or better than those described, and which are shown to meet or exceed international and federal environmental standards, will also be acceptable. Member lines have agreed to communicate to ICCL the use of equivalent or other acceptable practices and procedures. As appropriate, such practices and procedures shall be included as a revision to the attached document. As an example, when improved systems for treating blackwater and graywater are perfected and shown to meet the requirements for MSDs and accepted by appropriate authorities, the new systems and associated technology will be included in the attachment as a revision.

ICCL and its Environmental Committee will work with the U.S. Coast Guard, the U.S. Environmental Protection Agency and other appropriate agencies to further implement the above commitments.

ATTACHMENT: *CRUISE INDUSTRY WASTE MANAGEMENT PRACTICES AND PROCEDURES* (Dated May 14,2001)

Adopted: June 11,2001
Revised: December 1, 2001
Effective Date: July 1, 2001

Attachment to ICCL Standard E-1-01 (Revision 1)

CRUISE INDUSTRY WASTE MANAGEMENT PRACTICES AND PROCEDURES

(REVISED: December 1, 2001)

The cruise industry is dedicated to preserving the marine environment and oceans upon which our ships sail. As a stated industry standard, ICCL members have adopted aggressive programs of waste minimization, waste reuse and recycling, and waste stream management set forth in the following. In addition ICCL members are working in a number of areas to identify and implement new technologies in order to improve the environmental performance of their ships. ICCL member lines currently have agreed to utilize waste management practices and procedures, which meet or exceed the stringent standards as set forth in international treaties and applicable U.S. laws.

Introduction

The cruise industry is inextricably linked to the environment. Our business is to bring people to interesting places in the world, over the water. Recognizing the future of the industry depends on a clean and healthy environment, cruise industry senior management is committed to stewardship of the environment and establishing industry practices that will make ICCL member cruise ship operators leaders in environmental performance.

This document outlining member line practices has been developed under the auspice of the industry's professional organizations, the International Council of Cruise Lines (ICCL), the Florida Caribbean Cruise Association (FCCA), and the Northwest Cruise Ship Association (NWCA). The purpose of this document is to set forth cruise industry waste management practices and procedures that ICCL member cruise vessel operators have agreed to incorporate into their respective Safety Management Systems.

In the development of industry practices and procedures for waste management, the members of the International Council of Cruise Lines have endorsed policies and practices based upon the following fundamental principles:

- Full compliance with applicable laws and regulations
- Maintaining cooperative relationships with the regulatory community
- Designing, constructing and operating vessels, so as to minimize their impact on the environment
- Embracing new technology
- Conserving resources through purchasing strategies and product management
- Minimizing waste generated and maximize reuse and recycling
- Optimizing energy efficiency through conservation and management
- Managing water discharges
- Educating staff, guests and the community.

Discussion

Just as on shore, ship operations and passengers generate waste as part of many daily activities. On ships, waste is generated while underway and in port. Because ships move, the management of these wastes becomes more complicated than for land-based activities, as the facilities and laws change with the location of the ship. Facilities on the ships and management practices must be designed to take into account environmental laws and regulations around the world. Moreover, because waste management ultimately becomes a local activity, the local port infrastructure, service providers, and local waste disposal vendors are factors in the decision-making processes.

On an international level, environmental processes are an important part of the International Maritime Organization's (IMO's) policies and procedures for the maritime industry. ICCL member lines have agreed to incorporate environmental performance into Safety Management Systems (SMS) and MARPOL mandated Waste Management Manuals. Under agreements and laws specific to many nations, these programs are routinely reviewed by Port States to ensure compliance. For example, in the United States, the US Coast Guard has jurisdiction over environmental matters in ports and waterways and conducts passenger ship examinations that include review of environmental systems, SMS documentation and such MARPOL-mandated documents as the Oil Record Book and the Garbage Record Book.

The industry effort to develop waste management practices and procedures has focused on the traditional high volume wastes (garbage, graywater, blackwater, oily residues (sludge oil) and bilge water), pollution prevention, and the small quantities of hazardous waste produced onboard. In the process, ICCL members have shared waste management strategies and technologies, while focusing on a common goal of waste reduction.

The process of waste reduction includes waste prevention, the purchasing of products that have recycled content or produce less waste (e.g. source reduction), and recycling or reuse of wastes that are generated. The ultimate goal is to have the waste management culture absorbed into every facet of cruise vessel operation. A fully integrated system beginning with the design of the vessel should address environmental issues at every step.

Management practices for waste reduction should start before a product is selected. Eco-purchasing and packaging are vital to the success of any environmental program, as are strategies to change packaging, processes and management to optimize the resources used.

The commitment of the industry to this cooperative effort has been quite successful, as companies have shared information and strategies.

Industry Standard Waste Handling Procedures

ICCL member lines have agreed that hazardous wastes and waste streams onboard cruise vessels will be identified and segregated for individual handling and management in accordance with appropriate laws and regulations. They have further agreed, hazardous wastes will not be discharged overboard, nor be commingled or mixed with other waste streams.

A. **Photo Processing, Including X-Ray Development Fluid Waste:** *ICCL member lines have agreed to minimize the discharge of silver into the marine environment through the use of best available technology that will reduce the silver content of the waste stream below levels specified by prevailing regulations or by treating all photo processing and x-ray development fluid waste (treated or untreated) as a hazardous waste and landing ashore in accordance with RCRA requirements.*

There are several waste streams associated with photo processing operations that have the potential to be regulated under the Resource Conservation and Recovery Act (RCRA). These waste streams include spent fixer, spent cartridges, expired film and silver flake.

Photographic fixer removes the unexposed silver compounds from the film during the developing process. The spent fixer can have as much as 2000-3000 parts per million (ppm) of silver. Silver bearing waste is regulated by RCRA as a hazardous waste if the level of silver exceeds 5 ppm as determined by the Toxicity Characteristic Leaching Procedure (TCLP) test.

Silver recovery units may be used to reclaim the silver from the used fixer waste stream. There are two types of recovery units. These are active (with electricity) and passive (without electricity) units. The active unit uses electricity to plate silver onto an electrode. The passive unit uses a chemical reaction between steel wool and silver to remove most of the silver from solution. Utilizing the best available technology, the equipment currently onboard ICCL member cruise ships is conservatively estimated to reduce the silver content of this effluent below 4 mg/l (milligrams/l or ppm)

The effluent from the silver recovery process must be tested before it can be discharged as a non-hazardous waste to be further diluted by addition to the ship's gray water. After the photographic and X-ray development fluids are treated for the removal of silver, the treated, non-hazardous effluent is then blended with the ship's graywater. In general, assuming that an entire week's photographic and X-ray development treated effluent stream is introduced into a single day's accumulation of graywater, the concentration of silver in the resulting mixture would be less than one-half of one part per billion (<0.5 micrograms/liter). Such mixing is not done on a weekly basis. Even at this assumed extreme however, it is expected that the silver concentration would only be approximately one fifth (1/5) the surface water quality standard for predominately marine waters specified in one state where cruise ships operate. When mixing is done on a daily basis it is evident that the resulting immediate concentration would be almost an order of magnitude less than this (1/50 of the current surface water quality standard). Additionally, it is evident that total mass of any discharges of silver would be negligible. Member lines have agreed that this discharge would be carried out only while their vessels are underway. Also, it should be noted that these estimates were carried out considering the largest cruise ships in service, which would produce the greatest amount of waste.

Handling Method 1 Employed by Member Lines:

Treat used photographic and x-ray development fluids to remove silver for recycling.

Verify that the effluent from the recovery unit is less than 5 parts per million (ppm) silver, as measured by EPA-approved methodology.

After treatment, the residual waste stream fluid is non-hazardous and landed ashore or discharged in accordance with the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) and other prevailing regulations.

Handling Method 2 Employed by Member Lines:

Used photographic and x-ray development fluids, either treated or untreated, may be assumed to be a hazardous waste. In this event, they are landed ashore in accordance with the requirements of the Resource Conservation and Recovery Act (RCRA).

B. **Dry-cleaning waste fluids and contaminated materials**: *ICCL member lines have agreed to prevent the discharge of chlorinated dry-cleaning fluids, sludge, contaminated filter materials and other dry-cleaning waste byproducts into the environment.*

Shipboard dry cleaning facilities use a chlorinated solvent called perchlorethylene (also known as PERC or tetrachloroethylene) as a dry cleaning fluid. This is the approved dry cleaning solvent for these units. Operators must receive specific required training for the correct use of this chemical and its associated precautions. This solvent should be used in accordance with all safety procedures including appropriate personal protective equipment (PPE).

The dry cleaning units produce a small volume waste from condensate, the bottoms of the internal recovery stills, waste products from button and lint traps, spent perchloroethylene and filter media. This waste is comprised of dirt, oils, filter material, and spent solvent. Each ship utilizing these dry-cleaning units produces approximately two pounds of waste material weekly. However, the amounts may vary greatly by season and passenger load. This material is classified as hazardous waste under RCRA and must be handled accordingly.

Handling Method 1 Employed by Member Lines:

Perchloroethylene (PERC) and other chlorinated dry-cleaning fluids, contaminated sludge and filter materials are hazardous waste and landed ashore in accordance with the requirements of RCRA.

C. **Print Shop Waste Fluids**: *ICCL member lines have agreed to prevent the discharge of hazardous wastes from printing materials (inks) and cleaning chemicals into the environment.*

Print shop waste may contain hazardous waste. Printing solvents, inks and cleaners all may contain hydrocarbons, chlorinated hydrocarbons, and heavy metals that can be harmful to human and aquatic species. Recent advances in printing technology and substitution of chemicals that are less hazardous reduces the volume of print shop waste generated and reduces the impact of these waste products.

ICCL member lines have agreed to utilize, whenever possible, printing methods and printing process chemicals that produce both less volume of waste and less hazardous waste products, that shipboard printers will be trained in ways to minimize printing waste generated, and that alternative printing inks such as soy based, non-chlorinated hydrocarbon based ink

products will be used whenever possible. The member lines have further agreed that all print shop waste including waste solvents, cleaners, and cleaning cloths will be treated as hazardous waste, if such waste contains chemical components that may be considered as hazardous by regulatory definitions, and that all other waste may be treated as non-hazardous.

Handling Method 1 Employed by Member Lines:

When using traditional or non-soy based inks and chlorinated solvents, all print shop waste is treated as hazardous, and discharged ashore in accordance with RCRA.

Handling Method 2 Employed by Member Lines:

Shipboard printing processes use non-toxic based printing ink such as soy based, non-chlorinated solvents, and other non-hazardous products to eliminate hazardous waste products.

D. Photo Copying and Laser Printer Cartridges: *ICCL member lines have agreed to initiate procedures so as to maximize the return of photocopying and laser printer cartridges for recycling, and in any event, have agreed that these cartridges will be landed ashore.*

Increased use of laser and photo copying equipment on shore as well as onboard ship results in the generation of increased volumes of waste cartridges, inks, and toner materials. ICCL member lines have agreed to use only such inks, toners and printing/copying cartridges that contain non-hazardous chemical components, and that none of these cartridges or their components should be disposed of by discharge into the marine environment. In recognition of the member lines' goal of waste minimization, they have further agreed these cartridges should, whenever possible, be returned to the manufacturer for credit, recycling, or for refilling.

Handling Method Employed by Member Lines:

ICCL member lines have agreed that wherever possible, photo copying and laser printer cartridges will be collected, packaged and returned for recycling and when this is not possible, that these materials will not be discharged into the sea or other bodies of water but will be handled as other shipboard waste that is landed ashore for further disposal.

E. Unused And Outdated Pharmaceuticals: *ICCL member lines have agreed to ensure that unused and/or outdated pharmaceuticals are effectively and safely disposed in accordance with legal and environmental requirements.*

In general ships carry varying amounts of pharmaceuticals. The pharmaceuticals carried range from over-the-counter products such as anti-fungal creams to prescription drugs such as epinephrine. Each ship stocks an inventory based on its itinerary and the demographics of its passenger base. ICCL member lines have agreed that all pharmaceuticals will be managed to ensure that their efficacy is optimized and that disposal is done in an environmentally responsible manner.

ICCL member lines have further agreed that when disposing of pharmaceuticals, the method used will be consistent with established procedures, and that pharmaceuticals and medications which are off specification or which have exceeded their shelf-life, and stocks that are unused and out of date, cannot be used for patients and therefore will be removed from the ship. Further, each regulatory jurisdiction has a posting of listed pharmaceuticals that must be

considered hazardous waste once the date has expired or the item is no longer considered good for patient use.

Through onboard management of the medical facility, ICCL member lines have agreed that stocks of such listed pharmaceuticals are returned to the vendor prior to date of expiration. Pharmaceuticals that are being returned and which have not reached their expiration date are shipped using ordinary practices for new products.

Safety and Health

ICCL member lines have agreed that all expired listed pharmaceuticals will be handled in accordance with established procedures and all personnel handling this waste will receive appropriate training in the handling of hazardous materials. As guidance, the US Environmental Protection Agency (EPA) has issued a report that clarifies the fact that residuals, such as epinephrine, found in syringes after injections are not considered an acutely hazardous waste by definition and may be disposed of appropriately in sharps containers. Member lines have agreed that all Universal Precautions will be adhered to when handling sharps.

Handling Method 1 Employed by Member Lines:

Establish a reverse distribution system for returning unexpired, unopened non-narcotic pharmaceuticals to the original vendor.

Handling Method 2 Employed by Member Lines:

Appropriately destroy narcotic pharmaceuticals onboard ship in a manner that is witnessed and recorded.

Handling Method 3 Employed by Member Lines:

Land listed pharmaceuticals in accordance with local regulations. Listed pharmaceuticals are a hazardous waste having chemical compositions which prevent them from being incinerated or disposed of through the ship's sewer system. Listing of such pharmaceuticals may vary from state to state.

Handing Method 4 Employed by Member Lines:

Dispose of other non-narcotic and non-listed pharmaceuticals through onboard incineration or landing ashore.

F. **Fluorescent And Mercury Vapor Lamp Bulbs**: *ICCL member lines have agreed to prevent the release of mercury into the environment from spent fluorescent and mercury vapor lamps by assuring proper recycling or by using other acceptable disposal.*

The recycling of fluorescent lights and high intensity discharge (HID) lamps is a proven technology capable of reliably recovering greater that 99 percent of the mercury in the spent lights. This is done by using a crush-and-sieve method. In this process, the spent tubes are first crushed and then sieved to separate the large particles from the mercury containing phosphor powder. The phosphor powder is collected and processed under intense heat and pressure. The mercury is volatized and then recovered by condensation. The glass particles are segregated and

recycled into other products such as fiberglass. Aluminum components are also recycled separately.

Storage and handling of used lights pose no compatibility problems; nevertheless, storage and shipment of the glass tubes is best done keeping the glass tubes intact. These items are classified as "Universal Waste" when they are shipped to a properly permitted recycling facility; as such, testing is not required.

Safety and Health

Fluorescent and Mercury Vapor lamps contain small amounts of mercury that could potentially be harmful to human health and the environment. To prevent human exposure and contamination of the environment, ICCL member lines have agreed that these lamps will be handled in an environmentally safe manner. Recycling of mercury from lamps and other mercury containing devices is the preferred handling method and is encouraged by various states. The recycling of fluorescent lights and HID lamps keeps potentially hazardous materials out of landfills, saves landfill space and reduces raw materials production needs.

Handling Method Employed by Member Lines:

Fluorescent and mercury vapor lamps are collected and recycled or landed for recycling or disposal in accordance with prevailing laws and regulations.

G. **Batteries**: *ICCL member lines have agreed to prevent the discharge of spent batteries into the marine environment.*

If not properly disposed of, spent batteries may constitute a hazardous waste stream. Most of the large batteries are on tenders and standby generators. Small batteries used in flashlights and other equipment and by passengers, account for the rest. There are four basic types of batteries used.

Lead-acid batteries – These are used in tenders and standby generators. They are wet, rechargeable, and usually six-celled. They contain a sponge lead anode, lead dioxide cathode, and sulfuric acid electrolyte. The electrolyte is corrosive. These batteries require disposal as a hazardous waste, unless recycled or reclaimed.

Lead-acid batteries use sulfuric acid as an electrolyte. Battery acid is extremely corrosive, reactive and dangerous. Damaged batteries will be drained into an acid-proof container. A damaged and leaking battery is then placed in another acid-proof container, and both the electrolyte and the damaged battery placed in secure storage for proper disposal as a hazardous waste.

Nickel-cadmium (NiCad) batteries – These are usually rechargeable, and contain wet or dry potassium hydroxide as electrolyte. The potassium hydroxide is corrosive and the cadmium is a characteristic hazardous waste. Therefore, NiCad batteries will be disposed of as hazardous waste, unless recycled or reclaimed.

Lithium batteries – These are used as a power source for flashlights and portable electronic equipment. All lithium batteries will be disposed of as hazardous waste, or sent out for reclamation.

Alkaline batteries – These are common flashlight batteries and are also used in many camera flash attachments, cassette recorders, etc. They should be recycled, properly disposed or reclaimed.

Handling Method Employed by Member Lines:

Spent batteries are collected and returned for recycling and/or disposal in accordance with prevailing regulations. Discarded batteries are isolated from the refuse waste stream to prevent potentially toxic materials from inappropriate disposal. The wet-cell battery-recycling program is kept separate from the dry battery collection process. Intact wet-cell batteries are sent back to the supplier. Dry-cell batteries arc manifested to a licensed firm for recycling.

H. Bilge and Oily Water Residues: *ICCL member lines have agreed to meet and exceed the international requirements for removing oil from bilge and wastewater prior to discharge.*

The area of the ship at the very bottom of the hull is known as the bilge. The bilge is the area where water collects from various operational sources such as water lubricated shaft seals, propulsion system cooling, evaporators, and other machinery. All engine and machinery spaces also collect oil that leaks from machinery fittings and engine maintenance activities. In order to maintain ship stability and eliminate potential hazardous conditions from oil vapors in engine and machinery spaces, the bilge spaces should be periodically pumped dry. In discharging bilge and oily water residues, both international regulations (MARPOL) and United States regulations require that the oil content of the discharged effluent be less than 15 parts per million and that it not leave a visible sheen on the surface of the water.

All ships are required to have equipment installed onboard that limits the discharge of oil into the oceans to 15 parts per million when a ship is en route and provided the ship is not in a special area where all discharge of oil is prohibited. Regulations also require that all oil or oil residues, which cannot be discharged in compliance with these regulations, be retained onboard or discharged to a reception facility. The equipment and processes implemented onboard cruise ships to comply with these requirements are complex and sophisticated.

The term "*en route*" as utilized in MARPOL (73/78) Regulation 9(b) is taken to mean while the vessel is underway. The U.S. Coast Guard has informed ICCL that it agrees with this meaning of "*en route.*"

In accordance with MARPOL (73/78) Regulation 20, ICCL member lines have agreed that every ship of 400 gross tons and above shall be provided with an oil record book which shall be completed on each occasion whenever any of numerous specified operations take place in the ship and that operations include:

a. Ballasting or cleaning of fuel oil tanks,
b. Discharge of dirty ballast or cleaning water from the fuel oil tanks above,
c. Disposal of oily residues,
d. And discharge of bilge water that accumulated in machinery spaces.

Requirements regarding the keeping of an Oil Record Book as well as the form of the Oil Record Book are also found in MARPOL and in U.S. Coast Guard regulations (33CFR151).

Handling Method Employed by Member Lines:

Bilge and oily water residue are processed prior to discharge to remove oil residues, such that oil content of the effluent is less than 15 ppm as specified by MARPOL Annex 1.

I. **Glass, Cardboard, Aluminum and Steel Cans**: *ICCL member lines have agreed to eliminate, to the maximum extent possible, the disposal of MARPOL Annex V wastes into the marine environment through improved reuse and recycling opportunities, and that no waste will be discharged into the marine environment unless it has been properly processed and can be discharged in accordance with MARPOL and other prevailing requirements.*

Management of shipboard generated waste is a challenging issue for all ships at sea. This is true for cruise vessels, other commercial vessels, military ships, fishing vessels and recreational boats. Waste products in earlier days were made from natural materials and were mostly biodegradable. Today's packaging of food and other products presents new challenges for waste management. A large cruise ship today can carry over three thousand passengers and crew. Each day, an average cruise passenger will generate two pounds of dry trash and dispose of two bottles and two cans.

A strategy of source reduction, waste minimization and recycling has allowed the cruise industry to significantly reduce shipboard generated waste. To attain this, ICCL member lines have agreed to adopt a multifaceted strategy that begins with waste minimization to decrease waste from provisions brought onboard. This means purchasing in bulk, encouraging suppliers to utilize more efficient packaging, reusable packaging, and packaging materials that are more environmentally friendly—those that can be more easily disposed of or recycled. In fact, through this comprehensive strategy of source reduction, total waste on passenger vessels has been reduced by nearly half over the past ten years.

Another important component of the industry's waste reduction strategy is product or packaging recycling. Glass, aluminum, other metals, paper, wood and cardboard are, in most cases, recycled.

Handling Method Employed by Member Lines:

MARPOL Annex V ship waste is minimized through purchasing practices, reuse and recycling programs, landing ashore and onboard incineration in approved shipboard incinerators. Any Annex V waste that is discharged at sea will be done in strict accordance with MARPOL and any other prevailing requirements.

J. **Incinerator Ash**: *ICCL member lines have agreed to reduce the production of incinerator ash by minimizing the generation of waste and maximizing recycling opportunities, and that the discharge of incinerator ash containing hazardous components will be prevented through a program of waste segregation and periodic ash testing.*

Incinerator ash is not normally a hazardous waste. Through relatively straightforward waste management strategies, items that would cause the ash to be hazardous are separated from the waste stream and handled according to accepted hazardous waste protocols. In general, source segregation for waste streams is foundational for onboard waste management and is incorporated into the waste management manual required by MARPOL. Waste management for onboard waste streams include the following: source reduction, minimization, recycling,

collection, processing and discharge ashore. This allows the incinerator to be used primarily for food waste, contaminated cardboard, some plastics, trash and wood.

Member lines have agreed that incinerator ash will be tested at least once quarterly for the first year of operation to establish a baseline and that testing may then be conducted once a year. The member lines have further agreed that a recognized test procedure will be used to demonstrate that ash is not a hazardous waste. A recognized test procedure includes the following metals as indicators for toxicity - arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Special attention is placed on the removal of batteries from the incinerator waste stream. The use of incinerators saves landfill space and prevents the build up of material onboard that could become the breeding ground for insects, rodents and other vermin.

Handling Method Employed by Member Lines:

Proper hazardous waste management procedures are to be instituted onboard each ship to assure that waste products, which will result in a hazardous ash, are not introduced into the incinerator. Non-hazardous incinerator ash may be disposed of at sea in accordance with MARPOL Annex V. Ash identified as being hazardous is disposed of ashore in accordance with RCRA.

K. Wastewater reclamation

Because of the amounts of fresh water involved, and its restricted availability onboard ship (all fresh water must be either purchased or generated onboard), fresh water is a valuable commodity. Therefore, water management is extremely important and takes the form of both minimizing water usage and the potential reclamation and reuse of water for non-potable purposes. Many ICCL companies are researching new technology and piloting graywater treatment systems onboard their vessels. ICCL member operators also take numerous steps in onboard water management. Water management techniques include:

a. Use of technical water (for example: air conditioning condensate) where possible.
b. Use of water recovery systems (for example: filtering and reuse of laundry water – last rinse use for first wash).
c. Reclamation and reuse as technical water (flushing toilets, laundry, open deck washing) of properly treated and filtered wastewaters.
d. 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).

L. **Graywater**: *ICCL member lines have agreed to discharge graywater only while the ship is underway and proceeding at a speed of not less than 6 knots; that graywater will not be discharged in port and will not be discharged within 4 nautical miles from shore or such other distance as agreed to with authorities having jurisdiction or provided for by local law except in an emergency, or where geographically limited. The member lines have further agreed that the discharge of graywater will comply with all applicable laws and regulations.*

The term graywater is used on ships to refer to wastewater that is generally incidental to the operation of the ship. The International Maritime Organization (IMO) defines graywater as including drainage from dishwasher, shower, laundry, bath and washbasin drains. The US Clean Water Act (formally know as the Federal Water Pollution Control Act) includes galley, bath and shower water in its definition of graywater. The US regulations implementing this act do not

include a further definition of gray water. However, the regulations do include a provision that exempts all of the wastewater included in the IMO definition and other discharges incidental to the operation of a ship from the Clean Water Act's permitting program (formally known as the National Pollution Discharge Elimination System (NPDES) program). Finally, the US Coast Guard regulations include provisions that essentially combine the two definitions from the IMO and the Clean Water Act. None of the definitions of graywater include blackwater (discussed below) or bilgewater from the machinery spaces. Recent U.S. Legislation places limits on the discharge of graywater in the Alaska Alexander Archipelago.

Handling Method Employed by Member Lines:

Graywater is discharged only while ships are underway and proceeding at a speed of not less than 6 knots, in recognition that dispersal of these discharges is desirable and that mixing of these waters, which are discharged approximately 10-14 feet below the surface, by the action of the propellers and the movement of the ship, provides the best dispersal available.

M. **Blackwater**: *ICCL member lines have agreed to discharge* blackwater *only while the ship is underway traveling at a speed of not less than 6 knots and in accordance with applicable regulation, and that blackwater will not be discharged in port and will not be discharged within 4 nautical miles from shore or such other distance as agreed to with authorities having jurisdiction or provided for by local law, except in an emergency, or where geographically limited. The member lines have further agreed that the discharge of blackwater will comply with all applicable laws and regulations.*

Waste from toilets, urinals, medical sinks and other similar facilities is called "blackwater." Most cruise ships separate blackwater from other wastewaters before processing and/or discharge.

Treated blackwater is processed using an approved "Marine Sanitation Device" (MSD) that is intended to prevent the discharge of untreated or inadequately treated blackwater. Marine Sanitation Devices use physical, chemical and/or biological processes to allow effluent from the process to be discharged with characteristics that are similar to effluents from conventional, shoreside wastewater treatment plants.

All MSDs are certified and approved by the US Coast Guard. The US Coast Guard consults with the Environmental Protection Agency in evaluating processes used to certify MSDs.

The US Coast Guard regularly inspects MSDs while onboard ships for proper operation during their Control Verification Examinations. If the Coast Guard has reason to believe that an MSD is not properly operating, it can require the vessel owner to have the effluent sampled and analyzed by a qualified wastewater laboratory, with the results reported to the Coast Guard.

Handling Method 1 Employed by Member Lines:

Blackwater is treated by a properly working, approved Marine Sanitation Device prior to discharge. As agreed with and required by the U.S. Coast Guard, MSDs are tested periodically to ensure continued operation in accordance with certification standards.

Handling Method 2 Employed by Member Lines:

Untreated blackwater is discharged into the ocean at a distance greater than 4 nautical miles from any land, coral reef or designated sensitive area in accordance with MARPOL or such other distance as agreed to with authorities having jurisdiction

N. Advanced Wastewater Treatment Systems:

To improve environmental performance, cruise lines are testing and installing wastewater treatment systems that utilize advanced technologies. These onboard wastewater treatment systems are designed to result in effluent discharges that are of a high quality and purity; for example, meeting or surpassing standards for secondary and tertiary effluents and reclaimed water. Effluents meeting these high standards would not be subjected to the strict discharge limitations previously discussed.

O. Training and Educational Materials

Training is an important and ongoing part of every position and tasking onboard cruise ships. Not only is training necessary for the safe and economical operation of a ship, it is required by numerous international conventions and flag state regulations. The International Convention on Standards of Training Certification and Watchkeeping (STCW) for example, sets forth requirements for knowledge, experience and demonstrated competency for licensed officers of the deck and engineering departments and for ratings forming part of a navigation or engineering watch. These detailed requirements address not only the navigation of the ship but also the proper operation of the shipboard machinery and knowledge of and ability to assure compliance with the environmental protection requirements of MARPOL and the safety regulations of The International Convention on Safety of Life at Sea (SOLAS). SOLAS also requires that the ship's training manual (which contents are prescribed by regulation) be placed in the crew messes and recreation rooms or in individual crew cabins.

ICCL member lines have developed programs that raise the level of environmental awareness on the part of both the passengers and the crew. Each ship's crew receives training regarding shipboard safety and environmental procedures. Advanced training in shipboard safety and environmental management procedures is provided for those directly involved in these areas. Those directly responsible for processing wastes are given specific instruction in their duties and responsibilities and in the operation of the various equipment and waste management systems. Specific actions that our member lines have taken to train employees and increase passenger awareness include:

a. Announcements over the public address system and notices in ship newsletters that caution against throwing any trash overboard,
b. Signage and colorful posters placed in crew and passenger areas encouraging environmental awareness and protection,
c. Safety and environmental information booklets in crew cabins and crew lounges,
d. 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.

STCW, SOLAS and the International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code) require that training be fully documented. Individual training is documented in each crewmember's file. Ship training exercises, such as fire drills and emergency response exercises, are documented in the appropriate ship's logs. All of these

training documents are required to be available for oversight examination by both the ship's flag state inspectors and by port state authorities such as the United States Coast Guard.

Placards warning of the prohibition of the discharge of oil are posted on all ships operating in the navigable waters of the United States as required by U.S. Coast Guard regulations (33CFR155.450). Additionally, as part of required shipboard waste management plans, both Coast Guard regulations (33CFR151.59) and MARPOL (Annex V Regulation 9) require the posting of placards that notify the passengers and the crew of the disposal requirements for garbage. These placards are to be written in the official language of the State whose flag the ship is entitled to fly and also in English or French if neither of these is the official language. Once again, oversight of compliance with these requirements is conducted by ISM audits and frequent inspections by flag states and the United States Coast Guard.

The Safety of Life at Sea Convention mandates compliance with the ISM Code. This comprehensive Code requires that each vessel operating company and each vessel participate in a very strictly defined management program, under both internal and external audit and regulatory oversight, that sets forth detailed procedures for assuring compliance with safety, environmental protection, emergency response and training mandates.

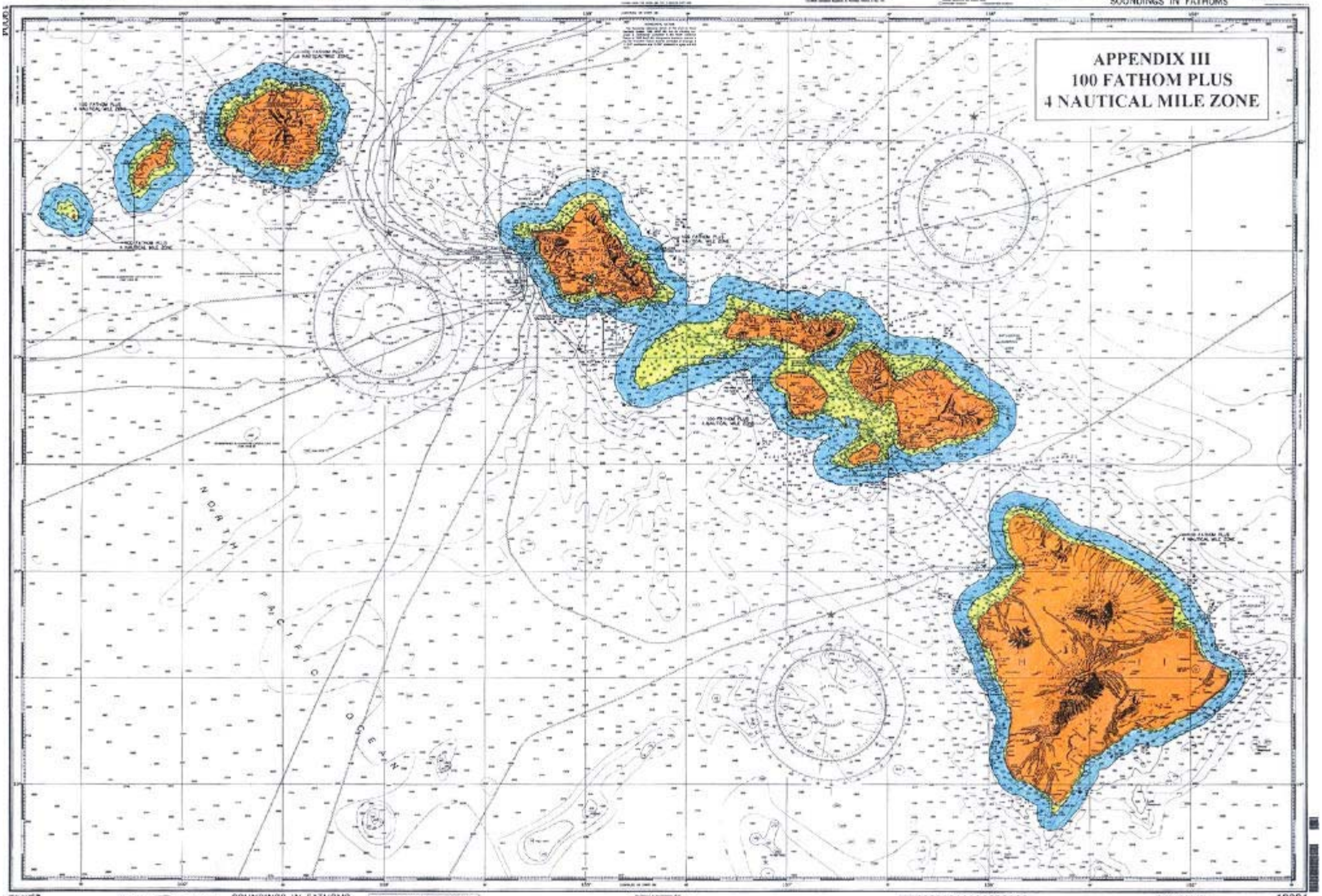
Equivalent equipment, practices and procedures

ICCL member lines have agreed that the use of equivalent or other acceptable practices and procedures shall be communicated to ICCL. As appropriate, such practices and procedures shall be included as a revision to this document. As an example, when improved systems for treating blackwater and graywater are perfected, shown to meet the requirements for MSDs and accepted by appropriate authorities for the treatment of graywater, the new systems and associated technology will be included together with their impact on the current standard of discharging graywater only while underway.

UNITED STATES
HAWAII

HAWAIIAN ISLANDS

SOUNDINGS IN FATHOMS



SOUNDINGS IN FATHOMS

19004

19004

Commandant
United States Coast Guard

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Phone: (202)-267-2978

COMDTPUB P16711
NVIC X- 2001
SEPTEMBER XX, 2001

NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. X – 2001

Subj: POLLUTION INSPECTION CHECKLIST AS ADDENDUM TO EXISTING FOREIGN PASSENGER VESSEL EXAMINATION BOOK, CG-840

Ref:
(a) Memorandum of Understanding (MOU) dated March 14, 2000 entered between Florida Department of Environmental Protection (FDEP) and the Florida-Caribbean Cruise Association (FCCA), a representative of the cruise industry in Florida.
(b) International Council of Cruise Lines (ICCL) Industry Standard E-01-01, "Waste Management Practices and Procedures."
(c) General Accounting Office Report of February 2000 on "MARINE POLLUTION – Progress Made to Reduce Marine Pollution by Cruise Ships, but Important Issues Remain."
(d) Title IV "Certain Alaskan Cruise Ship Operations" contained in Section 1(a)(4) of Public Law 106-554 enacted on December 21, 2000.
(e) 33 CFR 159, Subpart E – Discharge of Effluents in certain Alaskan Waters by Cruise Vessel Operations

1. PURPOSE: The checklist contained in Appendix 1 will eventually be incorporated as an extension to the existing Foreign Passenger Vessel Examination Book, CG-840. It is an extensive list of all possible examination items related to pollution prevention equipment, operation, plans and records. It is intended as a job aid to be used by Coast Guard senior marine inspectors during boardings of foreign-flagged passenger vessels. Inspectors should be especially familiar with the contents of the Marine Safety Manual (MSN), Volume II, Material Inspection, Section B, Chapter 6, "Pollution Prevention," and Section C, Chapter 2, Paragraph K, "Marine Sanitation Devices."

2. DIRECTIVES AFFECTED: This would revise the existing Foreign Passenger Vessel Examination Books CG-840, CV1, CV2 and CV3.

3. DISCUSSION: It is not the Coast Guard's intention to inspect all the items listed in the checklist at every exam; rather the inspector should use it as a reminder and use his/her own experience, knowledge, and judgment to determine the depth and scope of each examination. However, it is envisioned that the inspector will select at least one waste stream for a thorough and detailed examination. The selection will be based on the inspector's discretion, taking into

account the inspectors impression about the condition of the various waste stream systems on board the vessel; weighing the need to inspect all systems over a reasonable period of time; and maintaining randomness so that the operator has no advance knowledge of the waste stream that may be selected. It is incumbent on the vessel operator to be familiar with this NVIC and its enclosure. The operator should be able to present to the inspector a clear description of the practices and procedures for handling each waste stream and also to produce such records, as the inspector might need to verify compliance with these guidelines. Inspectors should be familiar with ICCL's Industry Standard E-01-01 "Waste Management Practices and Procedures," and SMS documentation on ICCL cruise ships should closely follow this standard. The different waste streams may be categorized as follows:

a. Oil pollution prevention systems, which include the oily water separator, the fuel/lubricating oil, transfer and sludge containment system. The inspector should verify that the oily water separator is operating within the desired range; that the alarms are working; that crew is knowledgeable and operating instructions are posted; and that maintenance is carried out at regular intervals. Actual piping may be verified against the approved piping diagram if the inspector notices modifications made to the system.

b. Gray water system includes discharges from galley, sinks, washbasin drains, showers, and baths. These may be held in large tanks before being pumped overboard. The handling and discharge of gray water will vary from ship to ship and the inspector should ensure the procedures followed by the ship correspond to those described in its Ship Management System (SMS) documentation. Gray water should normally not be pumped through a Marine Sanitation Device (MSD) because an MSD is not designed to handle the volume of gray water produced on a cruise ship. Other waste streams such as hazardous waste or medical waste must also not be mixed with gray water. Drains from hospitals, photo labs, slops, must be separate from the gray water system.

c. Black water system includes marine sanitation devices and other systems to treat, store, and discharge sewage. The checklist is designed to guide the inspector through some basic questions to ascertain whether the system is working as designed and that the crew is properly trained in its operation. For example, does the MSD appear to be properly installed? Is there adequate capacity for the number of persons on board? Are maintenance procedures being followed? Are there records of expendables being ordered: filters, chemicals, et cetera? Are the units operating within the manufacturer's design specifications? Are there clear and simple operating instructions? Is the crew knowledgeable in the use of the equipment/system?

d. Hazardous waste includes dry cleaning (PERC) waste, used paints and thinners, silver-bearing photo-processing waste, cleaning solutions and other similar items. Each vessel may vary in both the type and volumes of hazardous waste generated depending on the technology and processes aboard ship. This checklist is designed to evaluate on-board management of hazardous waste streams and to ensure that hazardous constituents are not released into the environment and that accountability is demonstrated via adequate waste disposal records.

e. Non-hazardous waste. This would include shipboard garbage including plastics and synthetic material, medical waste, food wastes and recyclables such as glass, cardboard,

aluminum and metal cans. Items to be checked should include waste sorted to prevent hazardous waste from entering the non-hazardous waste stream; no plastics or synthetics discharge overboard, separate and proper disposal of hazardous and non-hazardous incinerator ash; and proper disposal of grease from grease traps.

4. BACKGROUND:

a. On March 14, 2000, the Florida Caribbean Cruise Association (FCCA) signed a Memorandum of Understanding (MOU) with the Florida Department of Environmental Protection (FDEP) (Ref 1). Under this MOU, the FDEP recognized ICCL's Industry Standard E-01-01 "Waste Management Practices and Procedures," as meeting or exceeding the standards set forth in Florida laws and applicable Florida regulations. Though the Coast Guard was not a party to the MOU, the Coast Guard was in attendance during the signing and during prior discussions leading up to the MOU.

b. The FDEP also recognized the Coast Guard as the primary federal agency with the responsibility to examine cruise vessels for the proper administration of waste streams. As a result the Coast Guard worked in conjunction with FDEP and ICCL to develop a checklist section related to monitoring of hazardous waste and disposal.

c. At the same time, a number of other pollution prevention initiatives were also underway. The General Accounting Office (GAO) had just completed a report to Congress (Ref. 3) recommending that the Coast Guard initiate discussions with the cruise ship industry, other federal and state agencies, and environmental groups as appropriate, on the need for improved water quality standards for gray water and black water discharged from cruise ships and other vessels and assess the need to periodically monitor the water quality of these discharges. Subsequently, legislation was passed (Ref. 4) and regulations were promulgated (Ref. 5) related to monitoring and sampling of black water and gray water on cruise ships in Alaska.

d. The Coast Guard has taken this opportunity to prepare this checklist consolidating all CG pollution inspection items on passenger vessels and fill in the gaps as needed. The checklist was developed by the CG in conjunction with FDEP and ICCL.

5. ACTION: Officers in Charge Marine Inspections (OCMIs) should:

a. Bring this circular to the attention of appropriate individuals in the marine industry within their zones, especially those in the industry that are not members of ICCL.

b. Follow the guidance in this circular while conducting control verification examinations on passenger vessels.

c. If a vessel is detained for non-conformance with RCRA, notify the State RCRA program office immediately.

Encl: (a) Pollution inspection checklist for passenger cruise vessels

United States Coast Guard

FOREIGN PASSENGER VESSEL POLLUTION SURVEY EXAM BOOK

(FOR ALL PASSENGER VESSELS)

Name of Vessel	**Flag** ☐ No Change
IMO Number	**Case Number**
Date Completed	
Location	

Senior Marine Inspectors / Port State Control Officers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

Use of Foreign Passenger Vessel Pollution Survey Exam Book

This Checklist is an extensive list of all possible examination items related to pollution prevention equipment, operation, plans and records. It is intended as a job aid to be used by Coast Guard senior marine inspectors during boardings of foreign-flagged passenger vessels. It is not the Coast Guard's intention to inspect all the items listed in the checklist at every exam; rather the inspector should use it as a reminder and use his/her own experience, knowledge, and judgment to determine the depth and scope of each examination. However, it is envisioned that the inspector will select at least one waste stream for a thorough and detailed examination. The selection will be based on the inspector's discretion, taking into account the inspectors impression about the condition of the various waste stream systems on board the vessel; weighing the need to inspect all systems over a reasonable period of time; and maintaining randomness so that the operator has no advance knowledge of the waste stream that may be selected. It is incumbent on the vessel operator to be familiar with this checklist. The operator should be able to present to the inspector a clear description of the practices and procedures for handling each waste stream and also to produce such records, as the inspector might need to verify compliance with these guidelines.

As a port state responsibility, senior marine inspectors/port state control officers must verify that the vessels and their crews are in substantial compliance with international conventions and applicable U.S. laws. The senior marine inspectors/port state control officers, based on their observations, must determine the depth and scope of the examination. This document does not establish or change Federal laws or regulations. References given are only general guides. Refer to IMO publications, United States Code, Code of Federal Regulations, the Port State Control Job Aid, NVIC's, and any locally produced guidance for specific regulatory references. Inspectors should be especially familiar with the contents of the Marine Safety Manual (MSN), Volume II, Material Inspection, Section B, Chapter 6, "Pollution Prevention," and Section C, Chapter 2, Paragraph K, "Marine Safety Devices."

NOTE: *Guidance on how to examine foreign passenger vessels for compliance with pollution prevention can be found in Navigation Vessel Inspection Circular (NVIC) XX-2001.*

Conducting the exam

- ☐ Complete Certificates/Equipment Data/Records information (Section A).
- ☐ Review SMS Environmental Procedures (Section B).
- ☐ Examine MSD, OWS, Garbage logs, Oil Record Book as per CG-840 Exam books for CVQ or CVE as appropriate.
- ☐ Select one of the following waste streams for a detailed exam (Section C)

Section
- C1 Oil Pollution Handling Waste Stream (Bilge, Sludge, Fuel, Lube Oil etc)
- C2 Gray Water Waste Stream
- C3 Black Water/Sewage Waste Stream
- C4 Hazardous Waste Stream
- C5 Non-hazardous Waste Stream

NOTE: Many items listed are not mandatory requirements, but fall under the umbrella of "Management Policy". Inspectors should be familiar with ICCL's Industry Standard E-01-01 "Waste Management Practices and Procedures," and SMS documentation on ICCL cruise ships should closely follow this standard. If the areas listed are corporate policy as set out in the company's Safety Management System (SMS), then the vessel should be held accountable for the actions as required in 33 CFR 96 and SOLAS Chapter IX. If state or local laws exist that are more stringent that US or international law, then the local or state laws must be followed. These vessels are not exempt simply because they are a foreign vessel.

Pre-inspection Items

- Review MSIS records
- PSVH
- MISN (past)
- MIAR (past)
- Print Center for Disease Control Green Sheet http://www2.cdc.gov/nceh/vsp/vspmain.asp

Post-inspection Items

- Issue letters/certificates to vessel
- Issue Port Sate Control Report of Inspection-Form A
- Issue Port Sate Control Report of Inspection-Form B (if needed)
- Fill out Vessel Record Card (to include "Waste Stream" area inspected)
- MIAR activity case MARPOL (MAR) in addition to CCV or CVQ

Certificates / Reports

Name of Certificate	Issuing Agency	ID #	Port Issued	Issued Date	Expiration Date	Endorsement Date
International Oil Pollution Prevention						
International Sewage Pollution Prevention Certificate (if issued)						
US Public Health Report (USPH latest report)						
State Certificates of Emission (if applicable)						
State Certificates of Ballast Water (if applicable)						

Equipment Data

Equipment Name	Capacity		US or MEPC Approval Nr	Authority/Agency	Date of approval/acceptance
Oily Water Separator	Throughput				
Oily Water Separator	Throughput				
Oily Water Separator	Throughput				
Waste Oil Holding Tank Capacity					
Marine Sanitation Device Certificate of Type Test	Volume/day				
Marine Sanitation Device Certificate of Type Test	Volume/day				
Marine Sanitation Device Certificate of Type Test	Volume/day				
Black Water Tank Capacity					
Gray Water Tank Capacity					

Pollution Records

	Date	Location	Amount
Last time bunkers were taken on			
Next time bunkers will be taken on			
Last time sludge/oily bilge water pumped ashore			
Last operation of OWS or overboard discharge			
Garbage incinerated			
Garbage discharged overboard at sea			
Garbage discharged ashore			
Required U.S. Ballast Water Report			

SECTION
Certificates/Equipment Data/Record
Informatio

Environmental Procedures can be found in the Ship Management System (SMS) documentation or in Company Polices and maintenance manuals, inspection logs, oil record books, etc. The inspector should question the ship staff on procedures and normal operations, and compare the answer to what is written in procedures and manuals.

☐ Current pollution prevention records — 33 CFR 156.150, 33 CFR 155.700, 33 CFR 156.170

- Person-in-charge designated and qualified
- Transfer equipment tests and inspections
- Declaration of Inspection
- Ship to provide PMS logs and required PMS activities for the selected waste stream for verification.
- Verify SMS incorporates PMS activities and logs for all Waste Streams.

☐ Oil Record book (Part 1) (spot-check) — MARPOL Annex. I/20, 33 CFR 151.25

- Each operation signed by person-in-charge
- Each complete page signed by master
- Book maintained for 3 years
- Use of proper codes and version for vessel
- Transfer receipts/manifest match oil record book entries

☐ Shipboard Oil Pollution Emergency Plan — MARPOL Annex. I/26.1, 33 CFR 151.26

- Approved by administration (class society)
- Updated and current
- In English and working language of crew
- Correct contact numbers for National and Local Authorities (Port Authorities for ports visited not every COTP)
- Immediate Actions List
- Non Mandatory Provisions (if listed in SOPEP) Spill kits located and inspected

☐ Oil Transfer Procedures — 33 CFR 155.720, 33 CFR 155.750, 33 CFR 154.310

- Posted / available in crew's language
- Format in CFR order or cross reference index page
- List/description of products carried by vessel
- Description of transfer system including a line diagram of piping system (pumps, vents, valves, alarms, shutoffs, etc.)
- Number of persons required on duty
- Duties by title of each person
- Means of communication (two-way voice)
- Procedures to top off tanks and disconnect
- Procedures to report oil discharges
- Emergency response procedures (fire, spill, human exposure)

☐ Garbage Management Plan

- Garbage Record Book
- Type, amount, location, date/time
- Receipts
- Each entry signed by Officer-in-Charge and each page by Master
- Person-in-Charge Designated

☐ Hazardous Waste Disposal Documentation

- EPA Generator ID# _____
- Records
- Uniform Hazardous Waste Manifests
- Land Disposal Restriction Notification Certification Forms (LDR)
- Shipping Document for Regulated Medical Waste

☐ MARPOL V placard posted	MARPOL Annex V/9
☐ Garbage Management Plan	MARPOL Annex V
• Garbage Record Book	MARPOL Annex V/9(3)
• Type, amount, location, date/time	MARPOL Annex V/9(2)
• Receipts	
• Each entry signed by Officer-in-Charge and each page by Master	
☐ Person-in-Charge Designated	U.S. Local Regulations as applicable
☐ Non-Hazardous Waste Disposal Documentation	
• EPA Generator ID# _____	
• Records	
• Non-Hazardous Waste Manifests	Shipboard Records (ISM)
☐ Records of consumables kept updated Used and unused	MARPOL Annex IV
☐ International Sewage Pollution Prevention Certificate (when MARPOL IV enacted)	Shipboard policy (ISM)
☐ Recycling policy being followed	

Oil pollution prevention systems, which include the oily water separator, the fuel/lubricating oil, transfer and sludge containment system. The inspector should verify that the oily water separator is operating within the required range; that the alarms are working; that crew is knowledgeable and operating instructions are posted; and that maintenance is carried out at regular intervals. Actual piping may be verified against the approved piping diagram if the inspector notices modifications made to the system.

☐ Oily water Separator	MARPOL Annex I/16
• Verify bilge suction piping (section) matches approved piping diagram (direct to OWS, to holding tank, etc.)	
• Observe general housekeeping and cleanliness	
• Witness operational test of OWS, evaluate operator competency. System operating in published ranges	
• Test 15 ppm Oil Content Meter and alarm	
• Verify system automatically recirculates (3-way valve) or shuts down when >15ppm	
• Visually sample processed water	
• Compare ship's operational maintenance routine with actual Preventative Maintenance conducted. Request proof/documentation of maintenance completed (used consumables from OWS, receipts of service, technician reports, contractor disposal records)	
• Review meter calibration records	
• Lab analysis of sample as appropriate/needed	
☐ Oil Pollution placard posted	33 CFR 155.450
☐ Standard discharge connection	MARPOL Annex I/19 33 CFR 155.430 33 CFR 155.320
☐ Fuel/Lube oil fill and sludge discharge containment	
• Size (<1600GT ½ bbl, >1600GT 1 bbl)	
• Fixed (Built after 30Jun74) or Portable (before 30Jun74)	
• Drains	
• Scupper closures	33 CFR 155.470
☐ Prohibited oil spaces	33 CFR 155.790
☐ Deck/Bunker Station lighting	33 CFR 155.800/805
☐ Oil transfer hose (if vessel uses to transfer in U.S. waters) Including Tender Hoses	33 CFR 154.500 33 CFR 156.170
• Condition	
• Markings (MAWP, Man. Date, Test date)	
• Hose assembly requirements (blanked off if not used)	
• Tests and inspections	
☐ Waste oil incineration	
• Tests and inspections	
• Record keeping	

Section C2
Grey Water Waste Stream

Gray water system includes discharges from galley, sinks, washbasin drains, showers, and baths. These may be held in large tanks before being pumped overboard. The handling and discharge of gray water will vary from ship to ship and the inspector should ensure the procedures followed by the ship correspond to those described in its Ship Management System (SMS) documentation. Gray water should normally not be pumped through a Marine Sanitation Device (MSD) because an MSD is not designed to handle the volume of gray water produced on a cruise ship. Other waste streams such as hazardous waste or medical waste must also not be mixed with gray water. Drains from hospitals, photo labs, slops, must be separate from the gray water system.

(Clean Water Act)
33 USC 1251 et seq.
33 CFR 159.300
Subpart E for (D17)
Local Regulations

- ☐ Sources
  - Galley (ex. Dishwashers, floor drains, sinks)
  - Showers/Baths & washbasin drains
  - Laundry
- ☐ Prohibited Sources (hazardous materials, bilges, photo shop, print shop, hospital spaces etc.)
- ☐ Connections to the Black Water System
- ☐ Connections to Ballast Water System
- ☐ Number of tanks _____
- ☐ Total tank capacity _____ m3
- ☐ Volume Produced _____ (m3 per hour)
- ☐ Maximum number of days in port without discharging._____
- ☐ Sufficient capacity for persons on board and time in port?
- ☐ Review Gray water (SMS) Ship Management System documentation procedures.
- ☐ Ensure Quality Assurance / Quality Control Plan - vessel specific.
- ☐ Is Gray water processed and discharged?
- ☐ What are disposal Gray water procedures: Shore and at Sea. (company policy)
- ☐ What are their sampling procedures (vessel specific).
- ☐ How often do they take samples (record book if applicable)
- ☐ Samples test result - log record book.
- ☐ What are the State, Federal and local regulations for Gray water discharge?
- ☐ Disposal
  - Shore
  - At sea
  - Sampling/Testing
  - Note
    Some gray water treatment employs advanced ultra-filtration systems, these systems claim to reduce gray water waste by 85% - 90%.
  - Alaska - Effective July 2001, Operators of cruise vessels carrying 500 or more passengers and transiting applicable waters of Alaska are restricted in where they may discharge effluents and will be required to perform testing of sewage and gray water discharges. The Coast Guard will inspect, monitor, and oversee this process to ensure compliance with applicable water quality laws and regulations. (33 CFR 159)

Black water system includes marine sanitation devices and other systems to treat, store, and discharge sewage. The checklist is designed to guide the inspector through some basic questions to ascertain whether the system is working as designed and that the crew is properly trained in its operation. For example, does the MSD appear to be properly installed? Is there adequate capacity for the number of persons on board? Are maintenance procedures being followed? Are there records of expendables being ordered: filters, chemicals, et cetera? Are the units operating within the manufacturer's design specifications? Are there clear and simple operating instructions? Is the crew knowledgeable in the use of the equipment/system?

☐ Sources
- Toilets, Urinals, Water Closets, scuppers
- All Drainage from Medical Premises, photo labs, slops, must be separate from the gray water system.

☐ System installed, maintained and operated in accordance with approved plans and manufactures specifications. Modifications documented
- Tank Capacity
- Volume Produced
- Chemical/Biological treatment
- Chemical Treatment Level
- Sufficient chemicals, additives, approved cleaning materials onboard. (enzymes, "Gamazyme", chlorine)
- Operating instructions

☐ U.S. Marine Sanitation Device Requirements
- Type (I, II, III)
- Nameplate
  Should be designed to resist efforts of removal or efforts to alter the information.
- Placard
- Proper operation (macerators, treatment chemicals)
- Structural integrity, no leaks
- Certificate of Type Test
  Foreign Flag Vessels in U. S. Waters
  A foreign flag vessel that has a "Certificate of Type Test" under MARPOL Annex IV indicating that its sewage treatment plant meets the test requirements of Resolution MEPC.2 (VI) of the International Maritime Organization (IMO) will be accepted by the Coast Guard as being in compliance with 33 CFR 159.7(b) or (c). The Certificate of Type Test must be issued by or on behalf of a government that is a party to the MARPOL convention. Such a plant will be considered as fully equivalent to a Coast Guard certified Type II MSD as long as the unit is in operable condition. However, the unit may not be labeled as USCG certified. U.S. registered vessels will continue to be required to have Coast Guard certified MSDs per 33 CFR 159.

MARPOL Annex IV (Pending Ratification)
40 CFR 140.3 & .4
33 CFR 159.57
33 CFR 159.7
33 CFR 159.55
33 CFR 159.59
MARPOL Annex IV/8
40 CFR 140.3
MARPOL Annex IV/3
Resolution MEPC.2(VI) (pending ratification)
33 CFR159.65
NVIC 9-82

☐ Standard Discharge Connection (when Annex IV enacted)
- New ships 200 gross tons and above
- New ships less than 200 gross tons and carry more than 10 persons.
- Existing ships 200 gross tons and above after 10 years after the date entry into force of Annex IV

☐ Disposal
- Shore
- Overboard valves secured
- At sea (provide proof of location discharge)
- Logged position, speed (if required by management)
  - When comminuted and disinfected greater than 4 miles.
  - When not comminuted or disinfected greater than 12 miles.
  - Both to be discharged while ship is underway at greater than 4 knots.
- EPA Prohibited Areas
- Connections to the gray water system
- Alaskan Waters:
  Effective July 2001, Operators of cruise vessels carrying 500 or more passengers and transiting applicable waters of Alaska are restricted in where they may discharge effluents and will be required to perform testing of sewage and graywater discharges. The Coast Guard will inspect, monitor, and oversee this process to ensure compliance with applicable water quality laws and regulations. (33 CFR 159).

33 CFR 159.7
40 CFR 140.4
40 CFR 136

☐ Sampling/Testing
- Lab analysis of fecal coliform/total suspended solids in effluent
- Results of residual chlorine content in effluent testing
- Calibration records for dousing pump/proportioner

Hazardous waste includes dry cleaning (PERC) waste, used paints and thinners, silver-bearing photo-processing waste, cleaning solutions and other similar items. Each vessel may vary in both the type and volumes of hazardous waste generated depending on the technology and processes aboard ship. This checklist is designed to evaluate on-board management of hazardous waste streams and to ensure that hazardous constituents are not released into the environment and that accountability is demonstrated via adequate waste disposal records.

☐ Hazardous Waste

40 CFR 262
49 CFR 173
RCRA
SARA Title III
42 USC 11002(a)(3)
40 CFR 355 App A / B

- Has the company conducted a waste determination? Through Process Knowledge or Waste Analysis (circle one)? If not, hazardous waste may not be landed.
- Have responsible personnel received initial and refresher training.
- Is there any evidence that hazardous wastes are being incinerated, diluted, neutralized, or evaporated as a means of disposal.
- Is there any evidence of hazardous material being discharged overboard?
- Are hazardous wastes being properly stored, maintained, labeled, and placarded? Note any observations made of deficiencies, dates and nature of repairs.
- Does the crew have ready access to spill control and decontamination equipment?
- Are records maintained and manifests completed for potential hazardous waste streams as follows:
  - Silver Bearing Photo Processing Waste (developers, wash water, Silver Recovery Units)
  - X-Ray equipment
  - Print Shop Waste (inks, dyes, cleaning solvents)
  - Used Solvents, Paints & Thinners
  - Fluorescent/Mercury Vapor Bulbs
  - Batteries:
    - Nickel Cadmium (Nicad)
    - Lead Acid
    - Lithium
    - Alkaline
  - Pharmaceuticals/Narcotics
  - Dry Cleaning Waste (PERC, lint, sludge, filters, condensate water)
  - Aerosol Cans
  - Cleaning Solutions (de-scalers, acids, bases)
  - Expired pyrotechnics
  - Rags contaminated with hazardous wastes

The following excerpt from 40 CFR 262 regarding Resource Conservation and Recovery Act (RCRA) requirements is provided for background information only. The State RCRA program office must be consulted if any clarifications are needed for a particular situation.

HAZARDOUS WASTE HANDLING REQUIREMENTS

§ 262.11 Hazardous waste determination.
A person who generates a solid waste, as defined in 40 CFR 261.2, must determine if that waste is a hazardous waste using the following method:
(a) Determine if the waste is listed as a hazardous waste in subpart D of 40 CFR part 261.
(c) Or if not listed in subpart D of 40 CFR part 261, generator must determine if the waste is identified in subpart C of 40 CFR part 261 by either:
(1) Testing the waste according to the methods set forth in subpart C of 40 CFR part 261
(2) Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.

262.12 EPA identification numbers.
(a) A generator must not treat, store, dispose of, transport, or offer for transportation, hazardous waste without having received an EPA identification number from the Administrator.

262.20 General requirements.
(a) A generator who transports, or offers for transportation, hazardous waste for offsite treatment, storage, or disposal must prepare a Manifest OMB control number 2050-0039 on EPA form 8700-22, and, if necessary, EPA form 8700-22A, according to the appendix to part 262.
(b) Generator must designate on manifest one facility that is permitted to handle the waste described on the manifest.

262.23 Use of the manifest.
(a) The generator must:
(1) Sign the manifest certification by hand; and
(2) Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest; and
(3) Retain one copy, in accordance with § 262.40(a) and give the transporter the remaining copies of the manifest.

262.30, .31, .32 & .33 Packaging, Labeling, Marking and Placarding.

Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator must package, label, mark and placard the waste in accordance with the applicable Department of Transportation regulations on packaging under 49 CFR parts 172, 173, 178, and 179. Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator must mark each container of 110 gallons or less used in such transportation with the following words and information displayed in accordance with the requirements of 49 CFR 172.304: **HAZARDOUS WASTE – Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency. Generator's Name and Address – – – – – . Manifest Document Number – – – – – – .**

262.34 Accumulation time.
A generator may accumulate hazardous waste on-site for 90 days or less for large quantity generator and 180 days or less for small quantity generator, without a permit or without having interim status.
The date upon which each period of accumulation begins must be clearly marked and visible for inspection on each container and while being accumulated on-site, each container and tank is labeled or marked clearly with the words, "Hazardous Waste."

§ 262.40 Recordkeeping.
(a) A generator must keep a copy of each manifest signed in accordance with § 262.23(a) for three years or until he receives a signed copy from the designated facility which received the waste. This signed copy must be retained as a record for at least three years from the date the waste was accepted by the initial transporter.
(b) A generator must keep a copy of each Biennial Report and Exception Report for a period of at least three years from the date of the report.
(c) A generator must keep records of any test results, waste analyses, or other determinations made in accordance with § 262.11 for at least three years from the date that the waste was last sent to on-site or off-site treatment, storage, or disposal.

Section C5
Non-Hazardous Waste Stream

Non-hazardous waste would include shipboard garbage including plastics and synthetic material, certain medical wastes, food wastes and recyclables such as glass, cardboard, aluminum and metal cans. Items to be checked should include waste sorted to prevent hazardous waste from entering the non-hazardous waste stream; no plastics or synthetics are to be discharged overboard, separate and proper disposal of hazardous and non-hazardous incinerator ash; and proper disposal of grease from grease traps.

33 CFR 151.63
MARPOL Annex V/9
MARPOL Annex V/3

☐ Garbage Management Procedures
- Shipboard garbage properly handled in accordance with Garbage Management Plan
- No plastics or synthetics discharged overboard
- Waste sorted to prevent hazardous waste entering non-hazardous waste stream or incinerated.
- Incinerator ash if discharged overboard free of plastic residue (clinkers) or free of unburned food wastes if landed ashore.
- Foreign Food Wastes handled per APHIS regulations
- Medical Wastes-incinerated or manifested as Bio-Hazardous Waste.
- Discharged outside of special areas only (when special area restrictions are in effect)
- Incinerator operation observed (if in operation)

☐ Procedures to minimize amount of potential garbage
- Is vessel encouraging ship suppliers to consider alternate means of packing, use of other than plastics?
- Is vessel using reusable packing?
- Is waste generated while in port disposed to shore reception facility prior to sailing.

☐ Recycling
- Is ships crew following policy for recycling.

☐ Maintenance conducted on equipment
- Incinerator
- Grinders

☐ Human factors
- Crew in garbage room comfortably positioned to perform jobs.
- Warning signs posted around equipment.
- Personal protective equipment available, functioning and in place.
- Sanitation, from a health standpoint, being maintained (ILO 147).

☐ Record keeping
- Garbage Record Book
- Type, amount, location, date/time
- Receipts
- Each entry signed by Officer-in-Charge and each page by Master
- Any reports of alleged inadequacy of port reception facilities for garbage on file.

AGENT
Vessel representative hired by the ship's owners. Ship's agent may be tasked with various jobs such as: ensuring proper vessel documentation and compliance.

AUTOMATIC STOPPING DEVICE
Is a control mechanism that ensures discharge is stopped when the oil content of the effluent exceeds 15 parts per million (PPM).

BALLAST
Used to improve the stability and control the draft of a ship. (In Ballast - having only ballast for a load)

BLACK OIL
A black or very dark brown colored layer of oil. Depending on the quantity spilled, oil tends to quickly spread out over the water surface to a thickness of about one-millimeter.

BLACK WATER (sewage)
Examples - possible sources toilets, urinals, and medical waste.

CARGO SHIP
Any ship which is not a passenger ship.

COTP
Captain of the Port.

CWA
Clean Water Act.

CVE
Control Verification Exam.

DISPERSION
The breaking up of an oil slick into small droplets which are mixed into the water column as a result of breaking waves and other sea surface turbulence.

EFFLUENT
To flow out. (Waste material, refuse, and sewage)

EMULSIFICATION
The formation of a water - in - oil mixture. The tendency for emulsification to occur varies with different oils and is much more likely to occur under high-energy conditions (wind and waves).

EPA
Environmental Protection Agency

15 PPM ALARM
An alarm that activates when the effluent passing though oil-filtering equipment exceeds 15 PPM.

GRAY WATER
Includes discharges from galley, sinks, washbasin, drains, showers and baths. These may be held in large tanks prior to being discharged overboard (State, Fed, regulation permitting).

HSSC
Harmonized system of survey and certification.

ICCL
International Counsel of Cruise Lines, participates in regulatory and policy development process to promote all measures that foster a safe, secure, healthy cruise ship environment.

ICLL
International Convention for Load Lines.

IMO
International Maritime Organization. Specialized agency of the United Nations concerned solely with maritime affairs. Responsible for international treaties, conventions, resolutions and codes to improve Maritime safety.

ISM
International Safe Management

MARPOL
The international convention for the prevention of pollution from ships.

MSC
Maritime Safety Committee. The highest technical body of the IMO deals with issues such as aids to navigation, vessel equipment, and construction, manning requirements handling dangerous cargoes, hydrostatic information and marine casualty information.

MSD
Marine Sanitation Device.

OIL CONTENT METER
An instrument used to measure continuously the oil content of the effluent in the line to ensure that the operation does not contravene the convention.

OIL FILTERING EQUIPMENT
Equipment that uses any combination of a separator, filter or coalescer, and also a single unit designed to produce an effluent with oil content less than 15ppm. (MARPOL reg 16(1)

Oily Water Separator
The basic principle of oil / water separation is their difference in specific gravity. The specific gravity of most oils is less than water; therefore, it will naturally float to the top of an oil / water solution. Small droplets of oil float to the top much slower than large droplets. This is due to the large surface area to mass ratio. To speed up the process of separation, OWS units form larger oil droplets out of smaller ones, thus decreasing the surface area to mass ratio. The increased mass of the oil droplet increases its buoyancy, thus causing it to rise more quickly.

PASSENGER SHIP
A ship which carries more than 12 passengers.

PMS
Preventative Maintenance System

QUALIFIED INDIVIDUAL (QI)
The person authorized by the responsible party to act on their behalf, authorize expenditures and obligate organization's resources.

RCRA
Resource Conservation and Recovery Act (RCRA) was enacted in 1976 to address the issue of how to safely manage and dispose of the huge volumes of municipal and industrial waste generated nationwide.

RECOVERABLE OIL
Oil that is in a thick enough layer on the water to be recovered by conventional techniques and equipment. Only black or dark brown oil, mousse, and heavy sheens (dull brown) are generally considered thick enough to be effectively recovered by skimmers.

SEPARATION EQUIPMENT
A device designed to remove enough oil from an oil-water mixture to provide a resulting mixture with an oil content of less than 100ppm, or 15ppm, such as an Oily Water Separator (OWS).

SLICK
Oil spilled on the water, which absorbs energy and dampens out the surface waves making the oil appear smoother or slicker than the surrounding water.

SHEEN

A sheen is a very thin layer of oil (less than 0.0001 inches or 0.003mm) floating on the water surface and is the most common form of oil seen the later stages of a spill. According to their thickness, sheens vary in color ranging from dull brown for the thicker layers to rainbows, grays silvers and almost transparent for the thinnest layers.

SLUDGE TANKS

Every ship of 400 GT or more must be provided with a tank or tanks of adequate capacity, in regard to type of machinery and length of voyage, to receive the oil residues (sludge) which cannot be dealt with otherwise in accordance with MARPOL Annex I.

SMS

Safety Management System (sometimes referred to as an SQM).

SOLAS

Safety of Life at Sea. The international convention for the Safety of Life at Sea.

SOPEP

Shipboard Oil Pollution Emergency Plan.

STCW

The international convention on Standards of Training, Certification and Watchkeeping. (STCW)

TANKER

Is a cargo ship constructed or adapted for the carriage in bulk of liquid cargoes of an inflammable nature.

TARBALLS

Weathered oil that has formed pliable balls or patches that float on the water. Tarballs may vary in size from millimeters to on foot across. Depending on exactly how weathered or hardened, the outer layer o f the tarball is, sheen may or may not be present.

TRANSFER

Any movement of oil or hazardous material to, from or within a vessel by means of pumping, gravitation, or displacement.

Single EPA ID Number for Cruise Ships
State Required Annual Reporting Components

EPA and the Florida Department of Environmental Protection have developed a guidance for assigning identification numbers (ID #) to individual cruise ships. Florida in conjunction with other States developed procedures for annual reporting to meet State requirements.

Single ID number per cruise ship:

We are proposing that individual cruise ships be assigned EPA ID #s as generators of hazardous waste for purposes of RCRA. The procedures being proposed are detailed below.

A cruise ship would determine its American-based home port State (the State in which it has its main port of call). After determining the home port State, the cruise line would notify that State or EPA Regional office of its hazardous waste activities and the generator size of each cruise ship based on the quantity of hazardous waste generated per ship in accordance with 40 CFR 261.5(c). The home port State or EPA Regional office will issue an EPA identification number for each individual cruise ship using the current established procedure. The number will reflect the home port State initials and ten alpha numeric characters. We are recommending that the State consider a ship's International Maritime Organization number (ship registry number). This is generally a five to seven digit number. Zeros can be added before or after the number to reach the required ten spaces. (RCRAInfo will reject duplicate numbers; therefore, placing the zeros after the IMO number would be a better practice.) Using the IMO number will allow for coordination with the Coast Guard, as this is the number they use most often.

To identify the ID as a cruise ship, enter the SIC code 4481 "deep sea passenger transportation, except by ferry". In 2002 with the next release of RCRAInfo, NAICS codes will replace SIC codes. The corresponding NAICS code which will then apply is 483112 " deep sea passenger transportation". Anyone wishing to generate a report on cruise ships can structure the query referencing the SIC or NAICS code to retrieve the ID's for cruise ships.

After the identification number is assigned, it will remain with that ship and be used on all hazardous waste manifests regardless of where the waste is offloaded in the U.S. The assignment of the ID number will not impact the applicability of State-specific RCRA requirements. For example, when waste is offloaded in a State, the cruise ship will comply with that particular State's RCRA requirements whether or not that State assigned its ID number. The ship will be required to provide records to the individual State as required by State law.

Submission of State Annual Reports for inclusion into the EPA Biennial Report System:

Cruise ships, as generators, are under the same national and State-specific reporting requirements as all generators. Depending on a cruise ship's "home port State", reporting requirements will vary and any required reports are due to the responsible government agency.

Currently the States send reports to EPA to be input into the Biennial Reporting System (BRS) on a biennial basis. However, many States require annual reporting from generators and treatment, storage, and disposal facilities rather than biennial reports. Therefore, for any generator, such as the cruise ship, the annual report required by the State could be modeled from the existing PC-based national electronic submittal/reporting system for BRS. An example of this database is available at:
http: //www.epa.gov/epaoswer/hazwaste/data/brs01/forms.htm and a working model of the BRS type software is available from the State of Florida Department of Environmental Protection at:
www.dep.state.fl.us/dwm/programs/hazardous/brs/data.htm.

Manifest data may be input and submitted via BRS data files (flat files), then uploaded to the national RCRAInfo BRS portion of the database. Reports could be generated by the cruise ship company using the BRS-type software, while the States and EPA could generate reports directly from RCRAInfo. The BRS software is capable of reporting waste by individual state, all wastes offloaded by the entire cruise line fleet, by each vessel, and at each State port facility. This software can be provided to the cruise lines and the cruise lines can then submit information in flat file format electronically to the home port state or any requesting state. Reports may be submitted electronically or hard copy as required by state law. Canada or other foreign countries with manifest requirements could potentially be aggregated in the same program for reporting purposes.

States wishing to record waste activity outside the federally mandated biennial report cycle may use the national RCRAInfo database to house that information (i.e., the annual report) as long as the data created meets the required file specifications. This information will only be available if it is provided by the States to EPA. Once in the database, any State will have read access to the information. Confidential business information will not be entered into the database.

Listed below are examples of the type information that can be input or retrieved from the database.

TARGETED LISTS:

This option brings up a set of choices to create a list of generators that generate wastes fitting a set of criteria as identified in further choice boxes, along with the amount of generation of the criteria wastes in tons by year. Lists can be created based on location (City/County), wastes, site name, or on-site activities, with an optional second layer filter for waste types and/or sources. The output may be p

rinted, viewed, or copied to a file in EXCEL, DBF, o
r Text format, totaled by year or other parameter, o
r sorted by value. This list may also be used as a f
ilter for other reports to report on only wastes gen
erated by the given subset of generators.

SUMMARY REPORTS:

Generation:

These options bring up a set of choices to create a summary of waste generation in tons by year: sorted by Origin, SIC, Source, Waste Code or Waste Type (Form code); fitting a set of criteria as identified in further choice boxes. EPA Waste Code reports will total to over 100% due to multiple WASTE CODE listings per waste. This summary may optionally be done for only a selected list of generators. There is also an optional second layer filter for waste form types and/or sources to be included in the summary amounts. The output may be printed, viewed, copied to a file in EXCEL, DBF, or Text format, or totaled by year.

Shipments:

These options bring up a set of choices to create a summary of waste shipped off-site in tons by year: sorted by Origin, SIC, Source, Receiving Facility, or Waste Type (Form code); fitting a set of criterion as identified in further choice boxes. This summary may optionally be done for only a selected list of generators. There is also an optional second layer filter for waste types and/or sources to be included in the summary amounts. The output may be printed, viewed, copied to a file in EXCEL, DBF, or Text format, or totaled by year.

TITLE XIV--CERTAIN ALASKAN CRUISE SHIP OPERATIONS

SEC. 1404. LIMITATIONS ON DISCHARGE OF TREATED SEWAGE OR GRAYWATER.

(a) No person shall discharge any treated sewage or graywater from a cruise vessel into the waters of the Alexander Archipelago or the navigable waters of the United States within the State of Alaska or within the Kachemak Bay National Estuarine Research Reserve unless--

(1) the cruise vessel is underway and proceeding at a speed of not less than six knots;

(2) the cruise vessel is not less than one nautical mile from the nearest shore, except in areas designated by the Secretary, in consultation with the State of Alaska;

(3) the discharge complies with all applicable cruise vessel effluent standards established pursuant to this Title and any other applicable law; and

(4) the cruise vessel is not in an area where the discharge of treated sewage or graywater is prohibited.

(b) The Administrator, in consultation with the Secretary, may promulgate regulations allowing the discharge of treated sewage or graywater, otherwise prohibited under paragraphs (a)(1) and (a)(2) of this section, where the discharge meets effluent standards determined by the Administrator as appropriate for discharges into the marine environment. In promulgating such regulations, the Administrator shall take into account the best available scientific information on the environmental effects of the regulated discharges. The effluent discharge standards promulgated under this section shall, at a minimum, be consistent with all relevant State of Alaska water quality standards in force at the time of the enactment of this Title.

(c) Until such time as the Administrator promulgates regulations under paragraph (b) of this section, treated sewage and graywater may be discharged from vessels subject to this Title in circumstances otherwise prohibited under paragraphs (a)(1) and (a)(2) of this section, provided that--

(1) the discharge satisfies the minimum level of effluent quality specified in 40 CFR 133.102, as in effect on the date of enactment of this Section;

(2) the geometric mean of the samples from the discharge during any 30-day period does not exceed 20 fecal coliform/100 ml and not more than 10 percent of the samples exceed 40 fecal coliform/100 ml;

(3) concentrations of total residual chlorine may not exceed 10.0 mg/l; and,

(4) prior to any such discharge occurring, the owner, operator or master, or other person in charge of a cruise vessel, can demonstrate test results from at least five samples taken from the vessel representative of the effluent to be discharged, on different days over a 30-day period, conducted in accordance with the guidelines promulgated by the Administrator in 40 CFR Part 136, which confirm that the water quality of the effluents proposed for discharge is in compliance with paragraphs (1), (2) and (3) of this subsection. To the extent not otherwise being done by the owner, operator, master or other person in charge of a cruise vessel pursuant to section 1406, the owner, operator, master or other person in charge of a cruise vessel shall demonstrate continued compliance through periodic sampling. Such sampling and test results shall be considered environmental compliance records that must be made available for inspection pursuant to section 1406(d) of this Title.