

SUMMARY NOTES<sup>1</sup>

***On Board with Cruise Ship Pollution Prevention***

**A Public Roundtable Discussion sponsored by the  
Pacific States/British Columbia Oil Spill Task Force**

January 21, 2004

San Diego, California

**Michael Conway, Moderator**

**PARTICIPANTS**

In addition to the invited speakers noted below, Roundtable attendees included representatives from Holland American Lines; the California Office of Spill Prevention and Response; the US Coast Guard Pacific Area; the Washington Department of Ecology; the Transportation Institute; Foss/NRC Environmental; PCCI; Kaye, Rose, & Maltzman; the Mexican Navy; the California Water Quality Board; the California State Lands Commission; the US Coast Guard District 14; the British Columbia Ministry of Water, Land, and Air Protection; the US Coast Guard MSO San Diego; the Monterey Bay National Marine Sanctuary; the San Diego Baykeeper; Oceana; the US Navy; the Port of San Diego; the Alaska Department of Environmental Conservation; the San Diego Harbor Safety Committee; Booz, Allen, & Hamilton; the US Coast Guard District 17; Det Nortiske Veritas; the O'Brien's Group; and Quay Cruise Agencies USA.

(For biographical information on invited speakers, please reference Attachment 1; for photos of the event, please reference Attachment 2)

**KEYNOTE ADDRESS: Carlton Moore, Administrator, Office of Spill Prevention and Response (OSPR), California Department of Fish & Game (California's Oil Spill Task Force Member)**

- Carl noted that the cruise ship industry generates more than \$12 billion dollars in the US, of which \$1.8 billion is spent in California's three ports; 750,000 passengers are served in Los Angeles, San Diego, and San Francisco.
- Carl pointed out that aircraft carriers and other vessels operated by the US Navy in San Diego also generate waste streams from large numbers of people. Yet the waste streams from cruise ships have raised more concerns.
- OSPR's Technical Advisory Committee and several California harbor safety committees are looking beyond oil spill issues and asking questions about this topic. The Pacific States/BC Oil Spill Task Force is interested in the topic for several reasons. Not only do cruise ships carry a large amount of petroleum product as fuel, but there have also been a number of instances where cruise ship operators have been responsible for illegal bypasses of oil/water separator systems required by law.
- Carl reviewed Bluewater Network's petition of EPA asking for an investigation into oil, waste water, and solid waste discharges and management practices on cruise ships and cited EPA actions and authorities (see Dr. Kim's remarks below).
- The Crystal Harmony delayed reporting a large wastewater discharge off of Monterey Bay by five months, and this angered citizens of that area. Carl noted that the dumping wasn't illegal, although it did violate company policy.
- This concern in California led to creation of the California State Cruise Ship Environmental Task Force (see Jack Geck's presentation below), which submitted a report to the California Legislature in August of 2003. Among the recommendations in the report was one to create a Marine Environmental Protection Program for the State of California; if this occurs, OSPR will probably be involved in its implementation.

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<sup>1</sup> NOTE: This is a meeting summary and is not intended as a verbatim record of all presentations or comments made during the meeting.

## **ALASKA'S CRUISE SHIP INITIATIVE: Michael Conway, MAC Leadership & Management**

**Consulting** (formerly of the Alaska Department of Environmental Conservation)

- Mike explained that the Cruise Ship Initiative developed in 1999 in response to overwhelming public concern regarding cruise ship pollution and its possible impacts on fisheries and the marine environment. Issues of concern included illegal discharges of oily water and chemicals, air pollution impacts while in port, and reports of discharges of inadequately treated sewage, graywater, and garbage in the Inside Passage. These concerns were magnified by the dramatic growth in the industry. ADEC had no information about whether this really was a problem, and discovered that other responsible agencies also lacked information. ADEC wanted to find out what the real story was.
- Since there was no existing model for dealing with this problem, ADEC partnered with the US Coast Guard and EPA to hold a workshop where the public could describe their concerns to the regulated industry, and discuss their responses. Everyone agreed that further work was necessary, so the agencies and the industry establish a Steering Committee which also included representatives from industry and local communities. Public and environmental groups participated at the workgroup level.
- Workgroups were established to address air quality, wastewater and waste management, oil spill response, and environmental leadership.
- The Air Quality Work Group focused on air monitoring for sulfur dioxide, nitrogen oxide, particulate matter levels, and smoke stack opacity monitoring. Air quality was of particular concern in Juneau, which is subject to air inversions.
- The Wastewater and Waste Management Work Group focused on blackwater and graywater discharges as well as the handling of chemical wastes from dry cleaning, photography, hair solons, and other sources. Bilge water and ballast water were not addressed by this group, since these were being addressed by other initiatives, i.e., the US Coast Guard is addressing ballast water at the national level. Bilge water discharges were not part of the initiative, because of existing regulatory programs and the consensus that this was not a cruise ship-only matter.
- Oil spills were addressed by the Oil Spill Response Work Group, which eventually merged into the SE Alaska Subarea Regional Contingency Plan Work Group.
- The Environmental Leadership Work Group evaluated Best Management Practices and ways in which the cruise industry could go above and beyond regulatory requirements. Consideration was given to establishing a "Marine Star" program. This group also facilitated an industry open-house and public discussions, allowing anyone to tour the vessels and publicly discuss cruise ship environmental controls.
- After the first six months of work by these committees, they acknowledged that they needed to monitor discharges to establish what the real risks were. The cruise industry agreed to monitoring protocols. The data generated from this monitoring effort got Governor Knowles' attention; he spearheaded efforts to pass state legislation at a special session in 2001.
- US Senator Frank Murkowski from Alaska also succeeded in passing federal legislation specific to Alaskan waters, but there were some differences between the state and federal laws, as follows:

<b>Federal Law</b>	<b>Alaska Law</b>
Large vessels only (500+ passengers)	Large (250+ passengers) and small vessels of 50-249 passengers
Treated blackwater & graywater limits; effluent limits for blackwater only	Treated blackwater & graywater limits; effluent limits for both
US Coast Guard enforces	ADEC enforces

- During 2002, the first full year of implementation for the state regulations, 24 large vessels, 14 small vessels, and five Alaska ferries were registered. 167 wastewater samples were collected and tested from all vessels.
- Mike noted that 18 cruise ships operating in Alaska now have super treatment systems, which qualify these vessels to discharge anywhere in state waters under any conditions.

- Ambient air quality sampling was done in Juneau, and all sulfur dioxide, nitrogen oxide, and particulate matter samples were well below state and federal standards. Fewer vessel air emission violations were recorded in Juneau, Haines, Skagway, and Ketchikan than in 2000. The cruise industry has modified engines and operations while in port, including using shoreside power where possible. They've also experimented with fuel additives, cleaner fuels, and gas turbines.
- A scientific advisory panel created when the Steering Committee and Work Groups were first established continues to meet; their charge has been to examine vessel wastewater discharges into the marine environment. Panel members have expertise in the fields of oceanography, chemistry, toxicology, water pollution, dispersion modeling, microbiology, and marine ecology.
- Regulations to implement the Commercial Passenger Vessel Environmental Compliance Program were developed through a negotiated regulation process with participation by a stakeholder committee including industry citizen groups, tribes, municipalities, and the US Coast Guard; all meetings were open to the public.
- ADEC has concluded that the cruise ship regulations established in the legislation are working, but recognize that small passenger vessels are still a problem. Small passenger vessels (50 berths or greater, and less than 250 berths) were given more time to comply with the new requirements, since less was known about the impact of their operations and the cost of changes would be extreme in such a short time. The results of sampling the smaller vessels concerned the Science Advisory Panel. The Panel has reported that more work should be done to reduce pollution from those smaller vessels.
- These regulatory and monitoring programs are funded by a vessel fee per voyage, based on passenger capacity. \$406,500 was collected in 2001 and covered staff time, sampling, quality control, database, scientific analysis, and enforcement.
- Mike noted that Alaska's Cruise Ship Initiative was a semifinalist for the prestigious "Innovations in American Government Award" in 2002.
- Denise Koch is the current Manager of the Commercial Passenger Vessel Environmental Compliance Program; her phone number is 907-465-5272 and her email address is: [denise\\_koch@envircon.state.ak.us](mailto:denise_koch@envircon.state.ak.us) More information on the program can also be found on the web at [http://www.state.ak.us/dec/water/cruise\\_ships/index.htm](http://www.state.ak.us/dec/water/cruise_ships/index.htm)

#### **CRUISE SHIP WASTESTREAMS: Jack Geck of the Office of Spill Prevention and Response, California Department of Fish and Game**

- Jack explained that the California Cruise Ship Environmental Task Force (Task Force) was established in 2003 by Assembly Bill (AB) 2746, which was signed into law in 1999. The Task Force duties were to gather information to prepare a report evaluating the following: environmental practices and waste streams of cruise ships; potential environmental impacts resulting from those practices and waste streams; and the current regulatory structure. The report also provides recommendations for improvements in the regulation, monitoring, and reporting required of cruise ships in regards to the environment.
- The Task force found the following wastes generated aboard cruise ships (information on quantities was not provided by the vessel operators):

Air Emissions	Gray water
Hazardous waste	Medical waste
Ballast water	Florescent light bulbs
Sewage or black water	Incinerator residue
Dry cleaning solvents	Paint and Solvents
Used sand or bead blasting residue	Food wastes
Plastics	Scrap metals
Batteries	Glassware, bottles and crockery
Swimming pool chemicals	Cleaning agents
Miscellaneous spray cans	Expired medicines/ drugs
Cardboard and paper products	Miscellaneous garbage
Printer cartridges	Insecticides

#### Photographic processing chemicals

- The task force discovered that hazardous wastes were not offloaded from the vessels in compliance with either state or federal regulations. The regulations require that waste generators document wastes created on the vessels and transported to shore and that wastes must be hauled by state certified waste haulers and disposed of properly at hazardous waste reception facilities. No paperwork was received by California State agencies for over 1,600 tons of wastes which the vessel operators stated they disposed of in California. Additionally the vessels routinely disposed of wastes by incineration but would not divulge the location in which they incinerated those wastes, Jack noted.
- The task force found that vessels routinely dump treated and untreated sewage and sewage sludges at sea. International regulations allow that treated sewage may be dumped at sea, but no closer than 4 miles from shore. Several cases occurred over the last few years in which treated sewage was dumped in state waters and into the waters of the marine sanctuaries.
- Based upon the findings of the Task Force and the history of the cruise ship industry the task force recommended that state statutes be enacted, and that an inspection program be implemented to inspect and monitor cruise ships. The Task force also recommended that the cruise industry be taxed to pay for the inspection program.
- For a complete text of the Task Force report to the California State Legislature please refer to the following web site: [www.swrcb.ca.gov/legislative/docs/cruiseshiprgrpt.pdf](http://www.swrcb.ca.gov/legislative/docs/cruiseshiprgrpt.pdf)

#### INDUSTRY SOLUTIONS TO WASTE STREAM CONCERNS: Tom Dow, Vice President, Public Affairs, Carnival Corporation

- Tom explained that the growth in cruise ship traffic in California was largely seasonal, except in Los Angeles. He also commented that the dramatic development of the industry had been highly visible, with the result that communication and coordination with the public and government is essential. While he recognized that regulation is inevitable, he stressed the value of consistency among jurisdictions, since cruise ships move between ports.
- Regarding the issue of oil spills, Tom noted that Alaska's new non-tank vessel contingency planning regulations cover cruise ships as well as other non-tank vessels and railroad cars. (EDITORS' NOTE: All West Coast states except Hawaii require oil spill contingency plans from cruise ships and other non-tank vessels. British Columbia is covered by the Canada Shipping Act, which requires that cruise ships have a contract with the approved regional spill response organization while operating in Canadian waters.)
- Cruise lines are retrofitting their ships with advanced sewage treatment systems, Tom reported. Systems which meet tertiary treatment standards may discharge in any location in Alaska, and he is negotiating with Washington and California for adoption of similar policies. Different cruise line operators are using different treatment systems, and the demand is driving market development of more advanced systems, which will benefit the vessel industry as a whole. Low-flush toilets and other water-saving systems will also help.
- Tom noted that the federal law that applies to Alaska requires effluent testing twice/month in order to stay certified for operation in that state; he'd like to see other states that are considering regulations accept the same tests. The industry has agreed that the standard for discharges of wastewater in Alaska requires effluents not to exceed a fecal coliform standard of 20 colonies per ml while in port, or 200 colonies per ml if one mile offshore and underway at a speed of 6 knots or greater. Since fecal coliform do not survive in salt water, the primary concern is with waste water discharges in warm water locations outside of Alaska.
- Tom noted that concerns had been expressed in Alaska regarding hazardous chemicals getting into the graywater waste streams, but noted that monitoring there didn't show this to be the case.
- He explained that hazardous wastes generated on cruise ships are subject to RCRA regulations when offloaded, but that doesn't happen until a voyage ends, so such wastes aren't offloaded in Alaska or Hawaii. Furthermore, many hazardous wastes are being eliminated. Photos and x-rays are changing to digital, for instance. Medical wastes are handled as with any clinic, and storage rooms are set aside strictly for hazardous wastes.

- Solid wastes are also being reduced as programs for recycling of glass, paper, and aluminum are put into place on cruise ships. Passengers participate eagerly, and recycling rates on cruise ships are higher than in many shore side communities.
- Regarding ballast water treatment, Tom explained that the cruise industry is also promoting development of new technology to deal with this issue. Systems which use filtering and UV treatment are under development, as is one which would use treated gray water as ballast.
- Improved engines using gas turbines and electric propulsion systems are reducing air emissions. Plugging into shore side electric supplies while in port is not always feasible; both the dock and the vessel must have special systems, and there needs to be surplus power available. While this has been done by one cruise ship in Juneau, where surplus hydropower is available, it's less likely to occur in California. Some cruise lines are investigating the possibility of such an arrangement in Seattle. Cleaner fuels and engines represent a more likely solution.

#### **WHAT WORKS BEST, REGULATIONS OR MEMORANDUMS OF UNDERSTANDING? THE ENVIRONMENTAL PERSPECTIVE: Kira Schmidt, Cruise Ship Campaign Director, Bluewater Network**

- Ms. Schmidt opened her remarks by emphasizing that the environmental community definitely favored regulatory solutions! She listed a series of more than 100 cases of illegal dumping by cruise ships documented in a GAO Report (2000) and noted that, in the wake of these high-profile cases and the public outcry they engendered, the environmental and regulatory communities began to scrutinize the cruise industry's environmental performance and the regulatory regime to which it was subject, and found them both lacking.
- Bluewater, with the support of 55 other environmental organizations, petitioned the EPA in 2000 to close a number of regulatory loopholes which were allowing cruise ships to pollute.
- In late 1999, the Alaska Department of Environmental Conservation launched the Alaska Cruise Ship Initiative.
- In response to growing public concern, the International Council of Cruise Lines (ICCL) and other cruise industry associations developed and adopted voluntary waste management practices and procedures, and "many individual cruise lines now tout environmental stewardship as a core corporate principle" Kira noted.
- While the environmental community commends the industry for adopting these voluntary policies and principles, they have unfortunately not resulted in a satisfactory resolution of the cruise ship pollution problem, she noted. More than fifty incidents have occurred since then, many in violation of voluntary policies or MOUs.
- Kira explained that the Alaska Cruise Ship Initiative in 1999 was initially a voluntary initiative. The cruise industry committed to a voluntary no discharge policy in the "donut holes" – areas beyond the three mile state limit but within the inside waters of Southeast Alaska - and to provide certain data. Cruise ship wastewater discharges and air emissions were monitored. The cruise industry sought, but was not granted, an "enforcement shield" for any violations which the initiative might turn up. Sampling of wastewater discharges showed that graywater and blackwater contained levels of fecal coliform and other pollutants that were orders of magnitude higher than what federal standards for marine sanitation devices allowed. Monitoring of the opacity of cruise ship smokestack emissions also turned up evidence of widespread violations of standards.
- These findings led both federal and state legislators to the conclusion that laws, not voluntary efforts, were necessary to protect Alaska from cruise ship pollution. The voluntary Alaska Cruise Ship Initiative was dissolved in November 2001, and the Commercial Passenger Vessel Environmental Compliance Program, established by state law passed in 2001, now requires mandatory cruise ship monitoring and regulations.
- Both air and water pollution incidents by cruise ships in Alaska have decreased since the passage of state and federal laws to monitor and regulate them. Before passage of the laws, 13 ships were charged for air pollution violations in 1999; 15 Notices of Violation were issued in 2000, and 11 in 2001. After the laws went into effect, only one notice of violation was issued in 2002, and two in 2003. Wastewater violations have decreased as well. This lends credence to the argument that

regulatory solutions are more effective than non-regulatory approaches in deterring pollution, Kira stated.

- Based on what happened in Alaska, Bluewater Network advocated for a regulatory approach to the cruise ship pollution problem in California, sponsoring state legislation in 2000. The bill created a wastewater discharge reporting requirement, as well as an interagency Cruise Ship Environmental Task Force.
- The industry at that time asserted that it had a voluntary wastewater no-discharge policy in California waters; nevertheless, the reporting mechanism revealed that a number of wastewater discharges did in fact occur. Kira stated that the Carnival *Holiday* discharged 40,000 gallons of graywater per week in the Port of San Pedro for the first 5 months of 2001, and a Cruise West ship discharged 24,000 gallons of graywater near San Diego. Carnival's *Ecstasy* discharged 60 gallons of graywater into no-discharge zone in Avalon Bay, half a mile from Catalina Island in January 2003.
- When three cruise lines decided to visit Monterey in 2002, and the public voiced concern about the potential environmental impacts, the three lines promised to abide by a voluntary no-discharge policy for the Monterey Sanctuary. The *Crystal Harmony* then broke that promise, discharging 36,000 gallons of graywater, treated bilge and blackwater into the Sanctuary. The company did not report the incident until five months later when regulators requested its log books. The company stated that it wasn't illegal, only a violation of a voluntary policy. The ship has been permanently banned from Monterey by a vote of the City Council.
- California passed two cruise pollution bills in 2003 which prohibit the dumping of hazardous waste, sewage sludge and bilge water into state waters and marine sanctuaries:
  - AB 906 (Nakano) prohibits cruise ships from discharging hazardous materials; and
  - AB 121 (Simitian) prohibits cruise ships from dumping sewage sludge or oily bilge water into state waters or the four marine sanctuaries along the California Coast.
- In August 2003, the Cruise Ship Environmental Task Force issued its report to the Legislature, which recommends that cruise ships be regulated by the state and that an inspection and monitoring program be implemented to protect the state's air and water quality and the marine environment.
- Other findings and recommendations in the report indicate that:
  - Cruise ships are a significant source of air pollutants in California, including criteria pollutants and toxic air contaminants;
  - Monitoring data from Alaska indicates that graywater discharges frequently exceed Marine Sanitation Device effluent standards; the Assembly should require, through statute, that graywater discharges meet the same standards as MSD effluent or prohibit its discharge in state waters;
  - Wastewater discharges into the waters of California's marine sanctuaries should be prohibited; and
  - The state should promulgate regulations and an inspection program to ensure proper management of hazardous wastes by cruise ships.
- Kira explained that California will consider three more bills related to cruise ship pollution this year, one to require the use of lower sulfur fuels in port and prohibit the use of cruise ship incinerators within three miles, and others to prohibit the discharge of sewage and graywater into state waters and sanctuaries.
- Citing the example of the State of Florida, Kira noted that repeated violations of hazardous waste management laws by cruise ships in the late 1990s prompted the Florida Department of Environmental Protection (FDEP) to seek dialogue with the Florida Caribbean Cruise Association (FCCA).
- She explained that, after many failed attempts at dialog, FDEP began conducting unannounced hazardous waste inspections, which got the FCCA's attention. FCCA said it would agree to "good faith" discussions if FDEP held enforcement proceedings in abeyance.
- FDEP and FCCA signed a Memorandum of Understanding in March 2000, essentially verifying that the FDEP accepts the ICCL voluntary environmental standards. The MOU was negotiated with no public involvement, despite repeated attempts to provide input by Bluewater and Florida-based environmental groups. The MOU provides for no means of monitoring or enforcement, Kira stated.

- Despite the MOU, violations continued in Florida. Norwegian pleaded guilty in July 2002 to illegally discharging oily bilge water from 1997 through May 2000 and to falsifying oil record books. Other cruise companies continued to mismanage hazardous waste, she stated.
- Kira noted that the state of Hawaii has signed an MOU with the Northwest Cruise Ship Association in October 2002 with no public input and despite opposition from the environmental community. She explained that there have been 16 violations of the MOU through October 2003, including several incidents of dumping sewage and graywater in Penguin Bank, a protected fishing ground off the south coast of Molokai that is frequented by humpback whales.
- Dissatisfaction among the public and legislators with the industry's violations of the MOU has led to development of legislation to ban discharges of graywater, sewage, sewage sludge, hazardous waste, ballast water, bilge water, and solid wastes; proposed legislation would also institute monitoring and reporting requirements.
- Kira stated that the State of Washington provides yet another interesting example of cruise industry promises broken and the growing realization that non-regulatory approaches are ineffective. With a new cruise terminal opening in Seattle, and concerns about an increase in cruise ship traffic and the pollution problems discovered in Alaska, the cruise lines volunteered early last year to follow Alaska policy in Washington waters.
- Then, in May of last year, on the very first day of the cruise season, the *Norwegian Sun* discharged 16,000 gallons of raw sewage in the Strait of Juan de Fuca just off Whidby Island, a popular vacation spot, in violation of this voluntary policy. Norwegian subsequently appealed the state's legal action, claiming the state did not have the right to regulate cruise ship discharges. As a result, the state Department of Ecology (DOE) initiated negotiations on an MOU with the Northwest Cruise Ship Association.
- While the environmental community has not been privy to these negotiations, Kira noted, she had recently learned that Representative Dickerson had introduced HB 2549 to prohibit and regulate wastewater discharges into state waters, and directed DOE to cease negotiations on the MOU.
- Kira then offered a final example of "the unreliability of industry promises and voluntary policies." The ICCL made compliance with their voluntary waste management practices and procedures a mandatory condition of membership in 2001. Despite numerous violations of these practices on the part of several member companies, however, she knows of no company which has violated these practices that has subsequently been dismissed from the association.
- MOUs are based on trust, Kira explained, and stated that the cruise industry has violated that trust time and again. Voluntary agreements and policies, industry promises, probation for past violations, MOUs have all been violated, she noted.
- A June 2003 report by the OECD confirms this view. The report, "Voluntary Approaches to Environmental Policy: Effectiveness, Efficiency and Usage in Policy Mixes," calls into question the environmental effectiveness and economic efficiency of voluntary approaches. It finds that there are few cases where voluntary approaches have improved the environment beyond a business-as-usual baseline.
- "Of course it comes as no surprise that the cruise industry, which has earned quite a black eye on environmental matters over the years, would prefer voluntary MOUs over laws with penalties for non-compliance," Kira stated. "MOUs make the cruise industry look good in the public eye, because they're voluntarily agreeing to certain practices in cooperation with regulators, yet cost them nothing if they violate them."
- The recent incidents in Hawaii's Penguin Bank, in Puget Sound, and in Monterey Bay lend particular credence to the view that industry promises are inadequate to protect our fragile and already polluted coastal waters, she feels. In each case the cruise companies had made a promise of no-discharge, and then broke that promise, claiming they had done nothing illegal.
- Kira stated that the states of Hawaii and Washington are abandoning voluntary MOUs for state legislation, a move which reflects a growing understanding among legislators, regulators, the environmental community, and the public at large that non-regulatory approaches have not proven effective in deterring pollution.

- Kira closed by stating that “If states wish to ensure that air and water resources are adequately protected from cruise ship pollution, they need to enact legally-binding, enforceable laws and regulations, with monitoring provisions and penalties for non-compliance. Only these, not voluntary approaches, will provide industry with disincentives to pollute, and the public the assurance that its environment is being protected.”

**HAWAII'S MEMORANDUM OF UNDERSTANDING: Curtis Martin, Hawaii Department of Health**

- Curtis opened his remarks by stating that “the environment IS the health of Hawaii,” thus explaining why the state’s environmental programs are part of the Department of Health.
- Hawaii’s primary concern is protecting their beaches, which are the basis for their tourist industry.
- He explained that Hawaii’s current MOU with the NW Cruise Ship Association has been revised and is awaiting the Governor’s signature. The MOU holds cruise ships to the ICCL standard while operating in Hawaiian waters, including no discharges closer to shore than 4 miles from the 100 fathom curve for any waste water discharges. Exceptions can be made for ships using advanced treatment systems; these may discharge within one mile of shore.
- The revised MOU also requires that cruise ships operating in Hawaii’s waters provide a spill response plan which provides for a contract with a spill response organization, a Spill Management Team, and periodic spill response exercises.
- Curtis reviewed the record of oil spills from cruise ships, as follows: a spill of hydraulic oil in May of 2003, and a tail-shaft leak in December 2002.
- Bills to regulate cruise ships have been introduced in this session of the Hawaii Legislature, he noted, but the Department of Health’s position is that the State should let the new MOU run its course while monitoring compliance.

**WHAT WORKS BEST, REGULATIONS OR MEMORANDUMS OF UNDERSTANDING? THE INDUSTRY PERSPECTIVE: Tom Dow, Vice President, Public Affairs, Carnival Corporation**

- Tom opened by stating that he could almost argue either way on the issue of MOUs v/v regulation, noting that the industry has had fewer problems since regulation went into place in Alaska. In contrast, any noncompliance with an MOU engenders a lot of bad publicity.
- He would appreciate consistency among state regulations, however, and noted that the Coast Guard provides “one continuous thread that runs through all the jurisdictions.”
- Tom also pointed out that cruise ships are being held to – and mostly meeting – higher waste water discharge standards than many coastal communities, citing the cities of Victoria and Anchorage as examples.
- The cruise industry “expects to be held to a higher standard,” he stated, but they “don’t expect to be perfect.” He explained that human error and mechanical failures do occur, in spite of best efforts.
- The primary advantage of an MOU, he stated, is that it provides opportunities for dialogue among all parties that the legislative process does not.

**THE US ENVIRONMENTAL PROTECTION AGENCY’S ROLE: Dr. Elizabeth Kim, US EPA**

- Dr. Kim opened her remarks by noting that the types of pollution from cruise ships may include sewage, graywater, bilge water, ballast water, incidental discharges, solid wastes, and hazardous wastes.
- Sewage, also known as “black water,” includes human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes. Assuming that such wastes are generated at the rate of about 5-7 gal/person/day, for 2500 people on one cruise ship that would mean 12,500-17,500 gal/day total. Pollution concerns may include on nutrients, pathogens, biological oxygen demand (BOD), Total Suspended Solids (TSS), chlorine, metals, and pH levels.
- Section 312 of the Clean Water Act requires that all vessels with installed toilets operating on US navigable waters use a marine sanitation device (MSD) approved by the Coast Guard. This applies to both internal waters and coastal waters out to 3 miles from shore. EPA establishes performance standards for MSDs, while the Coast Guard sets rules for the design, construction, installation, and operation of MSDs.

- US federal MSD standards require that vessels greater than 65 feet use a “Type II” device or a holding tank. The effluent produced by a Type II MSD must not have a fecal coliform bacteria count greater than 200 per 100 milliliters, and must not have suspended solids greater than 150 milligrams per liter (40 CFR 140.3(d)). The contents of a holding tank may not be discharged in any US navigable waters (internal waters and coastal waters out to 3 miles).
- Dr. Kim explained that MSDs are tested by the Coast Guard for initial certification, but are generally not tested once installed on board a vessel. There is evidence that traditional MSDs do not continue to perform at the standard set by EPA, but that the new, advanced treatment systems (like those used in Alaska) have so far shown excellent performance.
- MARPOL Annex IV also sets standards for MSDs. The US is not a party to Annex IV; the US considers USCG-approved MSDs to offer equivalent or better sewage pollution prevention. The Coast Guard does not require foreign flag vessels operating in the US to have a USCG-approved MSD if their MSD is in compliance with the MARPOL requirements.
- She explained that, under the Clean Water Act (CWA) Section 12, states are prohibited from regulating MSD design, manufacture, installation, or use, but states may establish No-Discharge Zones; these are areas in state waters where the discharge of all sewage from vessels, whether treated or not, is prohibited. States can establish an NDZ if EPA determines that there are adequate pump-out facilities available. EPA can establish NDZs by rulemaking if the prohibition is needed to protect a sensitive area or if the area is a drinking water intake zone.
- Federal legislation (Title XIV) sets standards for discharges of sewage and graywater from large cruise vessels operating in Alaskan waters; these standards are stricter for sewage discharges than CWA Section 312 standards for fecal coliform and suspended solids. The legislation also includes standards for BOD, pH, and chlorine. Dr. Kim noted that EPA is developing standards that potentially will replace these (proposal planned for 2006).
- Dr. Kim then explained that graywater is generally effluent from sinks, baths & showers, laundry, and galleys (sinks and dishwashers). Assuming about 50 to 80 gallons are generated per person/day, about 125,000 to 200,000 gal/day would be generated by 2500 people. Pollution concerns may include nutrients, pathogens, BOD, TSS, chlorine, oil & grease, and soaps.
- There are no federal standards for graywater from vessels, she stated. CWA 312 (sewage) covers graywater from commercial vessels only on the Great Lakes, and Title XIV only covers graywater discharges from large cruise vessels operating in Alaska. EPA regulations exclude vessel graywater discharges from requiring a permit under the National Pollutant Discharge Elimination System (NPDES).
- Dr. Kim explained that bilge waters are oily mixtures from machinery spaces that collect in the bottom-most parts of a ship's hull. Estimates for cruise ships range from 1,000 to 5,000 gallons per day, and she noted that there are more oily wastes from a cruise ship than from a similarly-sized cargo ship due to the use of more power generation and propulsion equipment. Oil is the primary concern she noted, and explained that bilge water discharges are regulated by the OPA 90, section 311 of the Clean Water Act, and the Act to Prevent Pollution from Ships, implementing MARPOL Annex I.
- Oily mixtures (bilge slops) and fuel oil tank ballast water must go through an oily water separator, and the effluent from an oily water separator must not have >15 ppm oil and must not result in a visible sheen. There must be a bilge alarm and a means for automatically stopping any discharge >15 ppm. In addition, there must be tanks to hold the oily residue from the oil/water separator.
- With regard to ballast water, Dr. Kim explained that vessels entering US waters after operating in waters beyond the US EEZ should exchange ballast water. This exchange is currently mandatory only for vessels entering the Great Lakes and the upper Hudson River, but the Coast Guard proposed mandatory ballast water management requirements in 2003 for all vessels entering US waters.
- Dr. Kim explained that environmental groups petitioned EPA in 1999 to repeal the NPDES exclusion for incidental discharges, in order to subject ballast water discharges to NPDES requirements. In Sept 2003 EPA denied this petition based on the long-standing interpretation of NPDES recognized by Congress. EPA felt that other statutory schemes were better suited for addressing ballast water,

and noted that states are not prohibited from regulating ballast water. In Dec 2003, some petitioners sued EPA over its denial of the petition.

- Dr. Kim noted that there are other potential sources of liquid waste streams, e.g.:
  - Refrigeration and A/C condensate,
  - Desalination brine,
  - Deck runoff,
  - Photo labs,
  - Hair salons,
  - Dry cleaning, and
  - Pools and hot tubs.
- She then explained that such waste streams, if they are considered “incidental to the normal operation of a vessel,” would not require an NPDES permit to be discharged to navigable waters. As with ballast water, states could regulate such discharges under their authority. Any discharges containing oil or hazardous materials would be subject to other applicable laws, and waste streams that are NOT incidental to normal operation WOULD require an NPDES permit to be discharged into navigable waters.
- Non-hazardous solid wastes are regulated by the Act to Prevent Pollution from Ships and MARPOL Annex V. These regulations prohibit any discharge of plastic, anywhere. For food waste or other garbage, no discharge is allowed within 3 nautical miles (nm) of shore, and no discharge is allowed between 3 and 12 nm unless the waste is ground to <1 inch. Discharge is permitted outside 12 miles (except Dunnage [lining and packing material that floats], which is prohibited between 12 and 25 nm). Non-hazardous solid waste can also be incinerated onboard or landed for recycling or disposal.
- Hazardous wastes from cruise ships may include dry-cleaning waste (PERC), used paints and thinners that contain hazardous substances, silver-bearing photo-processing waste, batteries, and cleaning solutions. The Resource Conservation and Recovery Act (RCRA) imposes management requirements on generators, transporters, and handlers of hazardous wastes; requirements differ depending on the amount of hazardous waste produced. Generally, regulations require that generators do the following:
  - Identify and quantify hazardous waste;
  - Comply with accumulation requirements; and
  - Ensure that hazardous waste is treated, stored, or disposed of at specified types of facilities.
- As noted by Kira Schmidt in her presentation, EPA was petitioned in 1999 by the Bluewater Network, representing 53 environmental organizations, to assess:
  - the volume and quality of cruise ship discharges;
  - potential environmental impacts;
  - the adequacy of current regulations; and
  - options for regulating these discharges.
- In response to the petition, EPA prepared a white paper in August 2000 and held public meetings in Los Angeles, Juneau, and Miami in the Fall 2000. EPA also conducted a dilution study using EPA's Ocean Survey Vessel *Peter W. Anderson* in September 2001. EPA is now preparing an assessment report; this is scheduled for release for public comment in 2004. Dr. Kim stated that the next step would probably be the formation of a Task Force to review the comments and finalize recommendations.

## **THE US COAST GUARD'S ROLE: Commander Jeff Brager, Chief, Marine Compliance, Coast Guard District 11**

- CDR Brager explained that the US Coast Guard conducts port state control examinations and enforces treaties, conventions, resolutions and US codes on foreign flag passenger vessels; these are known as “Control Verification Examinations” (CVE) and are conducted initially on a vessel's first visit to a US port and then either quarterly or semi-annually, as well as annually, after that. Inspections focus on lifesaving and environmental protection by including reviews of the vessel's construction plans, bilge and sewage systems, and the crew's training and knowledge.

- Inspections are based on implementation of Federal authorities and regulations covering pollution from cruise ships. For oily wastes, these include:
  - 33 U.S.C. 1231 &1321(j)
  - Title 33 CFR Part 155
  - MARPOL Annex I (33 U.S.C 1901 et seq.)
- For sewage, authorities include:
  - 33 U.S.C. 1322
  - Title 33 CFR Part 159
  - MARPOL Annex IV (in force but not ratified by U.S.)
- For Alaska, graywater is covered by Title 33 CFR 159.300 – 159.321; there are no MARPOL requirements. The Coast Guard reviews the operating company's Safety Management System Plan. The inspectors ensure that volumes are not exceeding system capacity and that no hazardous wastes are in graywater.
- Solid wastes which are not hazardous are regulated by:
  - 33 U.S.C. 1321 & 1903
  - Title 33 CFR 151.63
  - MARPOL Annex V (33 U.S.C 1901 et seq.)
- USCG inspectors talk to crew members and review waste disposal records to monitor compliance with these regulations.
- Hazardous waste disposal is governed by RCRA (42 U.S.C. 6906, 6912, 6922 – 6925, 6937 & 6938) and Title 40 CFR Part 262, as well as the company's Safety Management System.
- Air emissions from cruise ships would be governed by the Clean Air Act Section 213, but this section is not applicable to foreign flag vessels. MARPOL Annex VI is not in force yet and has not been ratified by the US.
- Ballast water exchange is currently a voluntary program in the US, although reporting is mandatory. The US Coast Guard has proposed rules to make ballast water exchange mandatory for vessels entering US waters.
- CDR Brager cited recent instances of cruise ship violations which the USCG had prosecuted. These included:
  - Carnival Cruise Lines - Numerous illegal discharges of oily water, false Oil Record Book (ORB) entries; this led to a \$18 million fine and adoption of an Environmental Compliance Program (ECP);
  - Royal Caribbean Cruises – Numerous illegal discharges of oily water and hazardous waste, false ORB Entries; this led to \$18 & \$9 million fines and adoption of an Environmental Compliance Program (ECP); and
  - Norwegian Cruise Lines - Self-reported oil spills & false ORB entries, \$1 million fine and adoption of an Environmental Compliance Program (ECP).
- New USCG or IMO initiatives include:
  - Soon to be published guidance regarding a Pollution Checklist for Cruise Ships;
  - The USCG is participating in a task group developing DOJ Sentencing Guidelines for Hazardous Waste Criminal Cases; and
  - The USCG is awaiting US Ratification of MARPOL Annex VI.
- Jeff also noted that voluntary measures by cruise lines such as ICCL's Standard E1-01 provide specific standards for environmental compliance and set a compliance goal of meeting all applicable US and International Standards. In addition, a company's Safety Management Systems (SMS), addresses:
  - Company safety and environmental compliance policy;
  - Personnel responsibilities, resources, and training;
  - Plans/procedures/checklists for safety/environmental operations; and
  - Documentation, verification, & evaluation.
- Many cruise ship operators adopt ICCL Standard E1-01 as part of their Safety Management Systems, which then are enforceable by the US.

- He concluded by noting that this combination of enforcement programs, sanctions, and voluntary measures have collectively improved cruise ship environmental performance.

## **OPEN FORUM**

- CDR Spencer Wood, USCG District 17 stated that both regulatory and non-regulatory approaches are needed, and that Alaska began with voluntary measures such as sampling and monitoring. This was useful to identify the real problems, which were not what was anticipated. Then programs to address those problems were then codified and “given teeth.”
- Tim Eichenberg of Oceana noted that, while some cruise ships in Alaska are using advanced sewage treatment systems, this is not the case everywhere. He also stated that California needs to implement mandatory reporting and enforcement systems with regard to blackwater discharges.
- Tom Dow responded that the Alaska waters are unique since they are “inside” waters, and thus advanced treatment is more important than for discharges further from shore. There are different issues in different areas, and negotiated processes allow for more flexibility to address unique issues.
- Gary Gregory of the California State Lands' Marine Facilities Division responded to a question regarding ballast water standards by noting that California's ballast water law was effective January 1st of 2004. The law requires the management of ballast water and allows discharge of ballast water while in a port only if the ballast water was taken from the same port, has been exchanged as required beyond 200 miles from shore, or is discharged through an approved ballast water treatment system. He explained that the State Lands Commission is working with the Pacific Ballast Water Working Group to develop a regional standard for ballast water management for vessels in coastwise trade.
- Tom Dow noted that if a cruise ship has to go 200 nm from shore for ballast water exchange the company might have to drop a port call to compensate for the lost time.
- Gary Gregory noted the importance of having environmental organizations participate in the rulemaking to implement California's cruise ship legislation.
- Mike Conway agreed, noting that when tribal and public interests are well represented, the process is more effective.
- Tim Eichenberg replied that environmental groups have very limited staff and financial resources to participate. Kira Schmidt reiterated her concern that environmental interests had been “shut out of the process” in the State of Washington.
- In response to concerns regarding chlorine in waste waters, Tom Dow explained that its use was required in spas and pools, and that it also comes aboard with drinking water. The cruise ship industry is evaluating alternatives.
- Dr. Elizabeth Kim stated that dumping of sewage sludge is permitted beyond three miles from shore, but that EPA is carefully considering whether regulations governing this need to be updated.

**Attachment 1**  
**Cruise Ship Roundtable**  
**Speaker Biographies (in order of presentation)**

**Carlton Moore**

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Carlton Moore assumed the position as Interim Administrator of the Office of Spill Prevention and Response in March of 2003. Prior to this assignment, he served as a Staff Counsel handling primarily maritime, federal and international law. As Special Legal Counsel to the Administrator from 1992 to 1998, he was responsible for the development of regulations affecting oil spill contingency plans and financial responsibility requirements for tankers, and tank barges. Other regulating programs involved tug escorts, salvors, oil spill response organizations, marine pilots, and oil transfer operations. In that capacity, he represented the State in matters involving proposals affecting ships, tankers and other vessels before the International Maritime Organization. Additionally, he coordinated activities of the Oil Spill Technical Advisory Committee, State Interagency Oil Spill Committee and its Review Subcommittee, and was California's Coordination Committee representative to the States/British Columbia Oil Spill Task Force. He also handled legislative proposals at the State and Federal level affecting navigation, ship safety and international tanker insurance requirements.

Carlton Moore was appointed to the Coast Guard Navigation and Safety Advisory Council by Department of Transportation Secretary Dole, 1986, served as vice-chair for three years. In 1997, he was awarded the Department of Transportation Public Service Commendation for work in establishing marine pilotage agreements in California's five largest harbors.

He received his Juris Doctor, graduating top of his class, from Lincoln School of Law and completed post doctoral studies in Admiralty Law and Law of the Sea at the University of the Pacific. He holds a post secondary teaching credential and taught Contract law at night from 1990-1998.

**Michael A. Conway**

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Michael Conway is a retired Coast Guard commander and former State of Alaska director with 32 years experience in leadership and management in environmental protection, marine safety, emergency planning and response, strategic planning, and homeland security. During his 20-year Coast Guard career, he served as commanding officer of three units including one multi-mission patrol vessel out of Port Angeles, Washington and two Captains of the Port (COTP) / Federal On Scene Coordinator (FOSC) positions. As Commanding Officer, MSO Juneau, Alaska he led the Coast Guard effort in meeting the needs of the early days of significant cruise ship industry growth in Southeast Alaska.

Upon retiring from the Coast Guard, Mr. Conway was appointed as the first director of the Alaska Spill Prevention and Response Division in the Alaska Department of Environmental Conservation (ADEC), which was established by the Legislature following the EXXON VALDEZ incident. During his 12 years with the Alaska Department of Environmental Conservation, he also served as director of the Air and Water Quality Division and Statewide Public Service Division.

Of note is Mr. Conway's role as coordinator of the Alaska Cruise Ship Initiative for the Commissioner of ADEC. This two-year cooperative effort of industry, federal and state agencies, and the public working together to address cruise ship operations impacts in Alaska's Environment resulted in ground-breaking state legislation.

Mr. Conway holds a Master of Science in Natural Resources Administration from the University of Michigan. He has lived in Juneau since 1985 with his wife, five children, and three grandchildren.

**Jack E. Geck**

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Brief biographical sketch: Jack Geck is a retired US Coast Guard officer and currently the supervisor of the Marine Safety Unit within the Office of Spill Prevention and Response. During his 24 year career with the Coast Guard, he served at several Marine Safety Offices as Chief of Inspections, Chief of Investigations, Chief of Port Operations and Chief of Licensing. He has extensive experience in vessel inspections, pollution response, marine salvage and firefighting. He has responded to many large oil spill incidents, shipboard fires and vessel groundings including the loss of a large cruise ship off the coast of Puerto Rico.

After retiring from the Coast Guard, Mr. Geck helped to establish the California State Lands Commission's Marine Facility Inspection Program. He transferred to the Office of Spill Prevention and Response in 1992 and assisted in developing the vessel oil spill contingency plans program and was instrumental in developing the Oil Spill Response Organization (OSRO) Inspection and the Drills and Exercises Programs for the State. He has worked extensively with other state and federal agencies to develop State Emergency Plans and Federal Area Response Plans. Currently, he heads the program to prevent spills from vessels into marine waters, the tug escort inspections program, the vessel arrival and monitoring program, and coordinates staff that are Liaison officers to the States 5 Harbor Safety

Committees. He is currently working on a research project to identify sunken vessels along the California Coast that pose pollution risks. Most recently, he was a member of the Cruise Ship Environmental Task Force that compiled a report to the Legislature on waste streams generated by the cruise ships calling on California.

Mr. Geck is a graduate of Chapman University and holds Bachelor of Science degrees in Criminal Justice and Social Science. He currently resides in Loomis, California with his wife, Joy.

**Thomas M. Dow**

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Tom Dow serves as vice president of public affairs for Carnival Corporation & PLC. He serves as the company's liaison to federal and state governments, local communities and industry associations. Based in Seattle Washington, he works closely with officials in the Pacific Northwest and Alaska, California, and Hawaii.

Prior to his appointment with Carnival, Dow held a similar position with Princess Cruises & Princess Tours. He joined Princess Tours in 1994 as vice president of the hotel division, and was appointed vice president of public affairs in 1996.

An active member of the cruise industry, Dow currently serves as a director of the Cruise Industry Charitable Foundation, and sits on several committees for the International Council of Cruise Lines (ICCL), and the North West Cruise Ship Association (NWCA).

Dow is past-president of the Alaska Visitors Association (AVA). He received the organization's North Star Award in 1990. He has served on the boards of the Alaska Travel Industry Association, Alaska Tourism Marketing Council, and was chairman and a board member of the Alaska Native Tourism Council.

Prior to joining Princess, he served as Vice President of NANA Development Corporation, an Alaska Native Corporation, where he was employed in various management positions, starting in 1975. Born in Kearney, Nebraska, Dow is a graduate of the University of Northern Colorado.

**Kira Schmidt**

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Kira Schmidt is a Campaign Manager with Bluewater Network, a national environmental group based in San Francisco. She recently returned to Bluewater Network after a two-year hiatus as an environmental consultant. Kira worked for Bluewater from 1999-2001, during which time she launched and directed Bluewater's cruise ship campaign, and also worked on Bluewater's global warming campaign. From 2001-2003, Kira worked as a consultant for the Earth Negotiations Bulletin, Lawyers for Clean Water, Environment Now, and Redefining Progress. She continues as a research consultant for Environment

Now's Energy Independence Now Campaign. Kira holds a B.S. in Conservation and Resource Management from the University of California Berkeley, and a Masters in International Affairs from Columbia University.

**Curtis Martin**

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Curtis currently works as the Emergency Response, Prevention, and Preparedness Coordinator for the Hawaii Department of Health. His prior experience includes a 30-years career in the US Coast Guard, during which time he served as COTP/OCMI, MSO in Miami, Florida. He also served as Chief of Marine Safety in US Coast Guard Districts 5 and 14.

Curtis holds an MBA from Central Michigan University, attended the Naval War College, and earned a BS from the University of Georgia.

**Elizabeth Kim**  
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Elizabeth Kim is the Cruise Ship Team Leader for EPA's Oceans and Coastal Protection Division. She is also responsible for EPA's ocean dumping management efforts. Before joining EPA in 1997, Elizabeth completed a Ph.D. in marine ecology and a law degree specializing in environmental law.

**CDR Jeff Brager**  
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Commander Jeffrey E. Brager is the Chief of Compliance for the Eleventh Coast Guard District Marine Safety Division. The Eleventh Coast Guard District is responsible for the Marine Safety, Environmental Protection and Homeland Security Programs administered by the Marine Safety Offices located in San Francisco Bay, CA, Los Angeles / Long Beach CA, and San Diego, CA. His position also has responsibility for the four western states of California, Nevada, Utah and Arizona.

Prior assignments include Chief of the Inspections Department Marine Safety Office San Francisco Bay, where he led the multi-agency criminal investigative team aboard the tanker COMMAND in Panama; Staff Officer at Coast Guard Headquarters, Merchant Vessel Inspections; was called upon to serve as inspector, investigator, and operations planner during the EXXON VALDEZ cleanup operation while assigned as vessel inspector at MSO Puget Sound; served as vessel inspector at Marine Safety Office Los Angeles – Long Beach; served as engineer aboard one of the last Coast Guard steam propelled cutters. Commander Brager has conducted numerous examinations of foreign cruise ships and inspections of U.S. Flag passenger vessels. Commander Brager earned his commission and a Bachelor of Science Degree in 1978 from the Coast Guard Academy.

## Attachment 2

### Cruise Ship Roundtable Photos



Kira Schmidt, Cruise Ship Campaign Manager with Bluewater Network



Commander Jeffrey E. Brager,  
Chief of Compliance for the  
Eleventh Coast Guard  
District, Marine Safety Division



Michael A. Conway,  
MAC Leadership and  
Management Consulting



Elizabeth Kim, Cruise Ship Team Leader for EPA's Oceans and Coastal Protection Division



Carlton Moore, Administrator,  
CA Office of Spill Prevention  
& Response



Jack E. Geck, Office of Spill Prevention and Response (OSPR)



Curtis Martin, Coordinator  
Hazards  
Evaluation and Emergency  
Response  
Hawaii Department of Health



Thomas M. Dow, Vice  
President of Public Affairs,  
Carnival Corporation & PLC



Tim Eichenberg of Oceana  
speaks during the Open Forum