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OVERSIGHT OF THE CRUISE SHIP INDUSTRY: ARE CURRENT REGULATIONS SUFFICIENT TO PROTECT PASSENGERS AND THE ENVIRONMENT?

HEARING

BEFORE THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

ONE HUNDRED TWELFTH CONGRESS

SECOND SESSION

MARCH 1, 2012

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ONE HUNDRED TWELFTH CONGRESS

SECOND SESSION

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OVERSIGHT OF THE CRUISE SHIP INDUSTRY: ARE CURRENT REGULATIONS SUFFICIENT TO PROTECT PASSENGERS AND THE ENVIRONMENT?

THURSDAY, MARCH 1, 2012

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The Committee met, pursuant to notice, at 10 a.m. in Room SR–253, Russell Senate Office Building, Hon. John D. Rockefeller IV, Chairman of the Committee, presiding.

OPENING STATEMENT OF HON. JOHN D. ROCKEFELLER IV, U.S. SENATOR FROM WEST VIRGINIA

The CHAIRMAN. Good morning. We have, as usual, a complicated, potentially fluctuating morning schedule. I know that one thing will not fluctuate and that's the 11:00 o'clock vote, and I'd like to get as much of this done but will come back if more members, I hope, will appear.

We have Georgia and Alaska and West Virginia, which should be enough to cover the country but there ought to be more people here and they probably will be here. And I'm very glad that you are and first of all, I want to say to the Coast Guard that I feel very sad about the helicopter crash that happened in Mobile Bay, and it was just Tuesday night, wasn't it?

Admiral SALERNO. Yes, sir.

The CHAIRMAN. My thoughts and the Committee's thoughts are with the families and also with the Coast Guard on this because the Coast Guard is a family unto itself.

Admiral SALERNO. Thank you, sir.

The CHAIRMAN. I got that correct, didn't I? All right. Let me give my opening statement. Senator Rubio will be along and Senator Isakson has a one-hour-and-three-quarter speech. One minute? OK. I knew that actually. It's fun teasing you. He's a good friend. He's a Braves fan.

The cruise ship industry is large, it's successful and it's very profitable. The industry's revenues top $25 billion a year. Nearly 13 million Americans, including a couple of my own children, took a cruise last year, although I think they did it the year before. But they enjoyed it.

The industry is growing with larger and larger ships entering service every year. Some ships will carry over 5,000 passengers and a crew, and I can't speak for Alaska and Georgia but in West Vir-

ginia terms that would be a modern cruise ship carrying the entire population of most West Virginia towns.

So they're floating private cities. A unique and complex set of international rules governs the operations of the ship and the safety of the passengers. This is a safety committee, the Commerce Committee. We are a safety committee. We do many things but safety is always on top.

I believe that these rules work, really, to protect the companies more than to protect their passengers. If there are those who disagree with it, I'm sure they will so say. In any event, we're here today to examine whether existing regulations are in fact sufficient to protect the health and safety of passengers and the fragile ocean environment in which they operate, and I recognize some of you testified yesterday before the House and this is something that I've wanted to do for a long time and so please don't be troubled by so much attention. Or be troubled by so much attention.

In addition to reviewing the industry's safety and environmental record, I believe that we must ask why an industry that earns billions and uses a really very wide variety of Federal services from the Coast Guard to the Customs Bureau to the Centers for Disease Control pay almost no corporate income taxes at all.

Good morning, Senator. I just started.

Senator RUBIO. Good. I was watching you on TV.

The CHAIRMAN. Trust me, when something goes wrong with a cruise ship, it is always the Coast Guard that comes to the rescue, and this is a time when the Coast Guard is fighting for revenues, has 45-year-old ships which are trying to break up ice in Alaska in northern territory and we can't get the money to build new ships. It's an embarrassment, and they're strapped for cash because they don't get the same attention that the Marines do or that the Air Force does.

But they do in this committee. We care about the Coast Guard a lot. And the Coast Guard is struggling. The entire Federal Government is struggling to maintain critical missions. Everybody's cutting back. All of our offices here are streamed into every day by people who are making very legitimate requests for projects that need to be funded in our various states and we can't always give them very good news. We have to tell them the truth about what's happening here.

But in any event, in spite of all of this, it's inconceivable to me that with this amount of Federal help that comes to the help of a cruise ship when it runs into trouble that this industry doesn't pay some part of a fair share of the services they're getting for it. I think it's sort of unique that way.

For any mode of transportation, safety must be priority number one. That's the way we look at things here. We're very, very glad when companies make a lot of money and we're very, very glad when passengers are very safe, and we tend to focus more on the second than on the first because that's more of our mission.

The rarity of major cruise ship accidents suggests, in fact, that an industry has an excellent safety record, and let that be on the record. But the recent sinking of the *Costa Concordia* off the Italian coast is, in fact, a stark and tragic reminder that no mode of transportation is 100 percent safe. There aren't so many cruise

ships around that when you have an incident with two or three that it doesn't represent a disproportionately large share of difficulties.

The reports from the survivors of the *Costa Concordia* do not inspire confidence, at least in this Senator, in the industry's ability to respond to a major accident. There's a wonderful person, Martha Manuel, who is a constituent of mine who was a passenger on board this particular ship and she said that there was a clear lack of communication from the ship's staff.

She survived the accident because she refused to follow the instructions, which were to go back to her room, which could have been the end of her, and so she went elsewhere and survived.

But the point, obviously, isn't just what happened to her. But is there a pattern of safety? What do you do when there's a crisis? Is the crew trained? Do they practice the training?

There are hundreds and hundreds of crew members, I think maybe 900, 800 crew members on these ships, and they have to—from the captain on down—they have to properly train so that passenger evacuation procedures not are only in place but have been practiced and therefore do work.

When accidents do occur and lives are tragically altered, passengers have little recourse against the cruise ship operators. Complicated ticket contracts limit passenger rights and antiquated laws prevent passengers from collecting fair compensation. Our laws have not kept up with the changes in the industry and I believe that we must revisit them.

Although major accidents are, in fact, rare, and let that be understood, the environmental damage caused by cruise ships happens not so rarely. Happens all the time, and it's a particular source of angst for me.

These floating cities produce enormous volumes of sewage and solid waste, and just three miles from shore they can do that because then they're out of our jurisdiction as a country. A cruise ship can discharge thousands of gallons of raw sewage and they sp do, and they dump a significant amount of solid waste at sea.

I've often joked without humor about having a hearing on one of these floating, you know, two or three square miles of just trash and awful things that float in various parts of our world's oceans.

Obviously, I'm not going to do that. That would be unwise and I would no longer be Chairman and I like being Chairman. But the dumping of all of this waste really gets to me because it's against the law, it is not in tune with what a modern industry should be doing and a profitable industry should be doing.

So the practices of the industry, I think, have to come under scrutiny. Unfortunately, the Coast Guard, as I've indicated, has very limited resources to police against these discharges. Where in the world would they be happening? They can't follow all of these ships. And there may be a possibility of seeing them from eyes in the sky, and my guess is you probably could see them.

But the point is we cannot continue to let our oceans fill with trash and fill with debris. It's a little bit like space. We have so much stuff up in space now that it's dangerous not only for our country for falling debris but also for other spaceships that are up there. It's just getting dangerous. Americans consider debris a part

of their heritage and cultural pursuit. It's not a wise idea for any of us.

So I think we have to adopt stronger laws to protect our fragile marine ecosystem, which is part of what this committee is charged with.

As taxpayers, we deserve to have the industry pay its fair share.

Without numerous government services, the industry could not operate and it's time that they contributed to the cost of helping with the expense of the government services they receive.

So just in ending, I think our children and grandchildren deserve an ocean environment free of trash—I believe that very deeply—and sewage and hazardous materials. The industry needs to do more to protect the environment for future generations and so we will talk about this and other subjects.

[The prepared statement of Senator Rockefeller follows:]

PREPARED STATEMENT OF JOHN D. ROCKEFELLER IV,
U.S. SENATOR FROM WEST VIRGINIA

The cruise ship industry is large, successful, and vastly profitable. The industry's revenues top $25 billion a year. Nearly 13 million Americans took a cruise last year. The industry is growing with larger and larger ships entering service every year—some ships will carry over 5,000 passengers and crew. A modern cruise ship can carry the entire population of most West Virginia towns. They are floating private cities.

A unique and complex set of international rules governs the operations of the ship and the safety of passengers. I believe that these rules work to protect the companies rather than their passengers. We are here today to examine whether existing regulations are sufficient to protect the health and safety of passengers and the fragile ocean environment in which they operate.

In addition to reviewing the industry's safety and environmental record, I believe that we must ask why an industry that earns billions and uses a variety of Federal services—from the Coast Guard, to the Customs Bureau, to Centers for Disease Control—pays almost no corporate income tax. Trust me, when something goes wrong on a cruise ship, it is the Coast Guard that comes to the rescue. At a time when the Coast Guard and the entire Federal government are struggling to maintain their critical missions, it is inconceivable to me that this industry doesn't pay its fair share.

For any mode of transportation, safety must be the number one priority.

The rarity of major cruise ship accidents suggests that the industry has an excellent safety record. But, the recent sinking of the *Costa Concordia* off the Italian coast is a stark and tragic reminder that no mode of transportation is 100 percent safe. The reports from the survivors of the *Costa Concordia* do not inspire confidence in the industry's ability to respond to a major accident. A constituent of mine, Martha Manuel, was a passenger aboard the ship. She said that there was a clear lack of communication from the ship's staff. She survived the accident because she didn't follow instructions to go back to her room. Passengers have a right to expect that the crews of these ships are properly trained and passenger evacuation procedures are in place.

When accidents do occur and lives are tragically altered, passengers have little recourse against the cruise ship operators. Complicated ticket contracts limit passenger rights and antiquated laws prevent passengers from collecting fair compensation. Our laws have not kept up with the changes in the industry, and I believe we must revisit them.

Although major accidents are rare, the environmental damage caused by cruise ships happens far too regularly. These floating cities produce enormous volumes of sewage and solid waste. Just three miles from shore, a cruise ship can discharge thousands of gallons of raw sewage. In addition, they dump a significant amount of solid waste at sea. The environmental practices of the industry are unconscionable.

Unfortunately, the Coast Guard has limited resources to police against these devastating discharges. We cannot continue to let our oceans fill with trash and debris. We must adopt stronger laws to protect our fragile marine ecosystems.

As taxpayers, we deserve to have the industry pay its fair share. Without numerous government services, the industry couldn't operate. It is time that they contributed to the costs that they impose on the government.

Our children and grandchildren deserve an ocean environment free of trash, sewage, and hazardous materials. The industry needs to do more to protect the environment for future generations.

Now, I turn to Senator Rubio for his opening remarks.

The CHAIRMAN. And I turn now to my distinguished colleague, Senator Rubio, for his opening remarks.

STATEMENT OF HON. MARCO RUBIO,
U.S. SENATOR FROM FLORIDA

Senator RUBIO. Thank you, Mr. Chairman. I want to begin by thanking you for holding this hearing and for all of you for being a part of it, especially Director Bill Johnson from the Port of Miami, my hometown. So I appreciate you being here today.

Just want to also let you know I'll be back and forth today because there's also a hearing going on in Foreign Relations regarding Syria, which is critically important as well but I definitely wanted to be here for the start of this and I've read all of your testimony on this important issue.

Let me begin by just offering my condolences to the Heil family who lost two family members, Barb and Jerry, on the January 13th, 2012, *Costa Concordia* cruise ship off the coast of Italy. The sad thing about it is that from all indications it's a tragedy that could have been avoided.

As Captain Doherty points out in his testimony later today, ships run aground because someone made a terrible mistake or was negligent, and in this case, while I understand we're still waiting for the final report, all the indications point to a captain who not only crashed a ship but abandoned it before ensuring the safety of any of the passengers.

Despite this, I commend both the Coast Guard and our domestic cruise line industry for their quick response to the incident. The Coast Guard immediately offered assistance to the government of Italy, and through the Cruise Lines International Association the industry immediately made corrections to their own mandatory muster drills and continue to search for voluntary improvements through their own cruise industry operational safety review that was launched in January, late January, in response to the incident.

The industry's quick response I think is a testimony to the industry's self-accountability, and rightfully so. This bad news hurts the industry more than anyone else. This is whether it's bad news from time to time when you turn on the television and hear about some people getting food poisoning on a cruise to these kinds of things. The cruise industry has always taken this stuff seriously because above all else it is about customer service.

And the cruise industry is largely built on return customers and people just won't come back if they had a bad experience or if they watch the news and think they're going to have a bad experience. And so that's why we see such a high level of self-accountability in the industry and I think that's a very positive thing.

What we'll hear in today's testimony is that the industry has, in addition to its long history of ensuring through voluntary policies, the stewardship of both the safety of the passenger and also envi-

ronmental protection, you'll also hear that we have a very robust and safe cruise industry that supports thousands of jobs in Florida and across the United States.

There are more than 230 ships worldwide in the cruise ship fleet and 176 of them, over 75 percent of those cruise vessels, were operating in North America in the year 2010. The North American cruise industry generated $37.85 billion in the U.S. in economic benefits and supported nearly 330,000 jobs here in America in the same year.

That's a bright spot in our bleak economy, and in Florida, particularly in our port cities, I can tell you firsthand the impact that this industry has on the real lives of real people. I'm proud to say that the state of Florida accounts for 60 percent of all U.S. cruise embarkations and we hope to make that 61 percent and growing.

And so we're excited about that and we're excited about expansions in some of our ports that will allow for an expansion in this. So as we hear today from Bill, the Port of Miami is one of the busiest cruise ports in the world. It handled more than 4 million passengers in the year 2011 and the Port of Miami is just one of several ports in Florida that support the cruise line industry—Port Canaveral, Jacksonville, Tampa, and others.

So overall, the industry accounted for about $6.3 billion in my state and direct spending in 2010 that generated over 123,000 jobs in Florida. It means 123,000 families who make their living off the safety, the accountability and the prosperity of the cruise industry. So it's an important industry. It brings valued and high-paying jobs to it and, again, as we all hear this testimony today let's just remember that they've consistently shown their willingness to voluntarily make themselves one of the safest industries in our country.

With that, Mr. Chairman, thank you for holding this hearing on an issue so important not just to our country but especially to my home state and, again, I've read all the testimony here today and look forward to asking some questions and I'll look forward to that in a few moments.

Thank you.

The CHAIRMAN. Thank you very much, Senator Rubio, the Ranking Member.

And now I'm going to call on Johnny Isakson because he represents Georgia, which is bigger than our two states. And then I'm going to call on you, Senator Begich.

Senator BEGICH. Only by population.

STATEMENT OF HON. JOHNNY ISAKSON, U.S. SENATOR FROM GEORGIA

Senator ISAKSON. Absolutely correct. You got a lot more mileage at sea than we do too.

Thank you, Mr. Chairman, for calling this hearing. I want to commend you on the timely calling of this hearing and I think it's a very important hearing for the Commerce Committee to conduct.

Like Senator Rubio, I have another commitment so I will be in and out as well. But I started off here because I wanted to be sure and submit for the record and ask unanimous consent that the testimony of Lynda D. Sanford, a resident of my state who lost her

mother on the high seas in a cruise in 2001, be entered for the record in this hearing.

The CHAIRMAN. Absolutely.

[The information referred to follows:]

To:	John Clark Rayfield, Republican Staff Director U.S. House of Representatives Committee on Transportation and Infrastructure Subcommittee on Coast Guard and Maritime Transportation
From:	Lynda D. Sanford Survivor of Capsizing on July 13, 2001 with Loss of Life U.S. Coast Guard Report 16732
Subject:	Written Testimony of Lynda D. Sanford Hearing on Cruise Ship Safety Lessons from the Costa Concordia Accident
Date:	February 29, 2012

It has been more than a decade since I managed to survive the boating accident that killed my mother and 2 other cruise ship passengers and injured me and 13 other cruise ship passengers. I filed charges of negligent homicide against the boat driver and escorted the three corpses back to Los Angeles, California where I questioned what went wrong. The cruise line told me that our tragedy was a "freak accident". After burying my mother in Texas, I returned home to Atlanta, Georgia and contacted the cruise line attorney who had been flown to Cabo San Lucas, Mexico to interrogate me about my mother's death. The cruise line would not provide me with any more information and ignored my family's requests for answers.

I was devastated after having flown across the United States to meet my mother in California for a 7-day mother-daughter cruise and returning with her corpse and no explanation for her death other than a "freak accident". I acquiesced to my family's request to sue the cruise line because our mother had died and was horrified to learn that we could not do so because all of my mother's children were adults. The Death on the High Seas Act (DOHSA) of 1920 did not allow us to sue for negligence resulting in the death of our mother, her pain and suffering as she drowned or the loss of her contribution to society as a bilingual, special education teacher and mother who raised five children without child support from our deadbeat dads. The U.S. Congress had allowed the cruise line industry to influence it when DOHSA was amended in 2000. Consequently, DOHSA by Wrongful Act entitles these legal remedies only to commercial aviation victims. The Death on the High Seas Act (DOHSA) of 1920 entitled my mother's corpse to receive only burial expenses!

In 2006 and 2007 my Congressman, Congressman John Lewis of Atlanta, Georgia, co-sponsored Death on the High Seas Act amendments introduced by Congressman Lloyd Doggett for cruise ship victims. These bills held cruise lines accountable for negligent deaths regardless of the age of the victims. The amendments became a part of the original legislation of the Cruise Vessel Security and Safety Act. However, again, the cruise lines' paid lobbyists successfully pressured the U.S. Congress to allow the cruise line industry to evade accountability. All of the protections of the Cruise Vessel Security and Safety Act were in jeopardy in 2010 if DOHSA was not removed. So, DOHSA was removed and the Cruise Vessel Security and Safety Act became law in July 2010—including the requirement that all cruise ships have a man-overboard system within 18 months. The United States Coast Guard acknowledged in February 2012 that the cruise line industry has not implemented this provision of the law. Freedom of Information Act requests indicate that the U.S. Coast Guard spent over $900,000 for just two searches for cruise ship passengers whose bodies were never found. American taxpayers pay for these searches. The cost to the cruise line is nothing.

Despite cruise line claims of safety, a 2008 U.S. Senate hearing divulged that cruise lines did not know how many passengers had died or disappeared from foreign-flagged cruise ships using American ports. The cruise lines did not keep count of the dead or missing because they were not required to do so. Consequently, complaints of negligent death when the deceased has no dependents continue to be dismissed from court because DOHSA does not allow surviving adult family the right to sue for the death of their loved one. The family of the deceased does not have the opportunity to have the facts of their loved-one's death heard and decided by a jury.

Unlike DOHSA of 1920, state tort laws have evolved to reflect the value of human life in commercial maritime deaths. Every state in the United States has laws that

allow victims to sue for financial damages for wrongful death. Some states also allow surviving family members to recover damages for the conscious pain and suffering of the deceased. Others also impose punitive damages for serious wrongdoing and to serve as a deterrent. In the case of wrongful maritime deaths, state law is superior to Federal law.

It is inequitable, unfair, and inhumane to force cruise ship victims to apply the antiquated Death on the High Seas Act of 1920 to their loved one's death. My mother's life is no less valuable than an airline passenger's life and my family's grief is no less painful than the grief of any airline victims' family. The U.S. Supreme Court has recommended that Congress correct this inequity for maritime victims and there are no costs associated with making this change. By continuing to force maritime victims to do so, the U.S. Congress is telling survivors that the life of their loved is worthless in comparison to that of an aviation victim! The result is that cruise ship victims are victimized not only by cruise lines but by the United State Congress. I urge Congress to do what is was intended to do—represent its people—by correcting the injustice of DOHSA of 1920 during the 100 year anniversary of the RMS Titanic tragedy that took more than 1,600 lives.

Respectfully,

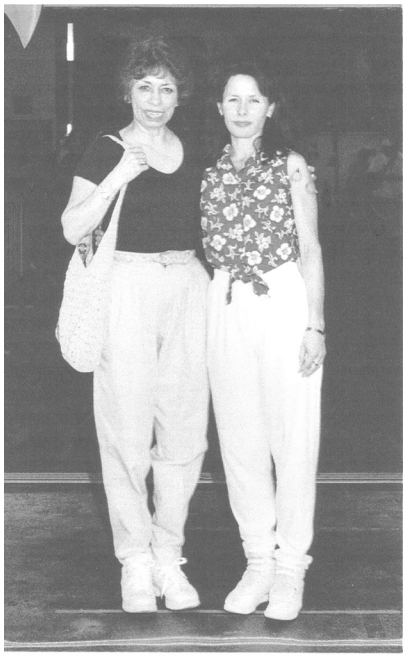
Lynda D. Sanford, Vice-President
International Cruise Victims Association (ICV)
http://www.internationalcruisevictims.org/

Lynda D. Sanford, MBA, CIA, CFE, CISA

Lynda Sanford has been auditing for the public and private sector for 25 years. She was an internal auditor, forensic auditor, and external auditor for the Federal Government for 17 years. She has received numerous awards for her audit work and earned her designations as a Certified Internal Auditor, and Certified Information Systems Auditor, and Certified Information Systems Auditor through examinations. She earned her Master of Business Administration with a concentration in international business from Kennesaw State University and her Bachelor of Business Administration degree in accounting from Texas A&M, Corpus Christi. She has worked in North and South America, Africa, Asia, the Caribbean and the South Pacific. She has lived in Georgia since 1986 and has been a resident of Atlanta, Georgia since January 2001.

About Our Mother

Elizabeth Sanchez Stevens (left) of Anchorage, AK and with her daughter, Lynda Sanford (right), of Atlanta, GA in Los Angeles, CA in July 2001.



Elizabeth was a single mother of five children. She began her career as a Licensed Vocational Nurse in Corpus Christi, TX. She earned her Bachelor's Degree in Secondary Education and Master's Degree of Public Administration in her mid-40s. She moved to Anchorage, AK in 1987, where she continued to teach Special Education and English as a Second Language, until her death in July 2001.

Senator ISAKSON. And I thank the industry for being represented. To Admiral Salerno, thank you for the many things the Coast Guard contributes to the safety and security of the citizens of our country on the high seas and thanks for what you do for the country. And to the others testifying, we look forward to hearing your testimony although I, like Senator Rubio, read it all last night because I knew I would be in and out.

So Mr. Chairman, this is a very timely hearing on a subject that's of great interest to the people of my state and I appreciate your letting Ms. Sanford's statement be entered for the record.

The CHAIRMAN. Thank you very much, Senator Isakson. As always, you're to the point and effective.

Senator Begich, followed by Senator Nelson.

STATEMENT OF HON. MARK BEGICH, U.S. SENATOR FROM ALASKA

Senator BEGICH. Thank you, Mr. Chairman. I will be brief because I'm anxious for the opportunity to hear the testimony but also for the questions and answers. I have a state that has an enormous amount of impact with the cruise industry, 15,000 jobs approximately in our state, related to the cruise ship industry a $1

billion-plus economic impact. But along with that, we have the largest single Coast Guard base in the country in Alaska.

So I'm anxious to have this hearing. I know in Alaska we have taken exceptional steps in Coast Guard, relationships with our cruise ship industry and our local community in making sure we have not only, I think if not the highest standards pretty close to the top highest standards of environmental standards that the cruise ship industry worked with us on as well as safety standards where we were able to do some things where we put pilots on the cruise ships, which is very unique to a lot of ports.

So I think we have a lot to talk about today but also from Alaska's perspective I think a lot to show off of steps we have taken. We consider ourselves a domestic port. Many people consider us an international port in a lot of ways because the coastline is so diverse and lengthy.

So, again, Mr. Chairman, thank you for this opportunity. I'm anxious to hear the dialogue and discussion and then, of course, as you know, Mr. Chairman, I will always be bragging about Alaska's unique steps that we've taken to improve another industry that's so important to our country.

The CHAIRMAN. I thank you, and actually Alaska probably gets a pretty large percentage of these boats because that's spectacular territory.

Senator BEGICH. We're getting more every day and that's why I was a little concerned when Senator Rubio said he wants to grow his to 61 percent. We want him to go down, ours go up. So we're working it.

The CHAIRMAN. All right. Well, you two guys work that out on your own.

[Laughter.]

The CHAIRMAN. Senator Nelson.

STATEMENT OF HON. BILL NELSON,
U.S. SENATOR FROM FLORIDA

Senator NELSON. Mr. Chairman, thank you for doing this. Senator Rubio and I have the busiest cruise port in the world, which is Miami, and when you combine all the cruise ports that we have—Everglades, which is at Fort Lauderdale; Cape Canaveral, which has become famous because of the Disney cruises, although Carnival is there and other lines as well; Jacksonville, another major cruise port, as well as Tampa—these are major cruise lines and ports.

And so we've got our port director here of Miami, Bill Johnson. He's going to be contributing mightily to this conversation. And, of course, this cruise industry produces 120,000 jobs in Florida and untold amounts of economic activity because of this phenomenon that cruise guests fly in and they stay a night or two, getting ready for the cruise, and then they go to the cruise.

Now, with Disney, of course, they've got this incredible thing. They take them to the park. Then they go on the cruise, or vice versa, and this just generates phenomenal economic activity. Back a couple years ago we passed the Cruise Vessel Security and Safety Act, which is going to continue to protect the traveling public, and I really appreciate you calling the hearing and giving the cruise

lines the opportunity. I'm looking forward also to the Coast Guard's presentation today. I think that will be very, very helpful.

The CHAIRMAN. Thank you, Senator Nelson.

And Senator Lautenberg has just arrived and he is Chairman of the Subcommittee.

Senator LAUTENBERG. Thank you, Mr. Chairman. I thought I'd have a more dramatic entrance than this.

The CHAIRMAN. It was pretty dramatic.

[Laughter.]

The CHAIRMAN. Sort of threw off the rhythm of the hearing, you know.

STATEMENT OF HON. FRANK R. LAUTENBERG, U.S. SENATOR FROM NEW JERSEY

Senator LAUTENBERG. Thanks, everybody, for being here. The industry is so important, as we've now learned, and well, we may talk about some improvements in safety and security that we'd like. When a passenger steps onto a cruise ship, their expectations—relax, enjoy time off from the pressures of everyday life. No one comes aboard expecting to enter a real live nightmare.

That's what happened in January when the *Costa Concordia,* a 950-foot luxury liner, slammed into rocks, capsized off Italy's Tuscan coast. More than 4,000 passengers, and if this was said before please repeat it—forgive me, I think it's worth repeating—more than 4,000 passengers and crew members were aboard this ship when it crashed, killing at least 25 people, injuring more than 20 others and the survivors included a young married couple from Brick Township, New Jersey.

The couple told reporters the scene was chaotic and confusing, that they received little instruction from the captain and the crew as they rushed to get life vests, endured long panic-filled waits for instructions and information and crammed onto lifeboats.

In chaotic moments like this, passengers look to their ship's captain for leadership and that, as we now know, the *Costa Concordia's* captain abandoned ship after the crash. And I've got to be clear—crashes like this, though few and far between—are pretty significant when a tragedy of this magnitude occurs, and we've got to ask the tough questions and get honest answers.

And we owe it to the public to make sure that only the safest vessels are allowed to cross our seas and that only the best qualified, best trained crew members are operating these ships. Additionally, we've got to make sure that passengers receive their own proper safety and evacuation training and we also need a better understanding of whether international standards are being followed and where improvements are needed.

It's not, after all, the first time the questions have been raised about the cruise ship industry. In 2010, Congress passed cruise ship safety legislation aimed at protecting passengers from crimes on cruise ships, and this legislation recently went into effect but we still have serious concerns.

For example, one of the law's key objectives is to have all serious crimes reported and posted online but there are indications that it's not happening. So I'm going to have questions, Mr. Chairman, for the witnesses about whether the public is being informed and made

fully aware of the crimes, that are taking place. The bottom line is that while cruises are intended to be a time of relaxation and fun, safety can never take a vacation.

I took 20 members of my family on a trip last year and it was a spectacular trip all and will be remembered for long, long years. We felt safe and comfortable and I hope that's the way all passengers will feel on cruise ships in the future and I trust that you will help us to do that.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Lautenberg, very much, not just for this but for your hard and productive work on your subcommittee. You produce a lot of good stuff.

I'm going to start with the questions and we'll keep it to about 3 or 4 minutes each.

VOICE. Testimony.

The CHAIRMAN. Yes, I do that very frequently.

[Laughter.]

The CHAIRMAN. It's an ego problem, I think.

[Laughter.]

The CHAIRMAN. But I start asking questions before I've listened to you and this is exactly the opposite of what we want to present, that we're interested, that we want to hear what you have to say and that you probably don't want to hear what I have to say.

So I've been duly corrected. I apologize to all and, Admiral, you should start.

STATEMENT OF VICE ADMIRAL BRIAN M. SALERNO, DEPUTY COMMANDANT FOR OPERATIONS, DEPARTMENT OF HOMELAND SECURITY, U.S. COAST GUARD

Admiral SALERNO. Good morning, Mr. Chairman, Ranking Member Rubio, distinguished members of the Committee. Thank you for this opportunity to appear before you and to discuss issues related to cruise ship safety.

Thank you also, Mr. Chairman and committee, for your expression of sympathy for the tragedy the Coast Guard suffered earlier this week. We continue to search for our three missing colleagues and, as you can imagine, in a small service this is always a very painful time for us. So thank you.

Every year over 170 large passenger ships operate from United States ports and they embark approximately 11.7 million passengers. The safety of these passengers and the crews which operate these vessels has been a long-standing focus of the Coast Guard.

Every year, we conduct thorough examinations of these vessels to ensure that they comply with all United States and international safety, security and environmental standards.

In my role as the Deputy Commandant for Operations, I'm responsible for setting the safety, security, and environmental standards for all U.S. flag vessels, commercial vessels, as well as for the foreign vessels which operate and visit our ports. I'm responsible for conducting investigations when accidents or violations of our standards occur and I'm responsible for setting policy regarding the conduct of search-and-rescue activity.

For all of these reasons, the recent casualty involving the *Costa Concordia* is of great interest to us. We are certain that there will be much to learn from this casualty and we are open to the possibility that our regulations and the international standards produced by the International Maritime Organization may need to be strengthened based on the outcome of the investigation now being conducted by the Italian government.

Accordingly, we have offered to assist in Italy's investigation as an interested party due to the significant number of American citizens who were on board, including the two who remain missing. This was a tragic accident and all of us in the Coast Guard extend our heartfelt condolences to the families and friends of the passengers who are lost and who remain missing.

This year marks the 100th anniversary of the loss of the *Titanic.* Despite a century of technological improvements in maritime passenger safety, the *Costa Concordia* reminds us that our new technologies, as beneficial as they are, cannot be taken for granted, that they are only as good as the human systems that operate and maintain them and the regulatory regimes which enforce the rules.

To improve passenger safety on a global scale, the Coast Guard leads the U.S. efforts at the International Maritime Organization where world maritime safety standards are set. This focus on international standards is important because, just as in the *Costa Concordia* case, American citizens are frequently passengers on vessels which otherwise have no U.S. connection.

As the agency responsible for verifying the safety of foreign vessels in our ports, the Coast Guard has established the most rigorous port state control program in the world. All foreign flag cruise ships which embark passengers in the U.S. must undergo a controlled verification examination before they are permitted to operate.

This examination is comprehensive in nature. It includes preconstruction concept reviews of the ship design. It includes examinations of the hull and tests of safety systems during construction of the ship followed by annual and periodic examinations for however long that ship is operating from a U.S. port.

It is during these examinations that we also verify compliance with environmental standards and security procedures, including those procedures required under the Cruise Vessel Safety and Security Act.

In 2009, the Coast Guard established a Cruise Ship National Center of Expertise. This center is the focal point for providing Coast Guard marine inspectors with the in-depth technical knowledge of cruise ship design and operations and it serves as an indicator of just how seriously we take this responsibility.

One of our greatest safety challenges that we could potentially face is a mass rescue operation involving a cruise ship. While we work diligently with the cruise lines to minimize the risk of such an event ever occurring, we have also developed and we continually refine our search-and-rescue and mass rescue contingency plans.

We undertake this level of emergency planning in conjunction with the cruise industry. We hold copies of cruise ship emergency plans and we periodically test them to ensure seamless coordination in the event of an actual emergency.

Over the last 5 years, the Coast Guard has conducted 36 mass rescue exercises involving passenger vessels.

Each Coast Guard district has specific positions identified, authorized by Congress, to focus on this responsibility. As mentioned, we do not yet have the facts in the *Costa Concordia* accident.

However, as an immediate measure, I have directed Coast Guard field inspectors to witness passenger muster drills required by the International Safety of Life at Sea Convention whenever they are on board a ship for an annual or periodic examination. This contrasts with the international requirement for a muster drill within 24 hours of leaving port.

I'm also very pleased to see that the cruise industry itself has announced new emergency drill policies requiring mandatory muster drills for embarking passengers prior to departing from port. Again, this is exceeding the international requirement.

In closing, I want to assure the Committee that the Coast Guard views the safety of passengers as its highest marine safety priority. We have the best port state control program in the world for verifying the safety of vessels and for safety of passengers embarking from our ports, and through IMO we work diligently to enhance the safety of U.S. passengers regardless of where in the world they may embark a vessel.

And meanwhile, we've also undertaken measures to implement the Cruise Vessel Safety and Security Act and are engaged in additional regulatory efforts to give full effect to that law and to enhance the personal protection of passengers on cruise ships.

Coast Guard looks forward to working in continued cooperation with this committee, with passenger victims groups and with the industry itself to maximize cruise vessel safety, security and environmental protection.

So thank you again for the opportunity to testify today and I look forward to your questions.

[The prepared statement of Admiral Salerno follows:]

PREPARED TESTIMONY OF VICE ADMIRAL BRIAN M. SALERNO, DEPUTY COMMANDANT FOR OPERATIONS, DEPARTMENT OF HOMELAND SECURITY, U.S. COAST GUARD

Introduction

Good morning Mr. Chairman, Ranking Member Hutchison, and distinguished members of the Committee. Thank you for the opportunity to appear before you to discuss issues related to cruise ship safety.

In my role as the Coast Guard's Deputy Commandant for Operations, I am responsible for setting standards for safety, security, and environmental stewardship for commercial vessels, facilities and mariners, ensuring compliance with those standards, and conducting investigations of violations and accidents. I am also responsible for policy regarding the conduct of Search and Rescue (SAR). I'll touch on each of these areas in my testimony today in the context of foreign flagged cruise ships operating in U.S. waters.

While it is still too early in the investigation to comment with any certainty on the cause of the tragedy involving the cruise ship *Costa Concordia,* or the conduct of the passengers and crew after the initial incident and during the evacuation of the vessel, as mariners and safety professionals—all of us in the U.S. Coast Guard extend our heartfelt condolences to the families and friends of the loved ones lost in this tragic event.

Impetus for Safety Requirements

To understand where we are today with respect to passenger vessel safety, we should look at the lessons the past has taught us.

The 100th anniversary of the sinking of the *RMS Titanic* in April 1912 is only weeks away. The *Titanic* tragedy prompted overwhelming international response which resulted in the first Safety of Life at Sea Convention, also known as SOLAS 1914. This first version focused on lifeboats, emergency equipment, and radio watches. Improvements to the Convention made in 1929, 1948, and 1960 added requirements for subdivision, stability, machinery, firefighting, lifesaving, communications, and navigation systems. SOLAS is the key international maritime agreement focused on safety.

For the most part, large passenger vessels visiting the United States before the 1960s were in liner service, with the primary purpose of transporting passengers from one part of the world to another. With the advent of commercial airlines, the international passenger vessel industry evolved from transportation to entertainment, and liners became cruise ships.

In the 1960s, a number of serious cruise ship fires, involving heavy loss of life, brought the issue of cruise ship safety to the attention of maritime authorities worldwide. These fires involved the older passenger ships *Lakonia, Yarmouth Castle,* and *Viking Princess,* which had superstructures that contained some combustible materials, allowing the rapid spread of flames and total destruction of passenger spaces.

In May 1966, the Maritime Safety Committee (MSC) of the Intergovernmental Maritime Consultative Organization (IMCO), now called the International Maritime Organization (IMO), met to consider measures to improve the fire safety of passenger vessels. The committee first directed its attention to the problem of fire safety in older passenger vessels and crafted the 1966 amendments to SOLAS 60, which included additional fire protection standards for existing passenger vessels. Congress showed great interest in this work, especially since the Coast Guard had conducted a Marine Board of Investigation into the 1965 *Yarmouth Castle* fire. On November 2, 1968, Public Law 89–777 (R.S. 4400(c); 46 U.S.C. 362(c)), Fire Safety Standards for Foreign and Domestic Passenger Vessels, came into effect, which required the Coast Guard to verify that foreign cruise vessels complied with the 1966 fire safety amendments.

In 1968, the United States unilaterally required all passenger vessels with overnight accommodations for 50 or more passengers to meet the 1966 fire safety amendments or U.S. passenger vessel requirements. The Coast Guard promulgated Navigation and Vessel Inspection Circular 2–68, which provided implementing guidance on how to conduct a control verification examination on foreign flag cruise ships, specifying that "this verification may necessitate a degree of plan review, removal of panels, ceilings, etc., in addition to the testing of construction materials." On August 26, 1983, Public Law 98–89 provided additional authority for the Coast Guard to verify that foreign flag cruise ships embarking passengers in U.S. ports comply with SOLAS convention requirements.

The Coast Guard made improvements to its vessel examination program in 1985 and 1993, which further expanded examination requirements and provided much more detailed guidelines for control verification examination procedures on foreign cruise ships. Since 1993, cruise ship designs have continued to evolve, growing in size and complexity with the capability of carrying thousands of passengers and crew, and the Coast Guard has frequently updated guidance for plan review and control verification examinations necessary for foreign cruise ships operating out of U.S. ports. Last year, there were 143 cruise ships, sailing under foreign registry, that operated out of U.S. ports and carried over eleven million passengers.

Modern Standards for Cruise Ships

Over the past decade, the international shipping community, through the IMO and with Coast Guard leadership, has moved decisively toward a proactive approach to passenger ship safety. With cruise ships growing progressively in size and capacity, in May 2000, the IMO agreed to undertake a holistic examination of safety issues pertaining to passenger ships, with particular emphasis on large cruise ships. The outcome of this proactive initiative is an entirely new prevention and survivability based regulatory philosophy for the design, construction, and operation of cruise ships.

The U.S., through the efforts of the Coast Guard, has taken a very active leadership role throughout this initiative, putting forward many of the recommendations for action taken by the various IMO Sub-Committees. The effort identified a number of areas of concern related to cruise ships, and resulted in substantial amendments to major IMO conventions, including SOLAS, International Convention for the Prevention of Pollution From Ships (MARPOL) 73/78, International Tonnage, Standards for Training, Certification, and Watchkeeping (STCW) and Load Line conventions. These conventions provide internationally accepted standards for the design,

construction, outfitting, and operation of ships. They address surveys, structures, stability, machinery, fire safety, lifesaving equipment, communications, navigation equipment, safety management, maritime security, pollution prevention, crew competency, watertight integrity, and safe loading.

Significant improvements under the five main pillars of the initiative entered into force in July 2010:

- *Prevention:* Amendments to the STCW Code and supporting guidelines focus on navigation safety and resource management;
- *Improved survivability:* New SOLAS requirements for the "safe return to port" concept address essential system redundancy, management of emergencies, and casualty mitigation, including the new concept of dedicated shipboard safety centers to manage emergencies;
- *Regulatory flexibility:* Amendments to SOLAS provide a methodology for the approval of new and innovative safety technologies and arrangements;
- *Operations in areas remote from SAR facilities:* Guidelines on external support from SAR authorities, as well as guidance to assist seafarers taking part in SAR operations have been developed; and finally
- *Health safety and medical care:* Guidelines on establishing medical safety programs, and a revised Guide on Cold Water Survival.

Other recent improvements include stability and survivability of cruise ships through new probabilistic subdivision and damage stability regulations, and flooding detection systems; improved voyage planning, particularly in remote and high latitude areas; and voyage data recorders. As a separate initiative, stemming from the 2006 fire aboard the *Star Princess,* significant improvements have been made to the fire safety features of external areas on cruise ships. Overall, the past decade has been an enormous leap forward in cruise ship safety measures and has been largely proactive as opposed to reactive to casualties as has generally been the case in the past. Coast Guard's leadership in the international community with respect to cruise ship safety measures and our support to foreign casualty investigations evidences our dedication to U.S. passenger safety whereever our citizens embark on cruise ships.

The Safety, Security, and Environmental Protection Net

The IMO conventions form the bases for the international safety, security, and stewardship net designed to ensure consistent standards across the worldwide fleet of cruise ships. The owners and operators, flag states and port states each have distinct roles in ensuring compliance with those standards.

Flag states have the primary responsibility to ensure vessels of their flag meet international and domestic standards. They often achieve this through recognized third party organizations who certify that vessels meet design, construction, operating, and manning requirements throughout the life of the vessel.

Port states verify substantial compliance with international standards and ensuring compliance with applicable domestic requirements for vessels of all flags calling in their ports. As the port state authority for the U.S., the Coast Guard has established a robust control verification program that subjects cruise ships calling in U.S. ports to a much higher level of scrutiny than other foreign flag vessels, and much higher than any other port states require for foreign flag cruise ships in their ports.

Coast Guard Control Verification Program for Foreign Flag Cruise Ships

The Coast Guard has a very robust port state control program for cruise ships. All foreign flag cruise ships arriving in the United States that embark passengers or make a U.S. port call while carrying U.S. citizens as passengers must participate in the control verification process. Cruise ships that return to U.S. service after a prolonged absence are treated as if they had never been in service in the U.S. and must undergo the entire process again.

The Coast Guard control verification program includes initial, annual, and periodic examinations for foreign flag cruise ships calling in our ports. It includes concept review during the very earliest stages of design, pre-construction plan review by Coast Guard naval architects and fire protection engineers, mid-construction inspections at the builder's yard by Coast Guard marine inspectors, an initial operational inspection of the vessel upon completion of construction, and at least annual inspections while the vessel is in service in U.S. ports. This regime allows the Coast Guard to determine that the vessel is in substantial compliance with all applicable international and domestic standards.

The engineering review of plans for structural fire protection arrangements provides a great level of assurance that shipboard fire safety arrangements meet inter-

national standards. After review, these same engineers visit the ship and confirm that the actual arrangements on the vessel are the same as those shown on the structural fire protection plans. No other port state provides this level of attention to detail for cruise ships. On the basis of this initial examination, the Coast Guard issues a certificate of compliance that allows the vessel to operate in U.S. ports.

The annual examination ensures that foreign cruise ships continue to maintain all the systems the Coast Guard previously examined during the initial exam in proper operating condition and that the flag administration has performed annual renewal surveys as required by SOLAS. Inspectors focus on firefighting, lifesaving, and emergency systems and witness a comprehensive fire and boat drill by the crew. In addition, inspectors examine the vessel for modifications that would affect the vessel's structural fire protection and means of escape. They also check for modifications completed without the vessel's flag administration approval. After a satisfactory annual examination, the Coast Guard re-issues a certificate of compliance.

Periodic examinations are also conducted, typically midway between the annual examinations. These examinations are limited in scope and build on the more comprehensive annuals, and they are intended to ensure vessels are being operated in a safe manner. The periodic examinations focus on the performance of officers and crew, with specific attention paid to their training on and knowledge of the ship's emergency procedures, firefighting, lifesaving systems, and performance during the drills. To ensure the overall material condition of the ship has not appreciably changed since the annual examination, inspectors randomly select sample items for examination.

Inspectors also vary the scope of the examination depending upon the material condition of the vessel, the maintenance of the vessel, and the professionalism and training of the crew. At every Coast Guard examination of a foreign cruise ship, the inspectors will determine whether the vessel is in substantial compliance with the international convention standards.

As a result of the *Costa Concordia* incident, I have directed Coast Guard field inspectors to witness the passenger muster required by SOLAS whenever they are onboard a cruise ship conducting an initial, annual, or periodic examination. Our personnel will witness these musters either immediately before or during vessel departure from port. I am pleased to see that the cruise industry associations announced a new emergency drill policy requiring mandatory muster for embarking passengers prior to departure from port.

Investigations

Foreign vessels operating in U.S. waters are required by U.S. law to report accidents immediately. Upon accident notification, we proactivly investigate to determine causes and issue safety recommendations to prevent recurrences. It is a continuous improvement process which incorporates lessons learned from accident investigations to enhance cruise ship safety and ensure compliance with national and international laws.

After the *Costa Concordia* incident, the Coast Guard immediately offered technical expertise and support to the Government of Italy's marine casualty investigation. The Coast Guard's expertise in marine casualty investigations will prove helpful as we move forward with the investigation. Currently, Coast Guard teams are conducting interviews with the U.S. passengers to ascertain the vessel's crew level of preparedness and response. Information gained from the *Costa Concordia* investigation may assist in identifying marine casualty causal factors that could have broad application. It is long standing practice to cooperate in all manner of accident investigations involving different flag and coastal states and the Coast Guard routinely acts in this accord.

Search and Rescue (SAR) and Mass Rescue Operations (MRO)

The Coast Guard has maintained a good relationship with the cruise lines regarding search and rescue and medical evacuations. For the Coast Guard, a Mass Rescue Operation involving a cruise ship casualty offshore, with potentially thousands of passengers and crew forced to evacuate into lifeboats and the water, presents our greatest search and rescue challenge. Working with cruise line and passenger vessel companies, the Coast Guard continues to develop and improve SAR and MRO contingency plans. In addition to internal Coast Guard SAR plans, the Coast Guard holds a copy of cruise ship SAR plans and is able to incorporate the cruise ship plans into our overall SAR planning in the event of an emergency. The Coast Guard also meets periodically with cruise line medical personnel to discuss plans for medical emergencies, which pays dividends during actual medical evacuations. For example, many of the 857 medical evacuations performed by the Coast Guard last year, were conducted from cruise ships. evacuations last year.

In addition to working directly with cruise lines, Coast Guard has been working in partnership with the passenger vessel industry associations, including Cruise Lines International Association and the Passenger Vessel Association. Coast Guard works with the associations to develop, coordinate and represent Coast Guard policies and positions related to passenger vessel mass rescue plans, coordination, and exercises.

Recently, Coast Guard led a Department of Homeland Security sponsored interagency table top exercise for Federal agency representatives involving a cruise ship emergency in the Arctic. Mass rescue planning involves support from many of our Federal agency and State partners.

In 2002, Congress appropriated funding for 22 permanent billets for the Coast Guard's Passenger Vessel Safety Specialist/Mass Rescue Operation Program. These billets provide the Coast Guard with increased capacity and capability to help coordinate and promote passenger vessel prevention plans, manage risk and maintain a state of readiness in response to the impressive growth in foreign and domestic passenger vessels over the past decade. Planning for a mass evacuation of a cruise ship carrying thousands of passengers and crew involves intense preparation and extensive coordination to meet the varying types of emergencies that could arise.

Coast Guard passenger vessel safety personnel at each of our Districts assist in the conduct and coordination of Coast Guard mass rescue exercises. Over the last 5 years, the Coast Guard conducted thirty-six mass rescue exercises involving passenger vessels, three of which involved a cruise ship. The Coast Guard has an agreement with CLIA to include an actual cruise ship as part of these exercises every 2 years. Since 2007, CLIA has fulfilled this partnership agreement by providing a cruise ship every other year for a full scale exercise. The purpose of these exercises is to assist the Coast Guard, other Federal, state and local search and rescue authorities and cruise ship industry partners in exercising mass rescue plans, practice interagency/industry cooperation and coordination and identify ways to improve the overall response to a major maritime disaster.

Mass rescue exercises have been structured around a 5-year cycle. In 2010, the Coast Guard directed that, at a minimum, each Coast Guard District conduct and/or participate in one discussion based (*e.g.,* seminar, workshop, game, or tabletop) and one operations based (*e.g.,* drills, functional, full scale) mass rescue exercise over a 5-year period. To meet this exercise requirement, beginning this year, the Coast Guard has planned a 5-year mass rescue exercise series known as "Black Swan." The exercise series will begin this year with a cruise ship seminar in New Orleans, followed by a functional drill in 2013, also in New Orleans, and full scale mass rescue exercises in Miami in 2015 and Norfolk in 2017. The scope of these exercises provide a valuable opportunity to identify and resolve the difficulties associated with rescuing hundreds or thousands of people at once. It is also a chance to address the unique challenges posed by off shore mass rescues.

The Black Swan mass rescue exercise series will focus on the exercise of Coast Guard mass rescue plans, coordination with other authorities and industry partners, notification and information processes, personnel accountability, embarking thousands of survivors on rescue ships from the water, lifeboats and rafts, and rescued passenger and crew support.

Cruise Ship Security and Crime

September 11, 2001 spurred the development of the Maritime Transportation Security Act (MTSA) and the IMO International Ship and Port Facility Security (ISPS) Code, both of which are rigorously enforced by the Coast Guard. Prior to the MTSA and ISPS, only the cruise ships that visited the U.S. and cruise terminals were required to have security plans in place. The requirement for cruise ship and facility security plans in the United States had come into effect as a result of the 1985 *Achille Lauro* terrorist incident in the Mediterranean Sea, resulting in the murder of Leon Klinghoffer—a wheel-chair bound U.S. citizen.

The Coast Guard examines every cruise ship that visits the U.S. for compliance with MTSA and ISPS requirements at the same time it carries out annual and periodic examinations. Overall, cruise ship compliance records have been extremely good, with only three security-related detentions in approximately 1,800 security examinations since July 2004.

Notwithstanding this security compliance regime, there have been serious incidents and crimes that have affected U.S. citizens aboard foreign-flagged cruise ships, however, this has led to an increased focus on protecting our citizens both in port and while they are at sea. In 2010, Congress bolstered passenger safety and security with respect to such incidents and crimes by enacting the Cruise Ship Security and Safety Act of 2010 (CVSSA). Since then, the Coast Guard has worked diligently to implement the provisions of this act.

The CVSSA prescribes security and safety requirements for designated cruise ships and is the authority for a rulemaking now under development by the Coast Guard. CVSSA amended Title 46, United States Code, by adding passenger vessel security and safety requirements, and crime scene preservation training requirements for passenger vessel crewmembers. CVSSA addresses many areas that affect personal safety and security, including: ship design; better public access to information about crime aboard cruise ships; improved precautions, response, medical care, support for victims of sexual assault; preservation of evidence necessary to prosecute criminals; and more consistent and complete reports about criminal activities. A large number of these requirements went into effect when the President signed the legislation on July 27, 2010; however, there are areas that require implementation through the publication of regulations.

Thus far, the Coast Guard has completed the following actions with respect to implementing the CVSSA:

- In June 2011, the Coast Guard published policy establishing guidelines for Coast Guard Marine Inspectors examining cruise vessels for compliance to include physical requirements, such as: rail heights; door peep-holes as one commonly sees on hotel doors, which allow cabin occupants to see who is outside before opening their cabin door; and the passenger security guide.
- The Coast Guard established an Internet-based portal (*NCC@uscg.mil*) to facilitate electronic submission of crime reports.
- The Coast Guard established a web link to publish cruise ship sexual assault and criminal activity data received from the the Federal Bureau of Investigation (FBI) in accordance with the act: *http://www.uscg.mil/hq/cg2/cgis/*.
- An Inter-agency workgroup consisting of Coast Guard, FBI, and the Maritime Administration personnel completed development of a model course addressing crime scene preservation standards and curricula. In July 2011, the Coast Guard published policy promulgating training standards and curricula for the certification of passenger vessel security personnel.

Closing

As I close, let me emphasize that the Coast Guard places the highest priority on vessels that embark passengers in the United States; and embark U.S. passengers worldwide. We have a strong and effective port state control program for foreign cruise ships and ensure that vessels that visit the United States are in substantial compliance with applicable international and domestic standards.

We participate in casualty investigations, even those taking place overseas, and we lead efforts at IMO to improve maritime safety, security, and environmental protection standards.

Furthermore, we have one of the best Search and Rescue programs in the world and we work closely with the industry on SAR planning and medical evacuations. We have efforts underway to plan for mass rescue operations.

We are taking measures to implement the CVSSA. We have accomplished much, but additional work must take place.

As a result of the *Costa Concordia* incident, we have also put into place a regime to witness passenger musters as part of our mandatory vessel examination program. As the investigation unfolds, the Coast Guard will capture lessons learned and incorporate them into our safety regime.

The Coast Guard also looks forward to continued cooperation with this committee, passenger victims groups, and the passenger vessel industry to maximize cruise vessel safety, security, and environmental protection. Although we are not asking for, or recommending to Congress, new legislation at this time, we may do so in the future once we have had the opportunity to review the *Costa Concordia* investigation.

Thank you again for the opportunity to testify today. I will be pleased to answer any questions you may have.

The CHAIRMAN. Thank you, Admiral.

And we call now on Bill Johnson, Seaport Director, Port of Miami.

STATEMENT OF BILL JOHNSON, DIRECTOR, PORTMIAMI, MIAMI-DADE COUNTY

Mr. JOHNSON. Good morning. Chairman Rockefeller and honorable members of the Committee, first, I want to thank you for the

opportunity to testify before you today. I am especially pleased to be invited to appear before our two great senators from the state of Florida, Senator Bill Nelson and Senator Marco Rubio.

Both our senators, as they've stated, are keenly aware of the importance of the cruise industry to the state of Florida. My name is Bill Johnson and I'm the Director of the Dante Fascell Port of Miami, now known as PortMiami. I also serve as the Chairman of the Florida Ports Council, which has responsibility for coordination with Florida's—all of Florida's 15 deepwater ports.

I also have the privilege of serving as the third Vice President of the International Association of Ports and Harbors where we work on issues of national and global concern including issues pertaining to the cruise industry.

Believe me, I cannot emphasize enough that safety is the cruise industry's number one priority. I underscore that. Safety and security is also my highest priority as the director of the world's busiest cruise port.

As a way of some quick background, the Port of Miami, PortMiami, we're a small little port. We're about 518 acres located right in the beautiful part of downtown on Biscayne Bay between the City of Miami and the City of Miami Beach. Our port is governed by our county mayor, Carlos Gimenez, and our Board of County Commissioners serve as our board of directors. We're a public port but we operate with a private sector mentality.

Last year, PortMiami generated over $18 billion, direct and indirect, to the economy of our community, our state and our nation, and we generated in excess of 180,000 jobs in south Florida, in our state, and these are, I would like to add, are high-paying jobs. The average job through the Port of Miami with a high school education is approaching $56,000 a year. So the maritime industry and, specifically, cargo and crews, are very high paying important jobs.

As stated, PortMiami is the world's busiest cruise port. We've just completed our fourth consecutive year exceeding 4 million passengers. In addition, our community, Miami-Dade County, is the global headquarters of five of the world's largest distinguished cruise lines including Carnival Cruise Line and its parent, Carnival Corporation, Royal Caribbean Cruise Limited, Norwegian Cruise Lines, Oceania, Regent.

The importance of having these global headquarters in Florida but, most importantly, in America I cannot stress enough, and I'm sure we'll come back to that issue in a few minutes.

PortMiami, again, and its cruising really is the bread and butter of the economy of my town and a strong piece of the economy of my state. While there are 15 deepwater ports in Florida, five of those ports, as indicated I think by Senator Nelson, five of those ports have a heavy emphasis on cruise and cruise-related business.

During the recent several years in the downturn of our economy, the cruise business in America and in Florida remained a strong and a continued, if you will, strong presence to the economy, protecting local and state jobs and companies in a significant way.

I'd like to present, if I would, just a few statistics. In 2011, over 13 million overnight visitors came to Miami —13 million. The number is growing. In the state of Florida, it was over 82 million visitors, in 2011.

In Miami, those visitors spent over $20 billion last year. They stayed an average of almost six nights, those visitors. And of this number, over 7 percent were cruise passengers. These visitors spent an average of roughly $265 a day while in our community and they stay—this is important—an average of 2.4 nights per cruise. That is the single—the cruise industry is the single largest contributor to overnight stays, to occupancy of hotels, in our community.

When you examine how they spend their money, these cruise passengers spend approximately 35 percent for lodging in our motels and hotels, nearly 26 percent for food, for meals, 15 percent for entertainment, unfortunately only 10 percent for shopping. We'd like that to be higher. Of course, this is just the tip of the iceberg.

Of the more than 4 million passengers last year and, literally, within the next 2 years will be at 4.5 million passengers and by the end of the decade we're projected to be over 5 million cruise passengers at Miami, but of those 4 million cruise passengers who visited PortMiami last year, 60 percent—this is very important—60 percent passed through my sister agency, Miami International Airport, the second largest international gateway into America, obviously infusing millions, untold millions of additional revenues to the U.S. economy through airlines, OK, and million more, if you will, in terms of passenger fees, meals, sales tax, et cetera, et cetera.

PortMiami, obviously, is a critical job creator—a job incubator, if you will, for our state, again, generating over 180,000 jobs just in Miami alone, direct indirect. This number will continue to increase.

Three new lines, including Disney, have announced that they're going to call Miami as a home port—three new brands. We're clearly excited. Also, the maritime industry workers, as I've told you, are some of the highest paid in our state and in my community, averaging close to $56,000 a year.

I'd like to say that, of course, these workers, some of these are, again, both in public and private sector employment. We have over 1,200 International Longshoremen alone at the Port of Miami. In Florida as you've heard over $6 billion a year goes to cruise industry service and these are providers,

This is another benefit, the provisioning of these cruise ships. Royal Caribbean—and one of the senators made this point, a very strong point, RoyalCaribbean alone uses more than 2,000 suppliers.

These are American companies. Two thousand suppliers. Three hundred and fifty—in my community, 350 are located in Miami. They spend over $400 million in my town, Royal Caribbean alone, on shipboard products. Carnival Cruise Line has a fleet of 20, just the line—Carnival Cruise Line has a fleet of 23 ships. On average, they serve eight meals and snacks a day to between 2,000 and 3,000 guests, to a crew of between 1,000 and 1,500 daily.

When you look at that, as the point was made, they're serving—it's like a floating city. There's as many people and staff on these ships consuming product. It's huge for the American economy.

The CHAIRMAN. Mr. Johnson? Very respectfully——

Mr. JOHNSON. Yes?

The CHAIRMAN. If you could kind of begin to——

Mr. JOHNSON. Sure.

The CHAIRMAN. OK.

Mr. JOHNSON. Moving in the direction in terms of provisioning, the point I'm trying to make is it's not just the cruise passenger. It's the related industries that impact the, if you will, the economy of our state, our nation. And we see the opportunity for this to increase even more significantly as the cruise industry continues to flourish.

The comment I'd like to make is that I interact with these cruise executives—fortunately, they're headquartered in my town—from the CEOs and the presidents of these cruise lines all the way down. We are on a weekly basis working with our cruise partners, working—and it's incredible support we receive from the U.S. Coast Guard.

I cannot say enough about the importance of the Coast Guard, their role, the importance of U.S. Customs and Border Protection and the safety and security of our ports. I can assure you—I can testify about the commitment not just of your ports but of the leadership of these cruise lines and these executives to safety and to environment, and during the question and answer I'd be happy to get into some of the responses on both of those issues from the PortMiami perspective.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Johnson follows:]

PREPARED STATEMENT OF BILL JOHNSON, DIRECTOR, PORTMIAMI, MIAMI-DADE COUNTY

Chairman Rockefeller, Ranking Member Hutchison, and honorable members of the Committee, thank you for the opportunity to testify before you today. I am especially pleased to be invited to appear before our two great senators from the State of Florida, Senator Bill Nelson and Senator Marco Rubio, who are keenly aware of the importance the cruise industry brings to the Sunshine State. My name is Bill Johnson, and I am the Director of the Dante B. Fascell Port of Miami, now known as PortMiami. I also serve as the Chairman of the Florida Ports Council and serve as the Vice President of the International Association of Ports and Harbors where we work together on issues of national and international concern. Believe me, and I cannot emphasize this enough, safety is the cruise industry's top priority.

Background

The Miami-Dade County Seaport Department, PortMiami, is a 518-acre facility located in mid-Biscayne Bay between the City of Miami and Miami Beach. PortMiami is governed by Mayor Carlos Gimenez and the Miami-Dade County Board of County Commissioners under a strong mayor form of government. PortMiami is the busiest cruise port in the world, handling more than 4 million passengers in 2011 for the 4th consecutive year in a row. In addition, Miami-Dade County is the global headquarters for five of the world's largest and most distinguished cruise lines: Carnival Cruise Lines, Norwegian Cruise Line, Royal Caribbean Cruises Ltd., Oceania Cruises and Regent Seven Seas Cruises. Thus, at PortMiami, cruising is our bread and butter and lifeblood of the local economy. During the recent downturn in the economy, the cruise business in Florida remained strong and at present continues to grow, protecting our local and state economy from an even larger economic disruption.

Economic Impact

With your indulgence, I would like to present the following numbers—in 2011 Greater Miami had over 13.4 million overnight visitors who spent $20 billion dollars and stayed an average of 5.8 nights. Of those visitors, 7.1 percent or 951,400 were cruise passengers. These visitors spent an average of $264.58 per day and stayed an average of 2.4 nights. When examining how their money was spent, it breaks down as: 35 percent for lodging, 25.6 percent for meals, 15.2 percent for entertainment, 10.2 percent for shopping, 7.5 percent for local transportation; and 6.3 percent for parking. But that is only the tip of the iceberg. Of the more than 4 million cruise

passengers who visited PortMiami last year, over 60 percent of them passed through our sister department, Miami International Airport, infusing millions of additional revenue to U.S. airlines and millions more into the state and local economy via items such as passenger fees, meals, and sales taxes.

PortMiami is a critical jobs incubator for the state, supporting over 180,000 jobs, and that number will increase with three new cruise brands coming to our port over the next 22 months. Also, maritime industry workers at the port have one of the highest incomes in the County. For persons with a high school degree, salaries average around $52,000 per year, a good salary for South Florida. Jobs created by the port are in both the public and private sectors, including over 1,200 members of the International Longshoremen's Association.

In Florida, over $6 billion a year goes to cruise industry service providers, suppliers and vendors according to an economic impact study commissioned by the Cruise Lines International Association (CLIA). Royal Caribbean alone uses more than 2,000 suppliers, 350 of which are local to South Florida and spends more than $400 million annually in South Florida on shipboard products ranging from fuel, food and drinks, to furniture. Carnival Cruise Lines, PortMiami's largest cruise tenant, has a global fleet of 23 ships, where 8 meals and snacks are served every day to 2,000–3,000 guests per ship (along with 1,000–1,500 crew members). Celebrity Cruises' *Constellation,* at full capacity, feeds 3 meals a day to over 2,000 passengers and more than 1,000 officers and crew, comparable to the provisions that any small town might consume in 1 week. Provisioning of ships gets real money flowing into the economy—helping small and medium sized businesses not only survive, but thrive.

Ship Chandlers range in size and product specialization, and include nationally recognizable names like Coca-Cola and Cargill, to local and state businesses such as the American Fruit and Produce Corp., and Sysco. American Fruit and Produce, a fruit and vegetable supplier based in Miami-Dade County has 125 employees and over 45 years experience working with the cruise industry. With annual revenues of over $100 million, they get 30–40 percent of their business from the cruise industry, supplying lines such as Norwegian, Carnival and Royal Caribbean throughout Florida, in New Orleans and along the Gulf Coast. These suppliers support local jobs throughout the South, jobs that would disappear if we did not have a robust cruise industry.

Although standard fare such as bananas and tomatoes are still in high demand, more and more ships are changing menus to include organic and specialty foods, providing additional new business opportunities for U.S. farmers.

Every cruise ship leaving from PortMiami has a multiplier effect that also includes 486 companies providing ground transportation, including bus and limousine services, and thousands of taxi trips between Miami International Airport, local hotels, and PortMiami on a typical cruise weekend. The cruise industry also supports jobs ranging from companies involved in refueling ships, harbor pilots guiding ships into the harbor, tugboat operators, waste removal, and landscaping, as well as terminal security services.

In Florida as a whole, these numbers expand exponentially. Florida is the number one cruise state in the nation, and according to CLIA, the industry accounted for $6.3 billion in direct spending in 2010, generating 123,255 jobs and wages totaling $5.4 billion. Florida's five cruise ports handled 5.8 million embarkations, which accounted for nearly 60 percent of all U.S. cruise embarkations. The jobs are not just on-port, they include travel and transportation services, hotel and hospitality services, food provisioning, ship repair services, advertising agencies, engineering companies, manufacturers of machinery and metal, interior designers, and computer consultants, just to name a few.

Safety and Security

Safety and security must always be our top priority. While serving as director, I have focused on enhancement of our public safety and security protocols. I am pleased that our Port is a leader in the state and nation regarding security. Ensuring our passengers safety is the number one concern at PortMiami. In addition to the separate private security hired by cruise lines, we are close partners with U.S. Customs and Border Protection, the U.S. Coast Guard, the Florida Department of Law Enforcement, Miami-Dade Police Department and Miami-Dade Fire-Rescue.

We take the threat of terrorism seriously, as well as preventing crime on port and providing a safe and secure environment for passengers, workers and visitors alike. We conduct regular training drills with our Federal, state and local partners to ensure readiness for any emergency, be it natural like a hurricane, or man-made.

We also work closely with the Florida Fish and Wildlife Department and the U.S. Department of Agriculture as well as the Florida Department of Agriculture to pro-

tect against entry of insects or disease that could harm U.S. interests. For example, PortMiami has initiated a "Don't Pack a Bug" program with the USDA to protect U.S. farms and produce.

In another innovative program, we have also partnered with a group called Kristi House in Miami, implementing a plan to train the personnel at the seaport to identify and respond to children in transit who may be victims of human trafficking and/or sexual exploitation. In addition, the plan includes partnering with the cruise lines and private security companies to facilitate the training of their personnel as well.

The Port is compliant with all International Maritime Organization standards that govern the operations of cruise vessels. Our lines follow the safety standards of the Convention on the Standards of Training, Certification, and Watchkeeping which deals with crew training regarding safety procedures.

Our close cooperation with the U.S. Coast Guard assures passenger safety with the examination of each new cruise vessel when it first enters service at a U.S. port, three of which will be coming to PortMiami in the coming year. There are also thorough Coast Guard examinations of cruise ships when ships reposition from foreign to U.S. ports, as well as mandatory quarterly inspections. These inspections emphasize structural fire safety and the proper life saving equipment along with being present for fire and abandoned ship drills.

I applaud Congress for passing the Cruise Vessel Security and Safely Act of 2010 in furtherance of efforts to carry out the upmost passenger safety, including updating ships safety, the installation of ship rails, visual identification means on entry doors, integration of technology used to detect any passengers fallen overboard, and the new protocols regarding reporting crimes aboard.

Environmental

PortMiami continues to be at the forefront in environmental responsibility. Our well-thought-out vision embraces public and private input and is consistent with the objectives of County government and maritime industry needs.

Our Port is surrounded by a unique and fragile, maritime ecosystem which ranges from sea grass beds to natural coral reefs. These waters provide our community with the strong tourism base that South Florida thrives on, including the cruise industry.

The Port has taken steps to ensure that the value of commerce in our community is supported by an aggressive and proactive environmental program. Just last year, the Port completed over 40 acres of mangrove restoration at Oleta River State Park in Northern Biscayne Bay. We have also installed storm water treatment systems to improve water quality of the Bay.

To conserve energy, PortMiami has implemented a series of on-going projects to reduce energy consumption onsite, including the installation of 'variable frequency drives' on the air handlers in older facilities, retrofitting all lamps from watt reduction throughout the Port, along with installing computerized panels for controlling the lights in cruise terminals. To reduce our carbon footprint, we have replaced cars with hybrids and provided for the separation of cargo and cruise traffic to decrease idling time and reduce emissions.

We also incorporate green performance standards in our Cruise Capital Improvement Program, with our most recent renovations using furniture manufactured with products using renewable and recycled materials and canopies utilizing a fabric that is 100 percent recyclable. All re-roofing projects have reflective roof measures, such as reflective coating and membranes with a solar reflectance that keep terminals cooler, even in our tropical climate.

Our vision is to continue a tradition of leadership concerning environmental issues and to practice sustainable green development. By carefully balancing environmental, social and economic factors into our business planning and decision-making processes, we will ensure a favorable workplace today and a healthy environment tomorrow.

Conclusion

PortMiami is where the modern cruise industry was born starting in 1972, when cruise shipping pioneer Ted Arison acquired his first passenger ship and founded what has become the highly successful business called Carnival Cruise Lines. We look forward to continuing the growth of the cruise industry in Miami, and welcome new innovations and best practices with gusto. The safety and security of our passengers is priority number one. I would like to thank you for allowing me to speak today and welcome input regarding this most important of industries.

The CHAIRMAN. Thank you very much, Mr. Johnson.

Now, Captain William H. Doherty is the Director of Maritime Relations, NEXUS Consulting Group.

STATEMENT OF CAPTAIN WILLIAM H. DOHERTY,
DIRECTOR OF MARITIME RELATIONS,
NEXUS CONSULTING CORPORATION

Captain DOHERTY. Good morning, Chairman, Senators. Thank you for having me here today to review the issue of cruise line safety.

From my background, I'm a proud graduate of Massachusetts Maritime Academy. I hold two degrees from that institution. I'm a master mariner in the United States Merchant Marine and a retired commander in the U.S. Navy. I served 49 years in this industry including safety manager for one of America's largest cruise lines just prior to retirement.

As my submitted testimony notes, there's a number of issues where the international cruise industry has fallen short of its responsibility to maintain safety and security of the passengers and crew. In recent days, it's become glaringly obvious that there are some serious issues within the cruise industry pertaining to operating safety and security which need to be resolved.

Just 2 months into 2012, we've already seen at least 34 deaths—one on the Liberty of Sea, one on Carnival Fantasy and at least 32 on *Costa Concordia.* We've also seen two sinkings—the Rabaul Queen off of Papua, New Guinea, and the *Costa Concordia* in Italy.

We've seen hundreds of pounds of illegal drugs seized on three cruise ships; most recently, yet another cruise ship losing power in the middle of pirate-infested waters due to reported engine room fire. That ship left passengers in peril on the sea in a terrible place.

These are only the few known reported incidents on cruise ships in 2012. However, what we can reliably assume from these reports coming to light only after the *Costa Concordia* is that there is every reason to believe that many more incidents have gone either unreported or grossly underreported, making it almost impossible to validate incident data and draw an actual picture of the state of affairs regarding security and safety on today's cruise ships.

There's no one specific enforcement agency or mechanism which regulates or enforces the Law of the Sea in this international fleet. The maritime domain is regulated by the International Maritime Organization. More particularly, with respect to safety, the framework of operational management safety and environmental protection is covered through IMO-mandated International Safety Management, or ISM, standards.

These mirror the ISO, or International Standards Organizations, ashore. That's to say that an industry as a whole is expected to establish its own standards. It's regulated by how closely they meet those standards. Again, to paraphrase would be say what you're going to do, do what you say.

The regulators of these standards are usually in administration of the country where the ship is registered, otherwise known as the flag state, under the IMO worldwide. Unfortunately, quite often the country for which the ship is registered, or the flag state,

outsources its authority to contracted agencies, or classification societies.

That was the case in the *Costa Concordia* where Italy outsourced its country's compliance program to the private entity RINA, and they are a private entity. Sadly, these weak checks and balances have led to a sort of the fox guarding the henhouse model of governance, you know, at the expense of passengers, crew and the environment and the maritime domain as a whole.

What I have called for is a greater focus to be lent in three areas—obviously, passenger safety; second, strict shipboard compliance and flag state industry oversight, and you'll see in my testimony how I've outlined some of those. I've noted various specific areas of improvement and change which include, for one, zero tolerance with respect to drugs and alcohol for everyone, all crew on passenger ships.

We also recommend a passenger-initiated distress system and we strongly recommend worldwide contingency planning, funding an organization for future mega cruise ship disasters. Cruise ship operators and owners must fully comply not only with the letter but the spirit of the IMO standards of training, certification and watch standing, otherwise known as STCW, specifically, the requirements of Bridge Resource Management, or BRM, to prevent navigational disasters.

While none of us could have ever envisioned the specific events leading up to the loss of the Concordia and, tragically, 32 lives, there was a clear indication that the root cause of the grounding was a fatal failure on behalf of the captain and his senior officers to follow and comply with the procedures of Bridge Resource Management.

We don't need to reinvent the wheel to bring these necessary changes and improvements to maritime safety around. You know, we've got the framework already in place with the Cruise Ship Security Act and Safety Act of 2010.

This is good legislation but it lacks strict criminal penalties and addresses more individual crimes against cruise vessel passengers and as yet does not address strong penalties or criminal sentencing for reckless abandonment.

We have to decentralize the manner in which emergencies are reported. The *Costa Concordia* only lost 34 lives because a few passengers and crew members were able to call loved ones and report the distress. Mind you, a ship member needed to phone out to report the distress, clearly afraid of reporting it, clear afraid that it wasn't reported by his own ship and that the signal would go unheeded.

If the survivors weren't lucky enough to be within cell range, who knows how much larger the death count would have been? The Office of the *Costa Concordia* was still only reporting to the Italian authorities that they had a power outage, not that they had run aground within the first few calls from the Coast Guard to the ship. That totally should have been the other way around.

We're calling for legislation to mandate passenger distress signals. This would empower passengers to alert the outside rescue authorities if they feel their lives are in danger and they're not

sure proper distress messages were sent, for whatever reason, by the ship personnel. Passengers able to initiate distress signals.

Thank you, Senators, for your time. I'd be happy to answer any questions with this or my written testimony.

[The prepared statement of Captain Doherty follows:]

CAPTAIN WILLIAM H. DOHERTY,* DIRECTOR OF MARITIME RELATIONS,
NEXUS CONSULTING GROUP

Mark Twain (Samuel Clemens) was a Mississippi Riverboat pilot. One day, a woman passenger tried to flatter him saying" My goodness Captain, you must know where every hazard on this river lies!" Captain Clemens replied: "No Madam. That would be impossible. I just know where the good water is and keep her there."

Ships run aground because someone made a terrible mistake or was negligent.

A Master (Captain) has a responsibility to navigate in a safe and prudent manner, taking into account all circumstances—including but not limited to the existing conditions and the limitations of the vessel involved. Prudence dictates that the Master allows an "exit strategy" of all possible contingencies including grounding, collision, fire, serious illness and a multitude of unforeseen circumstances.

On January 13, 2012, the Italian flag cruise ship, *MV Costa Concordia,* stranded and capsized off the Italian island of Giglio. At least thirty-two lives, (almost all of them passengers) were lost. None of the lives appear to have been lost during the stranding, but occurred at least 1 hour later when the ship capsized.

Most often in life, we are judged more on how we react to situations and events than the incidents themselves. In the case of the Captain of the *Costa Concordia,* the lack of planning, training, drilling and preparing for the subsequent events was tragic and disgraceful . . .

Maritime safety and prudence starts with competence; achieved through a combination of training, certification and constant drilling as well as the maintenance of operational and safety equipment. Leadership on ships, as in life, starts from the "top down."

Abandoning those left in your professional care clearly demonstrates the lack of moral fiber of the Master and all those other officers and crew who abandoned not only their passengers but their fellow shipmates, those "professional" mariners, who did in fact remain at station waiting for leadership and guidance that was never provided by those [cowards] who deserted their responsibilities and dignity.

The fact that the passengers were never mustered and briefed in Emergency Stations, evacuation or any other prerequisite safety information is not only imprudent, but illegal.

I have commanded ships of all types for over thirty years, have served ashore in management as Port Captain for major oil companies, taught navigation at America's finest Maritime Academy, and have served as Safety Manager for one of the largest cruise lines in the world.

Cruise ships—as well as all vessels plying the navigable waters of the world—are subject to strict maritime rules and regulations, including but not limited to Safety of Life at Sea (SOLAS) regulations, Standards of Training Certification and Watch keeping (STCW), The International Safety Management (ISM) rules and most importantly, the Rule of the Sea (whereby the Master and officers and crew never abandon the ship until all passengers and crew are accounted for and everything possible has been done to save them).

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* Captain Bill Doherty is a 1967 graduate of the Massachusetts Maritime Academy, a licensed U.S. Coast Guard Master-Unlimited tonnage, and qualified First Class Pilot, Prince William Sound, Valdez, Alaska. Captain Doherty is a retired Commander in the United States Navy Reserve, and has served on numerous U.S. Navy warships and was the Head of Maritime Affairs for the Chief of Naval Operations during Operation Desert Storm. Over the course of his career, he has commanded U.S. Naval Ships, as well as tankers, containerships, research vessels, high-speed ferries, and was an instructor at his alma mater. Prior to retirement, his latest position was as Safety Manager for Norwegian Cruise Lines. Captain Doherty now serves as the Director of Maritime Relations for Nexus Consulting, a maritime safety and security firm based in Alexandria, VA.

On a total lack of leadership and responsibility from the ship's Master and senior officers & serious questions regarding the Captain's sobriety and emotional stability . . .

There seems to be a clear indication of reckless negligence, followed by confusion and chaos in the loss of the *Costa Concordia.* I agree that we have to wait until all the facts are in. However, pictures of that boulder stuck in the side of the ship and the fact that the Master, and most of the senior licensed officers, abandoned their ship and their duties prior to accounting for all souls aboard speak for itself. In fact, several reports portray the Captain, his key licensed officers and a woman (purported to be his girlfriend) in the very first lifeboats scurrying away from the sinking ship and abandoning those remaining souls to the perils of the sea. Emerging reports paint an ever more bizarre portrait of a ship and crew totally out of control.

On February 18, 2012, television news[1] reported that traces of cocaine were reportedly found on the outside of a hair sample of Capt. Francesco Schettino, the Master of the *Concordia.* Notably, the consultant who did the analyses stated that they found no presence of the drug in urine samples or within the hair itself.

My company, Nexus, has from the very beginning of this investigation questioned the "sobriety" (be it under the influence of drugs and/or alcohol) of the Captain and crew members, and how that condition may (and in my opinion most probably) have factored into this disaster.

It is clear that there was no timely or proper post-casualty alcohol or drug testing performed on Captain Schettino, or all those officers and crew who may have had an emergency duty during this disaster. Of course, this type of test must be done in a timely fashion to determine blood alcohol content, and this test was not completed.

Whatever "drug testing" was performed, the mere presence of an illegal substance (Cocaine) on the Captain while he navigated this majestic vessel onto the rocks, taking the lives of thirty two souls in the tragedy, is indication enough of the presence of illegal drugs on the bridge of this ship when she was wrecked. The fact that traces were found on the body of the Captain is nothing less than *STRONG CIRCUMSTANTIAL EVIDENCE* of drug use, by either Captain Schettino himself at the worst case, or by someone very close to him in the best case.

The Solution: A Need for Changes in Cruise Vessel Laws in Light of the Costa Concordia Disaster . . .

The International standard for proper evacuation, mustering and embarkation into lifeboats and life rafts is a *maximum* of thirty minutes from the sounding of the Abandon Ship Alarm, until the boats are launched and away from the sinking ship.

Cruise ships are required, periodically (not less than annually), to demonstrate this capability to a governing regulatory body. The ability for the entire ship's crew to work as a team in accomplishing this standard requires training, drilling and then continued drilling and training.

From the time the *Costa Concordia* hit the rocks and stranded, there was almost no communication and/or any distress signal sent from the ship until local authorities were alerted to a problem through cell phone conversations between passengers and their family members ashore. The Master downplayed and transmitted false and misleading information to rescue authorities until the situation became unmanageable and lives were lost.

No alarms were sounded, nor were passenger evacuations conducted in a timely manner. Passengers were given false accounts of the extent of the damage and ordered to return to their cabin rather than assemble at the abandon ship stations. The Master and senior officers abandoned the ship and the passengers by boarding the first lifeboats, leaving passengers and crew aboard to fend for themselves. The Master and ship's crew refused to cooperate with local rescue authorities, and there was no muster or accounting for how many souls were left aboard to be rescued.

The limited resources of the local Search and Rescue (SAR) units were overwhelmed and unable to affect an expedient and effective rescue, causing the loss of life of many. No unified command structure was in place, which would have brought maximum resources to bear on rescuing trapped souls aboard the ship. Rescue efforts transformed too quickly to recovery efforts due to lack of resources, information and effective use of an Incident/Unified Command structure. Obviously there is a need to insure through proper legislation that no such tragedy ever occurs again, affecting not only U.S. citizens but passengers around the world.

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[1] *http://www.foxnews.com/world/2012/02/19/lawyers-for-costa-concordia-request-new-drug-tests-for-cruise-captain-after/.*

The Cruise Vessel Security and Safety Act of 2010

H.R. 3360: The Cruise Vessel Security and Safety Act of 2010 was a well-intentioned and good piece of legislation, but shortfalls in enforcement, financing and prosecution require amendments. The act lacks strict criminal penalties and addresses individual crimes against cruise vessel passengers. It does not address or provide strong penalties or criminal sentencing for the reckless abandonment demonstrated in the *MV Costa Concordia* disaster.

Our *proposed amendments to the Cruise Vessel Security and Safety Act of 2010* would provide additional protection to U.S. citizens booking passage on any foreign cruise vessels through any ticketing agency in the United States and to all travelers aboard cruise ships calling on any United States port during any segment of their itinerary.

In summary, the amendments proposed by Nexus Consulting Group would:

Require development and implantation of a Passenger Distress Signal System (PDS). No timely distress signal was transmitted. "What can passengers do?"

(a) Passenger Distress Signal

Passengers need to be empowered with capabilities to alert authorities in event they are concerned that ship personnel are *NOT* alerting rescue and responding authorities to situations aboard the ship in "real time."

(b) The PDS system will be tied to the ship's Global Maritime Distress and Safety System (GMDSS)[2] system, with protections to deny interference of distress signal from the ship.

(c) Passengers are entitled to let the outside world know if there is something wrong without depending upon people who might have less than honorable motive to delay or interfere with outside response agencies becoming aware of potentially life threatening situations. Can we continue to ask passengers to check their rights in at the dock? We encourage "See Something/Say Something" in all kinds of Emergencies. Anyone can dial "911" on land; shouldn't passengers have the same rights?

No "timely" distress signal was sent

Aside from a cell phone (which appears to have been the initiating factor in the Italian Coast Guard response—and most likely saved numerous lives on the *Costa Concordia* [calls from passengers to families worrying about their own safely, resulting in calls to the Italian Coast Guard]) there are no methods for passengers to initiate a distress call external from the ship. There are systems on-ship which allow passengers to contact the officers on watch in the ship's bridge to inform them of a fire, or a man-overboard or a crime on ship, but these systems are on-ship only.

These proposed Passenger Distress Systems (PDS) need to be linked into the ship's external communication system, in a manner that will not allow any ship personnel to tamper or interfere with transmission, so that when a passenger "sees something" they can "say something." This system will need a redundancy false alarm component; a system which could work could be tying the on-ship warning system into the on-ship distress satellite system. The initiation of the passenger distress system (PDS) could send a message to company DPA, as well as governmental entities, through systems such as the U.S. Coast Guard's Automated Mutual-Assistance Vessel Rescue System (AMVERS)[3], poised to respond, much like the GMDSS.

A five-minute window could be afforded to the ship from the governmental response entity to the ship to allow for assessment of possible false alarm, and if no

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[2] The *Global Maritime Distress and Safety System (GMDSS)* is an internationally agreed-upon set of safety procedures, types of equipment, and communication protocols used to increase safety and make it easier to rescue distressed ships, boats and aircraft. GMDSS consists of several systems, some of which are new, but many of which have been in operation for many years. The system is intended to perform the following functions: alerting (including position determination of the unit in distress), search and rescue coordination, locating (homing), maritime safety information broadcasts, general communications, and bridge-to-bridge communications. Specific radio carriage requirements depend upon the ship's area of operation, rather than its tonnage. The system also provides redundant means of distress alerting, and emergency sources of power.

[3] *AMVERS* or *Automated Mutual-Assistance Vessel Rescue System* is a worldwide voluntary reporting system sponsored by the United States Coast Guard. It is a computer-based global ship reporting system used worldwide by search and rescue authorities to arrange for assistance to persons in distress at sea. With AMVER, rescue coordinators can identify participating ships in the area of distress and divert the best-suited ship or ships to respond. Participating in AMVER does not put ships under any additional obligation to assist in search and rescue efforts, beyond that which is required under international law.

positive confirmation from the ship that the PDS is false or manageable on ship, governmental entities can initiate their appropriate response systems.

Clearly, whether intentionally or unintentionally, there was a breakdown in the communication of what the true status of the *Costa Concordia* was and were the incident was heading quickly. At some point, and from accounts it seems to be about 20 minutes after the ship ran aground, the Italian Coast Guard started to realize they had a listing vessel with more than 4200 passengers and crew and a half-million gallons fuel 1000m from the coast of Giglio. The Italian Coast Guard was well behind the curve with night setting in and limited resources to affect the situation.

From the reports, it does not appear that a "May-day" Distress call went out to any and all vessels to support the rescue operation. It certainly appears the Italian Coast Guard had very limited response vessels and staffing to be able to handle the floating city, so what can be done when littoral (close-to-shore) response systems reach or start to reach critical mass?

Require affirmative port authority documentation, which will require a Captain to verify and report that pre-departure Musters and Evacuation Training has been conducted for all embarked passengers and crew, prior to a ship leaving port

At this point in time, there is no disputing the fact that the passengers aboard *Costa Concordia* were never provided with proper Emergency Muster information, nor were they given any information or instruction by any crew members regarding the emergency station, use of lifesaving equipment and what to do in the event of foreseeable emergencies.

News reports and real-time videos of the time from when the ship initially ran aground, and that period between the grounding and the actual loss of the ship (and thirty-two lives), the actions of the entire crew could only be described as "chaotic."

There was no proper Emergency Signal sounded. In fact unclear; and in most cases downright false and misleading status announcements only added to the confusion and chaos.

Unfortunately; current legal guidelines under the International Convention for the Safety of Life at Sea decree only that a muster drill should take place within 24 hours of embarkation.

It's proposed that if passengers arrive after the muster has been completed, they will be obliged to carry out individual or group safety briefings. The new policy is effective immediately.

Passengers would now need to attend a pre-departure safety drill after the industry's governing bodies announced new safety measures following the *Costa Concordia* disaster.

The Cruise Lines International Association, European Cruise Council and Passenger Shipping Association said the muster drills would now be obligatory on their ships before departure.

In a joint statement, the cruise ship associations said: "The formal policy is designed to help ensure that any mandatory musters or briefings are conducted for the benefit of all newly embarked passengers at the earliest practical opportunity."

They also pointed out that the new initiative "exceed legal requirements."

While this is a noble and possibly "knee-jerk" reaction to the *Costa Concordia* tragedy, this pre-departure muster and training must be included as statute in the amended "Cruise Ships Security and Safety Act of 2010."

It's time to make Pre-Departure Musters, safety briefings and instructions the new "minimum legal requirements." Suitable hard-copy documentation and verification must be required prior to any Port's Authorities' granting "clearance" to depart.

Mandate "zero tolerance" aboard cruise ships

The ship's Captain Francesco Schettino was reported to navigate the ship to pass very close by the island to render a "salute" to a former Costa Cruise Lines Captain retired on the Island. Captain Schettino and a Ms. Domnica Cemortan, 25, were seen wining and dining together 30 minutes before the disaster. One passenger, Angelo Fabri, said: "the captain was drinking wine"—*a claim that contradicts Schettino's assertion that he stayed off alcohol.* Sr. Fabri went on to say . . .."They were laughing and in high spirits. The last drops of wine went into the captain's glass." [4]

[4] By Rebecca Evans and Arthur Martin The Daily Mail (UK) 20th January 2012 *http://www.dailymail.co.uk/news/article–2089052/Domnica-Cemortan-Was-Costa-Concordia-captain-Francesco-Schettino-trying-impress-ballerina.html#ixzz1nLWH7jlq*.

While there does not appear to have been any timely post-casualty alcohol testing (which could have proved or disproved whether Captain Schettino was drinking or not, or how much he drank), overwhelming credible circumstantial evidence and eyewitness passenger reports—coupled with his behavior, before, during and in particular after he ran the *Costa Concordia* aground causing her to capsize and sink—clearly indicate and demonstrate the kind of irrational and irresponsible behavior we have all come to associate with persons under the influence.

The question then remains; just what was Carnival Cruise Lines Drug and Alcohol Program, and just how serious was it taken or complied with if the most senior officers were allowed to consume large amounts of alcohol in full view of passengers, immediately prior to conducting critical maneuvers? Maneuvers conducted aboard *Costa Concordia* on the evening of January 13, 2012 were critical enough in this case to cause the deaths of thirty two souls and the loss of one of the world's largest and most majestic passenger vessels.

One would have to wonder just how tolerant airline passengers would be if their pilot of a 777 jumbo-jet, consumed a bottle of wine in the First-class cabin, immediately prior to returning to the cockpit with an attractive passenger to "buzz" the tower, to salute the controllers. Or, say, their heart surgeon consumed a bottle of wine before performing a triple by-pass on them.

There is an assumption, in any profession, particularly those in which we "license" professionals such as Ship Captains, surgeons and airline pilots, that when we place our trust in our lives and well-being in there "competent and responsible" hands, they will perform in a sober and professional manner. From all reports, Captain Schettino violated that sacred trust.

Such a tragedy as the loss of *Costa Concordia,* and the deaths of thirty-two souls should never again be allowed to happen. One of many changes lawmakers will need to address is substance abuse and its effect on the Safety of Life at Sea.

There is a need to expand the *mandatory alcohol/drug testing procedure for post-incidents* to put the onus on the Master and all persons who were or should have been involved in any actions surrounding the incident to be available for timely testing. If a Master does not present him/herself immediately to authorities, the Master will lose his/her license until reviewed, refusal to submit implying presumption of guilt.

International Maritime Organization (IMO) and Alcohol Abuse

Alcohol and drug abuse have been identified both a sea and of course ashore as the direct cause of most casualties. In the International Labor Organization's (ILO) publication Drug and Alcohol Prevention Programmes in the Maritime Industry (A Manual for Planners)(Revised)" they cite *"In 1993 the International Maritime Organization adopted the International Safety Management (ISM) Code (IMO Resolution A. 741(18)) which "recognized the need for appropriate organization of management to enable it to respond to the need of those on board ships to achieve and maintain high standards of safety and environmental protection"* [5].

The publication goes on to cite:

"Test Results of Affects of Alcohol Consumption of Job Tasks" [6]

- 1st test: Before any alcohol ingestion: 10 percent could not perform all tasks correctly
- 2nd test: after reaching a blood alcohol concentration of 0.10/100ml; 89 percent could not perform all tasks correctly, and
- 3rd test: Fourteen hours later, after all alcohol had left their systems, 68 percent could not perform all tasks correctly

While test was performed on U.S. airline pilots on a flight simulator, there is every reason to believe that these findings apply equally to seafarers!"

The term "seafarer" should be applied to all persons working on ships and not just those in executive or traditional maritime positions, including hotel staff and entertainers directly employed by the ship operators.

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[5] Further, in November 1995 the nineteenth IMO Assembly adopted 'Guidelines for the Implementation of the ISM Code by Administrations' (Resolution A. 788(19)). The requirements of these resolutions became mandatory for certain types of ships on 1st July1998 with the remaining types of ships engaged on international voyages being required to comply by 1st July 2002."

[6] Note: This test was published in the New England Journal of Medicine 1990; 323(7) pp. 455–461. Model JG, Mounts, LM. *Drinking and flying: The Problem of alcohol use by pilots.*

IMO STCW 2010 "The Manila Amendments "regarding Alcohol consumption afloat.[7]

The Manila Amendments of the STCW convention came into force on 1st January 2012. For the first time under STCW, mandatory limits for alcohol consumption are also being introduced (a limit of not greater than 0.05 percent blood alcohol level (BAC) or 0.25 mg/l alcohol in the breath), although individual flag states may choose to apply stricter limits.

In as much as the *MV Costa Concordia* disaster occurred on January 1, 2012, these statutory limits were effective and ALL hands aboard the *MV Costa Concordia* from the Master down to the lowest entry level seafarers was required to comply with these rules and Costa/Carnival cruise lines was required responsible to enforce these statues. It was the Master of the *Costa Concordia's* responsibility to "enforce", not publically violate these regulations.

It's Time for Zero Tolerance

There is no argument among informed and concerned consumers (Cruise vessel passengers) that they want to be able to "assume" with every level of confidence, that the cruise ships they are embarked upon are being operated responsibly and more importantly, soberly.

The current practices aboard almost every cruise vessel flies in defiance and contrast to the international rules currently in effect regarding alcohol consumption by ANY crewmembers. By definition, all crew members embarked in any capacity have specific emergency stations and duties, and therefore are considered "on duty" at all time. We can't plan emergencies, and if ever there is a time for sober judgment and capacities, it is in emergencies.

The IMO alcohol regulations must be in effect at all times, twenty-four hours a day while embarked. Witnessing the . . . "captain . . . drinking wine . . . and in high spirits. The last drops of wine went into the captain's glass" openly contradicts the rules and clearly demonstrates Costa/Carnival Lines decision to ignore the Manila Amendments to the STCW Convention.

In fact, there are actually "crew bars" aboard these ships, specifically for the purpose of facilitating alcohol consumption by crewmembers. These crew bars are a very neat little "profit center" for cruise lines, with crews in excess of 1000. This facilitation, and open alcoholic consumption of ships' senior officers and well as all crew must be immediately discontinued. We cannot wait for the next Captain Schettino to give the "salute" to innocent passengers. We may not be so lucky next time. The ship might not capsize on rocks—she might sink on impact.

With such large numbers of crew aboard these "Mega Cruise Ships" and the temptations to violate these statutory regulations of the Manila Amendments regarding alcohol consumption, there very well may be the need for third party-trained security officers to regularly and randomly test the entire cruise vessel's crew, including the Master and senior officers while embarked and underway.

This proposal will definitely be considered radical by many, but the question then is this: is the entertainment of the ship's crew worth the obvious risks that alcohol consumption brings to the passengers?

It's time for "last call" for cruise ship Crew Bars and staff alcohol consumption.

Insure greater checks and balances between the IMO, Classification Societies and Flag-States for safety, security and environmental compliance

In recent years, there has been an ever-increasing homogenization of duties, roles and in some cases authority between Flag State Control (regulatory body responsible for enforcement of SOLAS Regulations) and Classification Societies. Here in the United States, there has been a major shift in the hands-on, on-scene inspection roles between United Sates Coast Guard Marine Inspection personnel and Classification (American Bureau of Shipping, Lloyds' Register, DNV, etc.) Surveyors.

Here in the United States, many of the actual inspections and surveys included in the details of at U.S. Coast Guard Issued Certificate of Inspection are carried out by authorized Surveyors for Bureaus such as ABS. In essence, licensed contractors are paid to do inspections for the Coast Guard by proxy.

While in most cases here in the USA, the oversight between the U.S. Coast Guard and the approved Classification Societies is adequate, the policy can sometimes lead

[7] *The 2010 amendments* The Manila amendments to the STCW Convention and Code were adopted on 25 June 2010, marking a major revision of the STCW Convention and Code. The 2010 amendments are set to enter into force on 1 January 2012 under the tacit acceptance procedure and are aimed at bringing the Convention and Code up to date with developments since they were initially adopted and to enable them to address issues that are anticipated to emerge in the foreseeable future.

to a less thorough and less-than-adequate inspection of the safety and materiel condition of the ship.

When more and more inspection duties and authority is shifted to Classification Societies, it leaves the door open for abuse and in some cases "conflicts of interest."

Classification Societies are *funded in full by ship owners,* and receive no governmental revenue. This creates a relationship between the Society and the ship owner/operator which can influence not only the thoroughness of an inspection, but in the worst cases, the validity of the Certificates of Inspection issued as a result of their opinions.

Again, there can be little doubt in anyone's mind, that there is SOME relationship between the sudden resignations of President of RINA, Gianni Scerni, resigning less than a week after the loss of *Costa Concordia.* RINA, the Italian Naval Register, is the classification society that issued the *Costa Concordia* a certificate of seaworthiness and safety management certificate in November 2011.

It's time to review, and in some case reverse this shifting of responsibilities and inspection services from Flag State Inspection Agencies to ship owner-funded Classification Societies.

If nothing else, it gives a perception of the "Fox guarding the Hen House."

The International Maritime Organization (IMO) needs to become much more proactive in demanding quality control from those flag states becoming more and more lax in delivering quality seafarer training and certification, and certain classification societies some ship owners seek out for less-than-thorough inspection requirements.

Flag (States) of convenience must be sanctioned for lax standards of inspection and certification.

Stricter compliance and audit of International Safety Management policies and procedures, focusing on training, documentation, drills and oversight

I'd like to take a quick look at the *Costa Concordia* grounding and subsequent mass casualty incident which is still unfolding off the coast of Italy a month and a half after running aground and address just a few of the failed human elements which delayed the response to the grounding and caused over 30 dead or missing passengers.

A key element of International Safety management and a requirement of IMO Standards of Certification Training and Watchkeeping (STCW) regulations, is the establishment of procedures for *Bridge Recourse Management (BRM)* sometimes referred to as "Bridge Team Management" basically synergizing professional personnel and maximum effective use of navigation procedures and equipment such as nautical charts, radar, and electronic navigation systems such as GPS and Electronic Chart Display and Information Systems (ECDIS)[8]

Naturally, while understanding how to operate and obtain pertinent information from such sophisticated navigation systems is an important element of Bridge Recourse Management, the SINGLE most important element is the "Human Factor" particularly the Master and senior Bridge professional licensed officers and rated crewmembers such as Helmsman and Lookouts.'

Obviously, there was a fatal failure in the Costa Concordia's Bridge Recourse management program, costing the lives of thirty-two innocent souls and the loss of a majestic ship.

At this point, it looks like no lives were lost upon the grounding incident or the immediate minutes following the ship running aground. This is important, as it denotes that in this incident, every life lost was preventable and directly tied to the response/rescue operation. To put it bluntly, passengers on the *Costa Concordia* died due to a failure of ship's Master and key company officials to follow specific elements of the International Safety Management (ISM) and the interface with local port-state authority.

Specifically, the loss of lives aboard *Costa Concordia* was due to failure, for whatever motives, to sound internal and external (distress signals) immediately after the

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[8] An Electronic Chart Display and Information System (ECDIS) is a computer-based navigation information system that complies with International Maritime Organization (IMO) regulations and can be used as an alternative to paper nautical charts. IMO refers to similar systems not meeting the regulations as Electronic Chart Systems (ECS).

An ECDIS system displays the information from electronic navigational charts (ENC) or Digital Nautical Charts (DNC) and integrates position information from the Global Positioning System (GPS) and other navigational sensors, such as radar and automatic identification systems (AIS). It may also display additional navigation-related information, such as Sailing Directions and fathometer.

grounding and early damage assessments which clearly indicated at least the *possibility* of a serious emergency.

The *International Safety Management (ISM)* system is an interface and procedural system established by the governing body for vessels on the high-sea, the International Maritime Organization (IMO), and is one based on ISO (International Organization for Standardization) standards which basically mandate that a company must "say what it will do, then do what it says" to be compliant with ISO certification. The IMO doesn't define what or how a company will establish its ISM procedures, but rather outlines the items which a company ISM must cover. The IMO leaves the details to the company to define how the company safety management program will be delivered.

The IMO mandates that for a ship to operate on the high-seas, the company must have a valid "Document of Compliance" which is issued by an organization recognized by the Administration (which is either the government of the country which the ship is registered and "flagged" in, or a recognized compliance body the government may have contracted to perform these task, most often maritime classification societies) which allows a ship within that company to be issued a mandatory "Safety Management Certificate". Under the ISM Code of 2002, resolution A.443(XI) and resolution A.680(17) the IMO mandates companies identify a Designated Person Ashore (DPA) who is the point of contact for ship Captains and governing bodies when issues arise on ships. The company is further mandated to establish all resources and shore-based support to the DPA to support safety and pollution prevention.

These prevention and crisis response systems and procedures must be clearly defined and written in the company ISM policies and more importantly procedures, which are reviewed by the issuing authority of the "Safety Management Certificate" (in the case of the *Costa Concordia,* the SMC was issued in November 2011 by the classification society Registro Italiano Navale (RINA)). This all leads to the first question that must be asked of the incident—"Was the Costa DPA contacted?"

President of RINA, Gianni Scerni, resigned January 18, 2012, less than a week after the *Costa Concordia* was stranded, and capsized, taking thirty-two souls with her. RINA, the Italian Naval Register, is the classification society that issued the *Costa Concordia* a certificate of seaworthiness and safety management certificate in November 2011.[9]

Mandatory criminal and psychological background checks of senior personnel

Criminal and psychological background checks of all licensed officers, crew and key hotel/staff personnel and established standards for refusal to employ those found with certain offenses must be mandated.

At the present time, U.S. Federal laws and regulations require that safety-related transportation professionals; including merchant mariners, undergo screening to ensure that they can safely perform their jobs. Medical certification and background checks are part of the requirements for licensing these mariners. Certification or licensing also includes testing workers' knowledge and skills required for the jobs. These checks are critical because physically or mentally unfit Mariners pose a danger to themselves and to the public. This regulation must be extended to all cruise ship personnel aboard all ships covered by the amended H.R. 3360 Cruise Vessel Security and Safety Act of 2010.

Scheduled competency testing and recertification of key personnel by external agencies in ISM, IMO, Flag State regulations, procedures, and competencies, particularly regarding safety and lifesaving

For some time now, there has been International concern regarding "inconsistencies" between the quality and thoroughness of critical Safety and Competency Training and Certification, in different flag states. The IMO has commissioned studies noting that in one particular study, regarding "Seafarer Certificate Forgery: The Threat Undermining the Quality of Training" the study results found that of a total of fifty-four administrations participating, 11808 out of 12703 cases of fraudulent documents were from one South Asian Country. Seafarers from that same country constituted over 300 of the *Costa Concordia's* total ship's crew at the time of the disaster.[10]

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[9] The Maritime Executive: President of RINA Resigns, Possible Consequence of Costa Concordia Incident Wednesday, January 18, 2012.

[10] IMO Fraudulent Documents *http://www.imo.org/OurWork/HumanElement/TrainingCertification/Pages/FraudulentCertificates.aspx.*

In a recent study published by BIMCO [11], Andrew Guest reported "Fears That the [South Asian Country] may lose its coveted status on a list of countries with approved maritime education systems may seem far-fetched but are still causing jitters in the Asian country. "

"For months, the country that is the biggest supplier of seagoing labour has been under the shadow of an investigation by the European Maritime Safety Agency (EMSA) that could result in some and perhaps all South Asian Country] certificates of competency no longer being recognized by the European Union (EU)." [12]

Obviouly, there is concern amoung some of Europe's leading maritime nations regarding the quality of training and documentation of seafarers from around the world. It's time the United States take a proactive position on ensuring the validity and competency standards of seafarers responsible for the safety of our U.S. citizens embarked on international cruise ships.

We also propose *Universal Criminal Statutes for Masters and Crew* who leave a serious incident. Minimum sentencing for reckless abandonment, causing injury or death to passengers of at least 5–10 years per death and 3–5 years for injury per passenger should be served in the United States' Federal prison system.

No financial limits on responsibilities (Unlimited Liability) to parties involved

Amid the *Costa Concordia* tragedy, it seems very likely that cruise passengers will have to file any lawsuits in Genoa, Italy, where the cases will be subject to Italian law. Courts in the United States have consistently upheld the choice of law clauses contained in cruise passenger tickets absent evidence that "enforcement would be unreasonable and unjust," "the clause was invalid for such reasons as fraud or overreaching", or "the enforcement would contravene a strong public policy of the forum in which the suit is brought".

More importantly, as part of this comprehensive system, the Athens Convention allows the carrier to limit its liability for passenger personal injury or death in the absence of its reckless misconduct. The current monetary limitation in U.S. dollars is approximately $72,000. The operative words are "in the absence of [the carrier's] reckless misconduct." Specifically, Article 13 of the Athens Convention provides that the carrier will lose its right to limit liability where it is proven that the damage resulted from an act or omission done with intent to cause damage or recklessly and with the knowledge that such damage would probably result.[13]

It seems clear that loss of a human life is worth more than $72,000. In 1990; Congress passed the Oil Pollution Act of 1990 (OPA90) lifting any liability limits for oil spills. The question then would be, is our environment worth more than human life? The Athens Convention has to be dissolved and ANY limitations of liability for loss of life or injuries aboard Cruise Ships must be removed in the amended H.R. 3360 "Cruise Ship Security and Safety Act of 2010."

Ticketing "Fine Print"

Cruise lines have made the "fine print" contained in the tickets too one sided [14]. Passengers are engaging in a "contract" between themselves and the ship operator.

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[11] BIMCO is the largest of the international shipping associations representing ship-owners controlling around 65 percent of the world's tonnage and with members in more than 120 countries drawn from a broad range of stakeholders having a vested interest in the shipping industry, including managers, brokers and agents.

[12] *https://www.bimco.org/News/2012/02/15__Feature__Week__07.aspx.*

[13] What are Costa Concordia Cruise Passengers' Rights under the Athens Convention? JANUARY 18, 2012 by Leesfield & Partners, P.A. (@leesfield)

[14] (Reuters) By Tom Hals, Andrew Longstreth and Steve Stecklow Tue Feb 21, 2012 6:14am GMT "The cruise business—led by industry giant Carnival Corp. & PLC, whose Italian subsidiary owned and operated the doomed *Costa Concordia*—has put in place over the years a legal structure that ring-fences operators from big-money lawsuits.

The rules for seeking redress are spelled out in complex, multi-page ticket contracts that passengers may not receive until right before boarding. Victims are often required to file suits in remote jurisdictions. The wording has been the subject of decades of court battles. Thomas Dickerson, a New York state judge who has written extensively on travel law, says the legal hurdles resulting from the industry's victories over the years give operators the upper hand in litigation and make the business highly profitable. The industry faces "fewer payouts because of all the roadblocks," he said. Cruise industry officials say their contracts streamline the litigation process, prevent frivolous claims and lower cruise costs for passengers.

In the case of the *Costa Concordia* wreck, the ticket contract stated that "all claims, controversies, disputes, suits and matters of any kind whatsoever . . . shall be instituted only in the courts of Genoa, Italy." Many survivors are now discovering the challenges of the Italian court system. Italian lawyers rarely accept cases on a contingency basis, so clients may have to pay

Continued

They should not be compelled to "waive" any rights to claims under the jurisdiction o this Act, merely to by granted boarding.

Tickets purchased in USA through ANY Agent, or sub agent for any Cruise Ship, whatever her National Registry, working directly or indirectly for Cruise ship operator or owner must include the statement: "All rights and protections under the amended Cruise Vessel Safety and Security Act of 2010" are granted under this contract for passage. These rights should extend to any excursions of activities purchase or engaged while on the ship during this passage.

Ticket fine print must be eliminated. Passengers should not be forced to surrender ANY rights for claims under the intent of this Act (HR3360). Just as we now have warnings on cigarette packages, Cruise Ship tickets should advise passengers of the right to retain all legal and civil rights.

Cruise Vessel Emergency Response Trust Fund

The proposed amendment provides funding for responses to *Cruise Vessel Security and Safety Act of 2010* events provided certain criteria are met. The responsible party is liable for Federal emergency rescue, response, salvage and cleanup costs and damages as detailed in *Cruise Vessel Security and Safety Act of 2010.* Federal agencies assisting in a response action may be reimbursed. Several other Federal agencies may provide financial support for removal actions.

The *Cruise Vessel Emergency Response Contingency Plan* is the Federal Government's blueprint for responding to large cruise vessel emergencies. The proposed *National Cruise Vessel Emergency Response Contingency Plan* is the result of our country's efforts to develop a national response capability and promote overall coordination among the hierarchy of responders and contingency plans. All of these actions contribute to providing financial incentives for compliance.

Failure to carry out Rescue Operations, utilizing an adequate Contingency Plan and failure to establish an Incident Command system, utilizing a Unified Command . . . Never Again

It bothers me very much that 3 days after the tragic grounding, local (Italian) rescue agencies quickly shifted from "rescue" operations to Salvage/Recover operations (shifting priorities and resources from any concentrated effort to safe those who may still be trapped below decks on this over-turned but not sunken ship, protecting the pristine environment of the island). In fact, news reports stated that local churches prayed on the Sunday following the tragic disaster to "spare the Island of Giglio from an environmental disaster which would destroy their tourism and economy, and 'Oh yes,' the souls of those lost in the disaster".

I am reminded that one and a half years ago, thirty three Chilean miners became trapped miles below ground in what seemed to be a hopeless situation. Instead, as the world watched, a quiet nation at the Southern tip of the Earth mobilized. From their President on down, mine officials, engineers, construction workers and others banded together with just about the entire Chilean population—and they created a miracle.

The whole world watched and prayed as what appeared to be a hopeless situation evolved through little glimmers of hope and tireless work on the part of the people of Chile into that miracle.

There wasn't a dry eye in the world, as the first through the last miner came up that elevator to safety, a full SIXTY-NINE DAYS after that accident.

On Friday, the 13th of January, 2012 an Italian flag passenger ship, driven by an Italian Captain, went aground off an Italian Island. The Captain's actions caused the grounding, his subsequent lack of competence, leadership, and most of all courage led to at least thirty-two souls dead or presumed dead.

Granted, we all saw a couple of salvage teams diving, as the magnificent vessel slides closer and closer to sinking, but there was NEVER any national mobilization of forces and resources, both governmental or non-governmental, to try to save those remaining souls who could be trapped in the hundreds of pockets throughout the ship in a timely manner.

Three days after the sinking, with the ship is lying on its side rescues efforts turned to recovery efforts. The *Costa Concordia* is less than 150 feet wide at her maximum beam. Last year the Chileans drilled over a mile into the rock and extricated thirty three miners trapped for 69 days! It appears that the Italian Captain

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them up front to take a case. And personal-injury cases can drag on for years, especially if there is a parallel criminal investigation. The *Costa Concordia's* captain is under investigation for allegedly abandoning ship. That probe must be completed before evidence will be made available to plaintiff attorneys in civil cases, said Alexander Guttieres, a Rome lawyer who has litigated major personal-injury cases."

isn't the only guy or responsible party or agency that ran (or fell) away from lives in peril on the sea.

Just a comparison as to how some nations react to tragedy. Some turn it into victories; others sit around and wait for time to complete the tragedy.

Never was there any demonstration of an implementation of a Contingency Plan; nor the establishment of any kind of Incident Command System, which could have maximized rescue recourses through a "Unified Command."

If I were asked to give you the very best examples of successful examples of "Unified Command" response I would be torn between three. Probably the most famous would be the rescue of a half million British troops off the beaches of Dunkirk, France in 1939; and more recently the successful rescue of every single one of the thirty-nine Chilean Coal Miners, buried miles beneath the surface of the Earth, and of course, our own Incident Unified Command response to last year's *Deepwater Horizon* oil spill, utilizing Contingency Planning and Response Plans and Finance Structure through the Oil Pollution Act of 1990 (OPA 90). Contingency Planning, the Incident Command and Unified Command Systems work. It's time to translate these into a unified maritime safety program.

Establish and fund the Cruise Vessel Emergency Response Trust Fund

Under the proposed amended *Cruise Vessel Security and Safety Act of 2010,* the owner or operator of a vessel on which a violation or emergency incident occurs (also known as the Responsible Party) is liable for all of the costs associated with the incident and any damages resulting from the incident (not limited to pollution but for the real costs of the rescue efforts, both governmental and non-governmental).

Once every possible effort has been made to rescue every person involved in a Cruise Vessel Emergency, the *USCG* and *FBI's* first priority is to ensure that responsible parties pay to effect effective and appropriate emergency response to their own emergency incidents. However, when the responsible party is unknown or refuses to pay, funds from the *Cruise Vessel Emergency Response Trust Fund* can be used to cover removal costs or damages resulting from cruise vessel emergency responses.

The primary source of revenue for the *Cruise Vessel Emergency Response Trust Fund* is a $10.00 per passenger day fee on all U.S. citizen passengers aboard any cruise ship on which passage (tickets) were sold in the United States, and all passengers aboard all cruise ships which embark passengers in United States (or its territories) ports, whether passengers are U.S. citizens or foreign Citizens.. Other revenue sources for the *Cruise Vessel Emergency Response Trust Fund* include interest on the fund, cost recovery from the parties responsible for the Cruise ship emergency incidents and any fines or civil penalties collected. The Fund is administered by the *U.S. Coast Guard's Cruise Vessel Emergency Funds Center (NCVEFC).*

Require adequate *Certificates of Financial Responsibility (COFR)* for ALL cruise vessels where any part of this act applies. COFR shows the funding availability and name of *Company-Qualified Individual (QI)* authorized to disburse funds by responsible party (ies).

The *Cruise Vessel Emergency Response Trust Fund* can provide up to $1 billion for any one cruise vessel emergency incident and claims in connection with any single incident. The main uses of *Cruise Vessel Emergency Response Trust Fund expenditures are:*

State Authority access for response actions.

Costs incurred in emergency response.

Payment of claims for uncompensated response and salvage costs and damages, and

Research and development and other specific appropriations.

Summation: Paraphrasing Robert Kennedy paraphrasing Bernard Shaw: "Some men see things as they are and say 'Why?' I dream of things as they that never were; and say 'Why Not?'"

Why not make H.R. 3360; The Cruise Ship Security and Safety Act of 2010" strong enough to prevent future *Costa Concordia* disasters?

The CHAIRMAN. Thank you, Captain. We've been joined by Senator Klobuchar and you're welcome to say a couple words.

Senator KLOBUCHAR. I do not need to.

The CHAIRMAN. OK.

Now Dr. Ross Klein, who is Professor, School of Social Work—I identify with that—St. John's College, Memorial University, Canada, welcome.

STATEMENT OF ROSS A. KLEIN, PH.D., PROFESSOR, SCHOOL OF SOCIAL WORK, ST. JOHN'S COLLEGE, MEMORIAL UNIVERSITY OF NEWFOUNDLAND

Dr. KLEIN. Thank you. It is an honor to be asked to share my knowledge and my insights with the U.S. Senate Committee on Commerce, Science, and Transportation. In my brief oral comments I will identify some of the key points in my written submission.

First, I will discuss safety and security issues related to cruise ships. There are a number of issues. One issue is on-board crime. Between October 1, 2007, and September 30, 2008, the cruise industry reported 421 incidents of crime to the FBI.

These include 115 simple assaults, 16 assaults with serious bodily injury, 101 thefts and 154 sex-related incidents, more than 17 percent of which were against children under the age of 18, and in that data the rate of sexual assault on Carnival Cruise Lines was 50 percent higher than the rate of sexual assault in Canada.

The data was accessed through a request under the Freedom of Information Act. Unfortunately, given the wording of the Cruise Vessel Security and Safety Act of 2010, comparable data is not available for subsequent years so it is impossible to judge whether things are getting better or getting worse. An analysis of these crimes is in my written testimony, Appendix B.

A second issue is whether cruise ships, as the industry often claims, are the safest mode of commercial transportation. Appendix A presents various events at sea—ships that have sunk, 16 between 1980 and 2012; ships that have run aground, 99 between 1973 and 2011; ships that have experienced fires, 79 between 1990 and 2011; ships that have had collisions, 73 between 1990 and 2011; and ships that have gone adrift or have had other issues that could be seen to pose a safety risk, 100 between 2000 and 2011. These events speak for themselves.

A third set of issues comes directly from the *Costa Concordia* disaster, the challenge of abandoning a ship within the 30-minute time period after an abandoned ship call, as dictated by the Convention on Safety of Life at Sea.

A large ship in 1974, when this regulation was established, accommodated less than 3,000 passengers and crew, one-third the number of the largest ships today.

Also, the ability to comply with the requirement that lifeboats can be deployed on a ship listing up to 20 degrees. Reports I have seen are that the *Costa Concordia* was listing 20 degrees and that lifeboats on one side could not be used. As well, changes in the manner in which muster drills are run today as compared to earlier times. There is still a question whether industry commitments are adequate.

Other issues worthy of comment are the fact that the *Costa Concordia* did not have a functioning black box when it experienced this tragic accident and, thus, much objective data is lacking.

The crew training for dealing with crime scenes is inadequate and that onboard security as cruise ship employees is not in a position to objectively investigate crimes on board cruise ships.

And finally, the passengers on cruise ships are treated differently by the Death on the High Seas Act than passengers on aircraft, an anomaly that appears unwarranted.

The second area I discuss in my written testimony is environmental concerns. I compliment the U.S. Congress for its endorsement of the North American Emission Control Area and I applaud the U.S. Environmental Protection Agency for its plan to extend regulations pertaining to the discharge of gray water in U.S. waters.

However, I express concern that the U.S. is an anomaly in the world by allowing discharge of treated sewage within three miles of the coast, untreated sewage between three and 12 miles.

I also address shortcomings to the advanced wastewater treatment systems and of marine sanitation devices, both of which discharge treated sewage so it can discharge in areas where discharge or gray water is prohibited; the problem posed by permitting sewage sludge dumping at sea, which is often considered treated sewage; the lack of adequate regulation of onboard incinerators and problems associated with dumping at sea of solid waste including incinerator ash.

Finally, I discuss the patchwork of widely varying environmental regulations across coastal states in the U.S. and I advocate for reconsideration of the previously introduced Clean Cruise Ship Act in order to bring consistency across jurisdictions in the U.S.

The third area I discussed in my written testimony is qualifications of medical care staff and medical care provided on cruise ships and illness on cruise ships.

There are four issues. One relates to the qualifications of onboard medical staff, something that was supposed to be addressed by the Cruise Vessel Security and Safety Act.

However, the provisions are inadequate and leave less protection to passengers and to victims of sexual assault than I believe was the intent of the legislation's authors. A second issue is medical malpractice and liability, that a cruise ship is not fully responsible or liable for improper medical care provided by its medical personnel, a loophole in U.S. law that should be addressed.

The third issue is norovirus and how the industry can more effectively deal with the problem with greater transparency and without creating incentives that indirectly encourage spread of illness. Already this year we've seen 1,725 people reporting ill on cruise ships.

Finally, I discuss the case where potable water on as many as 50 cruise ships was potentially contaminated, leaving many at risk. Unfortunately, information about the situation was sealed in 2006 by the High Court in the U.K., making it near impossible to gain full and complete knowledge about the problem. It is still difficult to secure reliable information.

I wish I could go into greater detail in these oral comments. I invite questions to allow me to expand further on any of these issues. Thank you.

[The prepared statement of Dr. Klein follows:]

PREPARED STATEMENT OF ROSS A. KLEIN, PH.D. *

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Oral Testimony

It is an honor to be asked to share my knowledge and insights with the U.S. Senate Committee on Commerce, Science, and Transportation. In my brief oral remarks I will identify some of the key points in my written submission.

First, I will discuss safety and security issues relating to cruise ships. There are a number of issues:

One issue is onboard crime—between October 1, 2007 and September 30, 2008, the cruise industry reported 421 incidents of crime to the FBI. These include 115 simple assaults, 16 assaults with serious bodily injury, 101 thefts, and 154 sex related incidents. The data was accessed through a request under the Freedom of Information Act. Unfortunately, given the wording of the Cruise Vessel Security and Safety Act of 2010, comparable data is not available for subsequent years, so it is impossible to judge whether things are getting better or worse. An analysis of these crimes is in Appendix B.

A second issue is whether cruise ships, as the industry often claims, are the safest mode of commercial transportation. Appendix A presents various events at sea:

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ships that have sunk, 1980–2012 (n=16); ships that have run aground, 1973–2011 (99); ships that have experienced fires, 1990–2011 (n=79); ships that have had collisions, 1990–2011 (n=73); and ships that have gone adrift or have had other issues that could be seen to pose a safety risk, 2000–2011 (n=100). These events speak for themselves.

A third set of issues comes directly from the *Costa Concordia* disaster: the challenge of abandoning a ship within the thirty minute period after an abandon ship call, as dictated by the Convention on Safety of Life at Sea (a large cruise ship in 1974 when the regulation was established accommodated less than 3,000 passengers and crew, one-third the number on the largest ships today; the ability to comply with the requirement that lifeboats can be deployed on a ship listing up to 20 degrees (reports I have seen are that the *Costa Concordia* was listing 20 degrees and that lifeboats on one side could not be used); and changes in the manner in which muster drills are run today as compared to earlier times—there is still question whether industry commitments are adequate. Other issues worthy of comment are the fact that the *Costa Concordia* did not have a functioning black box when it experienced its tragic accident and thus much objective data is lacking; that crew training for dealing with crime scenes is inadequate and that onboard security (as cruise ship employees) is not in a position to objectively investigate crimes onboard cruise ships; and that passengers on cruise ships are treated differently by the Death on the High Seas Act than passengers on aircraft—an anomaly that appears unwarranted. In my written testimony I discuss several changes that need to be considered to the Cruise Vessel Security and Safety Act, including the need for public reporting of all alleged crimes on cruise ships.

The second area I discuss in my written testimony is environmental concerns. I compliment the U.S. Congress for its endorsement of the North American Emission Control Area and I applaud the U.S. Environmental Protection Agency for its plan to extend regulations pertaining to discharge of grey water in U.S. waters. However, I express concern that the U.S. is an anomaly in the world by allowing discharge of treated sewage within three miles of the coast; untreated sewage between three and twelve miles. I also address shortcomings of Advanced Wastewater Treatment Systems (AWTS) and of marine sanitation devices (MSDs), both of which discharge "treated sewage" so can discharge in areas where discharge of grey water is prohibited; the problem posed by permitting sewage sludge dumping at sea (which is also often considered treated sewage); the lack of adequate regulation of onboard incinerators; and problems associated with dumping at sea of solid waste (including incinerator ash). Finally, I discuss the patchwork of widely varying environmental regulations across coastal states in the U.S. and I advocate for reconsideration of the previously introduced Clean Cruise Ship Act in order to bring consistency across jurisdictions in the U.S.

The third area I discuss in my written testimony is qualifications of medical care staff and the medical care provided on cruise ships, and illness on cruise ships. There are four issues. One relates to the qualifications of onboard medical staff, something that was supposed to be addressed by the Cruise Vessel Security and Safety Act, however the provisions are inadequate and leave less protection to passengers and to victims of sexual assault than I believe was the intent of the legislation's authors. A second issue is medical malpractice and liability—that a cruise ship is not fully responsible or liable for improper medical care provided by its medical personnel; a loophole in U.S. law that should be addressed. The third issue is norovirus and how the industry can more effectively deal with the problem—with greater transparency, and without creating incentives that indirectly encourage spread of the illness. Finally, I discuss a case where potable water on as many as 50 cruise ships was potentially contaminated, leaving many U.S. passengers at risk. Unfortunately, information about the situation was sealed in 2006 by the High Court in the UK, making it near-impossible to gain full and complete knowledge about the problem; it is still difficult to secure reliable information.

I wish I could go into greater detail in these oral comments. I invite questions to allow me to expand further on any of these issues.

Written Testimony

It is an honor to be asked to share my knowledge and insights with the U.S. Senate Committee on Commerce, Science, and Transportation. My testimony focuses on the parameters I was given when I was invited to testify:

- safety and security issues relating to cruise ships (*i.e.,* onboard crime; persons overboard; abandoning ship in an emergency, including muster drills and crew training; shipboard black boxes; crime reporting; and the Death on the High Seas Act (DOHSA)).

- environmental issues related to cruise ships (i.e, the North American Emission Control Area; regulation of grey water, sewage, sewage sludge, and limitations of marine sanitation devices (MSDs) and advanced wastewater treatments systems (AWTS); incinerator air emissions; solid waste; oily bilge; and the patchwork of regulations around the U.S. and the not-enacted Clean Cruise Ship Act).
- medical care and illness on cruise ships (*i.e.,* medical malpractice and liability, norovirus and other illness outbreaks, and issues relating to potable water).
- Labor issues (*i.e.,* the absence of labor laws governing hours of work and remuneration, and the use of arbitration clauses to truncate worker rights to use U.S. courts to address injuries and onboard injustice).

I. Safety and Security Issues

The *Costa Concordia* disaster has refocused attention on cruise ship safety and security. Following this tragic event, the cruise industry predictably repeated its mantra that cruise ships are the safest mode of commercial transportation. They often cite a 1996 Coast Guard "comprehensive safety study that concluded the cruise industry is the safest form of commercial transportation." [1] The study was based on Bureau of Transportation statistics and compared accidents involving occupants of cruise ships with those involving motor vehicles (including occupants, pedestrians, and pedacyclists), and U.S. air carriers; it compared fatalities (natural deaths and those caused by injury), injuries requiring more than first aid, and "accidents/incidents" (left undefined). The study apparently did not consider sexual assaults. Since the study period (1990–1994), the number of cruise ships and cruise passengers has more than tripled and the industry has undergone considerable change.

Rather than accept the industry's claim at face value, it is important to consider the history of accidents and occurrences on cruise ships. Appendix A provides a list of known incidents where cruise ships have sunk; run aground; experienced onboard fires; collided with other ships, quays, or objects; and other significant problems such as loss of power and going adrift, severe lists, encounters with storms, etc. The Appendix does not include the many cases where ships operate with engines that are not functioning or have "mechanical issues" such that ports are missed and itineraries changed. The reader can judge, after reviewing Appendix A, whether cruise ships are truly as safe a mode of transportation as the cruise industry claims.

Onboard Crime

There have previously been hearings on onboard crime, particularly sexual assaults and disappearances. I will not rehash what has already been presented to these esteemed committees, however I call your attention to my previous testimony before the Senate Subcommittee on Surface Transportation and Transportation and Merchant Marine Infrastructure, Safety, and Security on June 19, 2008. I have also attached Appendix B, which presents analysis of reported crimes to the FBI from October 1, 2007 to September 30, 2008. The data speaks for itself: 115 simple assaults, 16 assaults with serious bodily injury, 101 thefts, and 154 sex related incidents.

Perhaps the most distressing findings is the number of onboard sexual assaults—more than 17 percent against children under the age of 18—a rate that on Carnival Cruise Lines in 2007–08 is 50 percent higher than the rate for sexual assault in Canada (using the same definition for sexual assault for ships as on land). Royal Caribbean International in the period 2003–2005 had a rate comparable to Carnival Cruise Lines, but reduced the onboard rate by about half between 2003–2005 and 2007–2008. They are to be complemented.[2]

When one thinks about what can be done it is still timely to refer to two reports completed by consultants for Royal Caribbean in 1999. They had been charged with making recommendations for preventing sexual harassment and assault. The problem was obvious. As one report stated, ". . . improper activity occurs frequently aboard cruise ships, but goes unreported and/or unpunished." [3] The other report acknowledged: "crew members generally understand that if they commit an offence

[1] See CLIA website, "Safety Standards, April 2006." <*www2.cruising.org/industry/safety.cfm*>, Accessed April 11, 2011.

[2] Klein, Ross A. and Jill Poulston. 2011. "Sex at Sea: Sexual Crimes Aboard Cruise Ships," *Tourism in Marine Environments,* 7:2, pp. 67–80.

[3] Krohn, Kay. 1999. Unpublished consultant's report examining current efforts of Royal Caribbean Cruises Ltd. In the area of preventing sexual harassment and assault. May 26.

and are caught they are most likely going to lose their job and be returned home, but not spend time in jail."[4] (Greenwood, 1999: 4).

The reports make a range of recommendations, including:

- increased video surveillance of high risk areas (including the disco bar and dance area, main service corridors on crew decks and key intersections on passenger decks, and youth activity areas);
- cameras already in place be monitored periodically, at least on a random basis, and be recorded at all times;
- an increase in the number of security staff by two per ship;
- increased training and education of staff and crew members;
- responses to sexual harassment and assault be standardized across brands and ships;
- training for medical personnel include an interview protocol for sexual assault incidents;
- that a staff member be identified and assigned responsibility to serve as an advocate for the target of sexual harassment or assault;
- that a shore side hotline be established to receive telephone reports of wrongdoing and that investigations be consistent and evenly handled.
- better educating passengers and better signage onboard demarcating areas that are "off limits" to passengers.

These recommendations are great, but many had not been implemented before passage of the *Cruise Vessel Security and Safety Act of 2010,* and many have still not been fully implemented.

In addition to sexual assaults, Appendix B shows there is a fair number of assaults and thefts. Admittedly, many assaults are between traveling companions and can be considered a case of domestic violence; but not all. Take the case of San Diego grocer Scott Boney who in September 2007 went on Carnival Cruise Lines' *Elation* to celebrate his fiftieth birthday with his wife and a number of friends. On the first night of the cruise, he was pushed down a flight of stairs by a twenty-one year old fellow passenger. When he was found he was nonresponsive. Seven months later he still couldn't speak or write, couldn't stand on his own, was fed through a stomach tube, and didn't appear to recognize many family members and friends who visit or help care for him.[5]

I mention the Boney case because two relevant issues are highlighted. One is the question of whether there is adequate security personnel on cruise ships. This is a theme that has repeatedly been raised as concerns incidents of sexual assault.

Of particular note in those cases is not just the number of security staff, but the training of those personnel. Several cases indicate security personnel may not be adequately trained to deal with crimes and with crime scenes. A model course on "Crime Prevention, Detection, Evidence Preservation and Reporting," developed by the U.S. Coast Guard, FBI, and Maritime Administration in July 2011, and recently implemented, devotes a total of 3.5 hours to actions to preserve crime scenes and crime scene reporting and documentation, considerably less than the 40 hour course advocated by International Cruise Victims Association. The course is taught online; not in-person. This might be sufficient as a refresher for already-trained individuals, but not for those who appear to serve those roles on cruise ships. As related by Laurie Dishman after her 2007 testimony before the House of Representatives:

> I didn't know who to call, because my rapist was supposedly "security". I told [my friend] what had happened, and we decided to call the Purser's desk, which prompted two officers to come to our cabin. Instead of securing the cabin, they sat on the bed, where the rape occurred. Eventually, I was permitted to go to the ship's doctor, but he told [my friend] and I to go back to our cabin and collect the sheets & clothing from the incident and to place then in plastic bags, which they had provided.[6]

The other issue is the responsible serving of alcohol. The bar tab of Mr. Boney and one of his friends shows the purchase of 24 drinks (at a cost of more than $250)

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[4] Greenwood, Don. 1999. "Reducing Sexual Assaults on Cruise Ships: Risk Assessment and Recommendations." Unpublished consultant's report. June 7.

[5] See *Boney* v. *Carnival Corporation,* Case No. 08–22299–CIV, U.S. District Court, Southern district of Florida, Miami Civil Division; Darce, Keith. 2008. "Rehabilitation Slow, Uncertain for Grocer Hurt in Cruise Ship Fall," San Diego Union Tribune, April 9.

[6] Dishman, Laurie. 2007. "Laurie Dishman." International Cruise Victims Association. <*www.internationalcruisevictims.org/LatestMemberStories/Laurie__Dishman.html*>

and several bottles of wine between ten people over dinner from the time they boarded the ship to 11 PM. Depositions taken in the court case indicate Mr. Boney was intoxicated. There are other cases where intoxication has been a factor in grave events. Take the case of Lyndsay O'Brien, an Irish 15-year-old who on January 2, 2006, fell overboard from the *Costa Magic* after being served a lethal amount of alcohol. Also consider page 10 of Appendix B, which shows alcohol is involved in at least 62.5 percent of onboard assaults with serious bodily injury, 35 percent of simple assaults, and 36 percent of sexual assaults. While this data suggests greater concern with responsible serving of alcohol and curtailing alcohol misuse, some cruise lines now offer "all you can drink" packages at flat rates for the duration of a cruise. Bar sales is one of the top sources of onboard revenue for cruise ships.

There is a third issue with regard to shipboard security. Unlike police in a community setting, who are objective and are a disinterested party in their investigation, shipboard security personnel are compromised by the fact that they must investigate crimes onboard a ship where their own employer may be complicit in, or party to the crime. Can these security personnel truly act in a disinterested, objective manner that places the interests of the victim above those of the organization from which they receive their paycheck and continued employment? It is difficult to imagine that onboard security can reasonably be viewed as parallel to the quality and objectivity of a land-based, community police force. This is a disservice to crime victims on a cruise ship.

Persons Overboard

The issue of persons overboard has already been discussed at previous Congressional hearings in December 13, 2005, March 7, 2006, March 27, 2007, September 19, 2007, and June 19, 2008. While the cruise industry tends to view these incidents as comprising accidents and suicides, this is not supported by the 177 incidents recorded since 2000.[7] Admittedly, many incidents are intentional suicides—the 15 year old child who leaves a note after fighting with his parents, the 82 year old man who goes missing in the North Atlantic, and cases where a spouse jumps overboard after an argument—and some are accidents, such as the 23-year-old man who fell overboard while urinating over the side as the ship steamed away from San Juan (he swam to shore), or a 19-year-old man who climbed over a railing and threatened to kill himself after an argument with his girlfriend; when his girlfriend pleaded with him to climb to safety he complied but slipped and fell overboard. However, there are at least two known murders (and a third where a body was thrown overboard to hide a murder), a number of cases where a severely intoxicated person bent over a railing to vomit, and many incidents that are mysterious.

It is the mysterious incidents that raise the most concern. These are people who have given no sign of being suicidal, are happy and enjoying the cruise (often with family members along), and then go missing. Congressional hearings have already heard about some of these cases: Merrian Carver, Annette Mizener, and Hue Pham and Hue Tram, to name a few. In these cases, video surveillance footage was not made available—in the case of Annette Mizener the camera had been covered with a map or newspaper. Interestingly, video surveillance footage is readily available when it confirms the incident is a suicide or accident, but is not available in these incidents that remain a mystery. The situation suggests there is need for better video coverage of deck areas and that video feeds be monitored in real time, at least on a random basis and at times when these incidents most frequently occur.

Another issue is the cost borne by U.S. taxpayers when the U.S. Coast Guard is enlisted to search for a missing passenger. This expense is not trivial. In just one case—that of Michelle Vilborg who went missing 70 miles southwest of Pensacola, Florida on June 15, 2009—the total cost incurred during the search was estimated by the Coast Guard to be $813,807.[8] This is on a not-cost-recovery basis. It would seem that the cruise corporation (Carnival Corporation in this case) could be held liable for a portion these costs. In 2009 the corporation earned $1.790 billion in net income. Despite the U.S. corporate tax rate of 35 percent, Carnival Corporation's corporate tax paid in the U.S. in 2009, as a Panamanian-register corporation, was 0.9 percent.

One additional issue is proper detection of persons overboard. The Cruise Vessel Security and Safety Act requires that "the vessel shall integrate technology that can be used for capturing images of passengers or detecting passengers who have fallen

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[7] See *www.cruisejunkie.com/Overboard.html*.

[8] The figure is in a response to a FOIA request, #09–4707: Linda Griesman Christopherson; Requesting the Coast Guard cost that was incurred in the search for Michelle Vilborg, letter dated October 15, 2009.

overboard, to the extent that such technology is available."[9] The degree to which the cruise industry has complied with this requirement is entirely unclear. There may be additional camera surveillance (but no indication that this is the case), however there has not been adoption of any of the active measures recommended by the International Cruise Victims Association in discussions with the industry prior to the legislation being passed. There are many systems available, many manufactured and marketed in the U.S., but none of these appear to be under consideration for adoption, no doubt because of the cost involved.[10] In addition, the U.S. Coast Guard posted a Federal Register Request for Input from the Industry, and received a number of proposals, but there is no indication that these have been acted upon.[11]

Abandoning Ship in an Emergency

The *Costa Concordia* disaster brought to the forefront concerns about the ability for a ship to be abandoned within the requisite 30 minutes from an abandon ship call, as required by the Convention of Safety of Life at Sea (SOLAS). While the cruise industry might argue that larger ships cannot meet the 30-minute requirement and the period of time should be extended, this gets at the crux of the matter. A catastrophic event, such as seen with the *Estonia,* which in 1994 sunk in 30 minutes with loss of 852 lives, does not allow for a luxury of time. On some large ships today it could conceivably take a passenger, especially one with mobility issues, 30 minutes to get to a lifeboat station.

There are two issues at play. First, how large can a ship become before it is no longer feasible for the number of people onboard to be offloaded within a reasonable timeframe. When the SOLAS requirement was promulgated a large ship accommodated 2,000 passengers and crew. The *Costa Concordia* had more than twice that number, and the largest ships afloat today have more than four times that number—more than 6,200 passengers and 2,500 crew members. There need to be drills and tests to determine whether current systems for abandoning ship can meet the SOLAS requirement; they should be required by the U.S., given that otherwise compliance with SOLAS is left with the country where the ship is registered, most commonly Panama or the Bahamas.

Second, related to the issue of increasing size is ship design. There needs to be consideration for width of passageways, width of stairwells, and the ease with which passengers can make their way from cabins and entertainment areas to their muster stations. That which is practical when people are calm and orderly is quite different, as can be seen in video from the *Costa Concordia,* than what is possible in the frenzy of an emergency.

A related issue also follows from SOLAS requirements. They dictate that lifeboats can be deployed when a ship is listing by 20 degrees or less. This did not appear to be the case with the *Costa Concordia.* If this requirement cannot be met, then consideration needs to be given to alternative methods of evacuation and that there be sufficient life-saving equipment on both sides of the ship for the full complement of passengers and crew. While the Captain of the *Costa Concordia* has shouldered responsibility for the cause of the accident, it has not been sufficiently acknowledged that he likely saved 100s or 1000s of lives by maneuvering the ship to run aground close to shore, making evacuation by helicopter practical.

Three other issues are brought to the forefront by the *Costa Concordia:* crew training, muster drills, and functionality of life-saving equipment.

Crew training. There is no basis on which to say that crew was not adequately trained on the *Costa Concordia.* However, what can be said is that the multiple languages used on board led to increased confusion and messages were not always clearly available to all passengers. This suggests the U.S. Coast Guard pay particular attention to the ability for all crew to speak and understand English on cruise operating out of U.S. ports of call.

While there are conflicting reports, it also appears that crew members (some at least—there were many others who were notably heroic in their efforts) forgot their training and their responsibility by failing to keep passengers calm and by not providing sufficient assistance with getting to muster stations and getting off the ship. It isn't just a matter of some senior officers not remaining onboard until all passengers and crew were safely evacuated, but also that there are some reports of crew members trading priority on lifeboats for money, and others leaving the ship

[9] See § 3507(a)(1)(D).

[10] For a description of systems available see "Man-Overboard Devices," *Motor Boating,* April 11, 2011. <*www.motorboating.com/electronics/man-overboard-devices*>

[11] It appears proposals were received from Seafaring Security Systems and Radio Zealand DMP Americas, along with supporting documentation, as posted on the U.S. Coast Guard website.

before they had completed all of their responsibilities. This underlines the need for additional training and additional drills for how to respond when an emergency occurs.

Muster drills. Cruise ships have appeared to become complacent about lifeboat drills. When I was cruising in the 1960s, 1970s, and early 1990s there was always a lifeboat drill at the muster station (lifeboat) before a ship left port. A senior officer (usually the captain) would inspect whether each passenger properly wore their life vest (pulling straps tighter and fixing those that had been worn improperly), attendance was taken by roll call, and clear instructions were given about what to do in an emergency. Often the lifeboat would be lowered and a demonstration given on how the boat would be boarded and in what order. In the case of the *Costa Concordia,* the muster drill was planned the afternoon after the cruise began, which isn't inconsistent with SOLAS requirements, but in hindsight not a good decision.

By the mid-to-late 1990s, roll calls were taken less frequently and the inspections became less vigilant. Undoubtedly, with 3,000 or more passengers, officers could no longer complete inspections in a reasonable period of time, and there may have been a reaction to increasing complaints from passengers who didn't see the need for the drills. By the late-1990s I began to see virtual lifeboat drills. Passengers would muster in a lounge or a bar and be instructed on procedures to follow in an emergency. They were instructed how to put on a life vest, but there were no longer inspections to ensure they wore them correctly. And there were no longer demonstrations on how a lifeboat was lowered or boarded, or instruction on the order of boarding (children and women first, assist those with mobility issues, and able-bodied men last).

The Cruise Lines International Association (CLIA) and some cruise lines have now announced there will be mandatory life boat drills before a ship leaves port. However, it is still unclear whether these will be virtual drills or real drills, whether passengers will be inspected as to whether they properly wear a life vest, and whether there will be demonstration of life-saving equipment. It appears, based on a cruise director's blog, that attendance will not be taken.

> . . . once guests are gathered at the muster stations then the staff will walk around with clickers to count the number of guests at the muster stations. . . . These numbers are then given to each muster station supervisor who will then tell the bridge. . .the cruise director will let guests know this is happening, it will be very obvious and should take approximately 5 minutes to accomplish as the line has multiple staff assigned to this new task.[12]

The "old-fashioned" lifeboat drills normally took 30 minutes or more.

While I applaud CLIA's requirement for a mandatory muster drill, I have to ask what will happen to those members who do not comply. The Association has had mandatory environmental standards since 1999, however no cruise line has knowingly been sanctioned for violations, numbering in the hundreds and leading to more than $50 million in fines in the U.S.

Functionality of Life-Saving Equipment. Reports from the *Costa Concordia* indicate some lifeboats did not easily deploy given corrosion and rust. I wasn't there, so I can't say what was the case. However, these reports, if accurate, underline the importance for U.S. Coast Guard inspections to include a determination that each and every lifeboat on a cruise ship freely lowers.

I also understand from news reports following the accident that some cruise ships no longer place life vests in passenger cabins, but leave them on the deck where passengers muster to their lifeboat. The wisdom of this practice might be worth reconsidering in the aftermath of the *Costa Concordia* accident. What if passengers can't get to their muster station? Will there be a sufficient supply on each side of the ship to outfit all passengers in the case that one side of the ship isn't accessible? These questions need to be seriously considered.

Shipboard Black Boxes

Like airplanes, modern cruise ships have black boxes that record critical information about the ship and conversations on the bridge. Following the *Costa Concordia* accident the captain reported the black box on the ship had been broken for more than 2 weeks; that he had notified the company and it had yet to be repaired or placed.[13] Without a black box there is limited objective data about the accident. Just

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[12] Young, Susan. 2012. "Carnival Cruise Lines Adjusts Muster Drill," Travel Agent Central, February 16. <*www.travelagentcentral.com/ocean-cruises/carnival-cruise-lines-adjusts-muster-drill–33701*>

[13] Kenna, Armorel. 2012. 'Concordia Captain Says Black Box Wasn't Working, Repubblica Says, January 22. <*http://www.bloomberg.com/news/2012–01–22/concordia-captain-says-black-box-wasn-t-working-repubblica-says.html*> and Hoskins, Paul and Himanshu Ojha. 2012. "How

as an airplane is likely not allowed to knowingly operate without an operating black box, the same should be legislated for cruise ships.

Crime Reporting

The data in Appendix B was received from the FBI in response to a Freedom of Information request. A similar request was made in 2011 for data after October 2008. The material returned in response was totally unhelpful. All useful information was redacted. As well, the FBI says they are not required to keep track of or report crimes committed on cruise ships unless they have opened a file of investigation and subsequently closed the file. That means that allegations of crime are no longer available for analysis (including crimes where the FBI has judged a sexual assault to be a "he said, she said" situation, and thefts of less than $10,000 given that these are not treated as worthy of prosecution). One obvious problem is that it is impossible to measure whether cruise ships are doing better or worse than the 2007–08 baseline. Another problem is that it is impossible to compare onboard crime rates with crimes on land. On land crime rates are based on the number of allegations; these can't reliably be compared to only the number of incidents opened for investigation and subsequently closed. While this absence of data may serve the interest of the cruise lines, which prefer incidence of crime to remain hidden, it is not in the interest of the public or in the spirit of the Cruise Vessel Security and Safety Act of 2010.

Unfortunately, the Cruise Vessel Security and Safety Act of 2010 (CVSSA) was amended from what was proposed to what was passed. Here is the text of the Act as introduced:

> (4) AVAILABILITY OF INCIDENT DATA VIA INTERNET—
>
> (A) WEBSITE—The Secretary shall maintain, on an Internet site of the department in which the Coast Guard is operating, a numerical accounting of the missing persons and alleged crimes recorded in each report filed under paragraph (1)(A). The data shall be updated no less frequently than quarterly, aggregated by cruise line, and each cruise line shall be identified by name.
>
> (B) ACCESS TO WEBSITE—Each cruise line taking on or discharging passengers in the United States shall include a link on its Internet website to the website maintained by the Secretary under subparagraph (A)

The Act as passed reads:

> (4) AVAILABILITY OF INCIDENT DATA VIA INTERNET—
>
> (A) WEBSITE—The Secretary shall maintain a statistical compilation of all incidents described in paragraph (3)(A)(i) on an Internet site that provides a numerical accounting of the missing persons and alleged crimes recorded in each report filed under paragraph (3)(A)(i) that are no longer under investigation by the Federal Bureau of Investigation. The data shall be updated no less frequently than quarterly, aggregated by cruise line, each cruise line shall be identified by name, and each crime shall be identified as to whether it was committed by a passenger or a crew member.
>
> (B) ACCESS TO WEBSITE-Each cruise line taking on or discharging passengers in the United States shall include a link on its Internet website to the website maintained by the Secretary under subparagraph (A).

The change was made in Committee before it was reported back to the full Congress and my understanding is that the sponsors of the bill missed this. As you can see, there is a huge difference between reporting alleged crimes versus reporting crimes no longer under investigation. I encourage the Committee to change the language back to the original so the public has accessible accurate information about crime onboard cruise ships, and so researchers have access to reliable data that can be used to accurately measure the industry's progress in dealing with crime.

Death on the High Seas Act (DOHSA)

Cruise ship passengers are treated differently than airline passengers under the *Death on the High Seas Act* (DOHSA) The Act, originally passed in 1920, presently does not allow non-pecuniary and punitive damages to families of someone who has died while at sea. These limits were deemed to be unfair in the context of aviation cases and were removed, but they were not changed for passenger ships. House Resolution 2989, introduced by Representative Doggett July 11, 2007, intended to correct this inconsistency, but it was not approved. Two bills were introduced in the

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the Cruise Ship Industry Sails Under the Radar," Reuters, January 24. *<www.reuters.com/article/2012/01/24/uk-italy ship-regulation-idUSLNE80N02M20120124>*

111th Congress, H.R. 5803 (Conyers and 26 co-sponsors) andS. 3600 andS. 3755 (Rockefeller/Schumer), but they also didn't go beyond Committee. Given the obvious unfairness that American citizens on cruise ships are treated different on a cruise ship than when traveling by airplane, I hope amendments to DOHSA are revisited.

II. Environmental Issues

Environmental issues and the cruise industry were brought to the forefront in the late 1990s after Royal Caribbean International was fined more than $30 million for illegal discharges into U.S. and Alaska state waters of oil, hazardous chemicals, and for making false statements to the U.S. Coast Guard. The incidents date back to the early 1990s.[14] The U.S. General Accounting Office subsequently reported in 2000 that between 1993 and 1998 the Federal Government confirmed 87 illegal discharges from cruise ships (81 involving oil, 6 involving garbage or plastic). Seventeen "other alleged incidents" were referred to the countries where the cruise ships were registered.[15]

It wasn't only Royal Caribbean. Holland America Line was fined $2 million in 1998 for pumping oily bilge into Alaska's Inside Passage, in addition to other violations,[16] Then in April 2002, Carnival Corporation entered a plea agreement, pleading guilty to numerous pollution incidents from 1996 through 2001—discharging oily waste into the sea from their bilges by improperly using pollution prevention equipment and of falsifying the Oil Record Book on six ships to conceal its practices. Part of the plea agreement, in addition to an $18 million fine, was that the company was required to have environmental officers on all its ships; it was also required to file compliance reports with the court, which was later found to not comply with.

A few months later, in July 2002, Norwegian Cruise Line signed an agreement with the U.S. Department of Justice pleading guilty to having discharged oily bilge water for several years and to having falsified discharge logs. The company was fined $1 million and ordered to pay $500,000 toward environmental service projects in South Florida. Federal prosecutors considered the sentence lenient. There have been other fines since, but it is overkill to list them here.[17]

North American Emission Control Area

Governments have recently taken action to curtail air pollution from ships. The European Community issued Directive 2005/33/EC requiring all ships while in European ports to use fuel with sulfur content of 0.1 percent or less effective January 1, 2010. Six months later, provisions in Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL) regarding Sulfur Dioxide Emissions Control Areas (Baltic Sea, North Sea, and English Channel) placed a limit of 1.0 percent sulfur content; the limit reduces to 0.1 percent in 2015. Following developments in Europe, the U.S. and Canada partnered to establish the North America Emission Control Area (extending 200 miles from the coast), which was ratified by the International Maritime Organization on March 26, 2010.[18] It limits sulfur content in fuel to 1.0 percent effective August 1, 2012 and 0.1 percent by 2015.[19]

The cruise industry argued against the emission control areas (ECA) in Europe. It also voiced concern about increased fuel costs associated with the North American ECA and asked that consideration be given to ". . . alternative means, such as scrubbers, that ships could use to meet emissions goals, and to take a piecemeal, rather than blanket approach. 'The ECA area should be tuned to prioritize those areas where urgency exists and the greatest health and environmental benefits can

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[14] See Klein, Ross A. 2002 *Cruise Ships Blues: The Underside of the Cruse Industry,* Gabriola Island, BC: New Society, pp. 88–89.

[15] See U.S. General Accounting Office. 2000. *Marine Pollution: Progress Made to Reduce Marine Pollution by Cruise Ships, But Important Issues Remain,* February. (Doc #GAO/RCED–00–48)

[16] See Klein, Ross A. 2009. *Getting a Grip on Cruise Ship Pollution,* Washington, DC: Friends of the Earth. See also Klein, Ross A. 2005. *Cruise Ship Squeeze: The New Pirates of the Seven Seas,* Gabriola Island, BC: New Society.

[17] See Klein, Ross A. 2008. Paradise Lost at Sea: Rethinking Cruise Vacations, Halifax, NS: Fernwood. Also see Pollution and Environmental Violations and Fines, 1992–2010 <*www.cruisejunkie.com/evirofines.html*>

[18] Lagan, Christopher. 2010. "IMO adopts 200-mile North American Emissions Control Area," Coast Guard Compass, March 26.

[19] See Klein, Ross A. 2011. "Responsible Cruise Tourism: Issues of Cruise Tourism and Sustainability," *Journal of Hospitality and Tourism Management,* 18, pp 107–116. See also Klein, Ross A. 2010. "The Cruise Sector and Its Environmental Impact," *Tourism and the Implications of Climate Change: Issues and Actions Bridging Tourism Theory and Practice Volume 3* (ed. Christian Schott), London:Emerald Group Publishing, pp. 113–130.

be achieved.'"[20] Ironically, while saying they support the health and environmental goals behind the creation of the ECA, cruise industry associations questioned the research on which the regime is based and warned it could hurt the Canadian and North American cruise sector insofar as ships relocating elsewhere.

The North American Emission Control Area is an important step in dealing with air emissions from cruise ships. The U.S. needs to stand its ground under pressure from the cruise industry to delay implementation or to "water down" the measure. With air emissions from fuel dealt with, it is possible to now shift to other sources of pollution from cruise ships.

Regulation of Grey Water

Except for the Great Lakes, Maine, and Alaska, gray water was until 2009 largely unregulated. However, effective February 6, 2009, pursuant to a Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES) Vessels General Permit issued by U.S. EPA (VGP), cruise ships must meet treatment standards for gray water as well as 25 other types of incidental vessel discharges—from ballast water to deck runoff. Operational limits in the permit prohibit the discharge of untreated gray water within one nautical mile (nm) of shore. Gray water discharges are only allowed within one nm if they meet specific effluent limits and can not be discharged in waters of marine sanctuaries, units of the National Park System, units of the National Wildlife Refuge System, National Wilderness areas, and national wild and scenic rivers system components. Discharges of untreated gray water are allowed between one nm and three nm of shore if the vessel is traveling at a speed of six knots or more. The EPA is proposing for 2013 extending the present grey water treatment standards (the same standards that currently exist in Alaska) for large ships out to three nautical miles. The extension is to be complemented and encouraged.

The VGP is a positive step. However, there is room for improvement because the VGP only regulates gray water out to three nautical miles. As indicated by the U.S. EPA, untreated gray water falls woefully short of National Recommended Water Quality Standards and the Title XIV Standard for Continuous Discharge in Alaska Waters, in particular for fecal coliform, chlorine, biological oxygen demand, suspended solids, ammonia, copper, nickel, zinc, and tretrachloroethylene.[21] This suggests the need for upgrading and regular testing of systems treating gray water, and for further extending the area in which gray water discharges are prohibited. As well, it is necessary to perform system inspection and monitoring more frequently than required in the NPDES VGP, which only requires annual inspection and evaluation by the U.S. Coast Guard or the ship's classification society.

Regulation of Sewage

A cruise ship produces more than eight gallons of sewage per day per person. The cumulative amount per day for a ship such as Royal Caribbean's *Explorer of the Seas* (4,190 passengers and 1,360 crew) is more than 40,000 gallons; almost 300,000 gallons on a 1-week cruise. These wastes contain harmful bacteria, pathogens, disease, viruses, intestinal parasites and harmful nutrients. If not adequately treated they can cause bacterial and viral contamination of fisheries and shellfish beds. In addition, nutrients in sewage, such as nitrogen and phosphorous, promote algal growth. Algae consume oxygen in the water that can be detrimental or lethal to fish and other aquatic life.[22]

Sewage from cruise ships is a critical problem, compounded by the fact that it is excluded from the Clean Water Act's (CWA) National Pollutant Discharge Elimination System (NPDES) permitting requirements and ignored beyond three nautical miles from shore. The Clean Water Act's provision for sewage discharges from vessels sets treatment standards that are inadequate, and now outdated, and does not require permits or reporting. Further, the discharge of untreated sewage from vessels in coastal waters beyond three miles is not regulated.

It is worth note that the U.S. is one of the few coastal nations in the developed world that has not signed Annex IV of the International Convention for the Prevention of Pollution from Ships (MARPOL). While its neighbors ban the discharge of treated sewage within four nautical miles of shore, and untreated sewage within twelve nautical miles of shore, the U.S. permits sewage treated with a Type II Marine Sanitation Device to be discharged between zero and three miles of shore, and

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[20] Steuk, Wendy. 2010. "Clean-fuel Rules May prompt Cruise Line to Bypass Canada, *Globe and Mail,* July 9. Page A4.

[21] See United States Environmental Protection Agency. 2008. *Cruise Ship Discharge Assessment Report,* Washington, D.C.: EPA. (Report #EPA842–R–07–005)

[22] See United States Environmental Protection Agency. 2008. *Cruise Ship Discharge Assessment Report,* Washington, DC: EPA. (Report #EPA842–R–07–005)

untreated sewage to be discharged anywhere beyond three nautical miles. This anomaly in national regulations around the world has led a number of jurisdictions to request the EPA for "no discharge areas" within three miles of shore (such as Maine, New Hampshire, Michigan, Rhode Island and California), has led to state legislation (as in the case of California and Alaska), and has made necessary Memoranda of Understanding in other jurisdictions (such as Washington).

Sewage Treatment

Marine Sanitation Devices. Sewage from a cruise ship traditionally has been treated by a Type II marine sanitation device (MSD). Under Section 312 of the U.S. Clean Water Act, commercial and recreational vessels (including cruise ships) with installed toilets are required to have a MSD. Type II MSDs are the most common type of wastewater treatment systems on cruise ships and consist of flow-through devices that break up and chemically or biologically disinfect waste before discharge. Within three nautical miles of shore vessels must treat sewage with an approved Type II MSD prior to discharge. Beyond three nautical miles, discharge of raw sewage is allowed. The U.S. Environmental Protection Agency's (EPA) regulations governing MSDs have not been updated since they were instituted in 1976.

Type II MSDs are supposed to produce effluent containing no more than 200 fecal coliform for 100 milliliters and no more 150 milligrams per liter of suspended solids.[23] Whether MSDs achieve that standard was called into question in 2000 when the state of Alaska found that 79 of 80 samples from cruise ships were out of compliance with the standard. According to the Juneau port commander for the Coast Guard, the results were so extreme that it might be necessary to consider possible design flaws and capacity issues with the Coast Guard-approved treatment systems.[24] A 2008 report from the U.S. EPA suggests problems identified in 2000 with MSDs continue today.

Advanced Wastewater Treatment Systems (AWTS). The cruise industry in recent years has adopted the use of AWTS (an advanced form of Type II Marine Sanitation Device) on many ships—most often ships visiting Alaska's Inside Passage where such systems are required for continuous discharge in state waters. A ship with an AWTS avoids the need to travel outside Alaska state waters to discharge treated sewage. Installation of AWTS for ships visiting other waters with less stringent or no regulations has been at a much slower pace. For example, Carnival Corporation (which includes Carnival Cruise Lines, Holland America Lines, and Princess Cruises) had AWTS installed on slightly less than one half of its fleet at the end of 2008. But Carnival Cruise Lines, which sends only one ship to Alaska per season, has installed an AWTS on only one of its twenty-three ships. The corporation's spokesperson says they try to make sure AWTS are included on ships that go to Alaska and to other sensitive areas.

AWTS are a vast improvement over MSDs—yielding what the industry refers to as drinking-water quality effluent. However this terminology must be treated with skepticism. Such water cannot be recycled for onboard human consumption nor can it be used in the laundry because sheets and towels apparently turn gray. Both the EPA and Alaska have found that even the best systems still had difficulty with a number of constituents. A key problem is the AWTS do not adequately address nutrient loading, which means they pose similar problems as MSDs with regard to nitrogen and phosphorous. In addition, tests in Alaska have shown levels of copper, nickel, zinc, and ammonia that are higher than the state's water quality standards. The EPA has also found that AWTS exceed permitted concentrations of chlorine and tetrachlorethylene. As a result, 12 of 20 (60 percent) ships permitted to discharge in Alaska waters violated discharge limits in 2008, logging 45 violations involving 7 pollutants. These include ammonia, biological oxygen demand, chlorine, copper, fecal coliform, pH, and zinc. The year 2009 was even worse, with 13 of 18 (72 percent) ships permitted to discharge in Alaskan waters violating Alaska discharge limits during the season, racking up 66 violations involving 9 pollutants. Comparable data is not available for 2010 or 2011; the state lowered its limits for waste from AWTS under pressure from the industry, so there is no way to reliably measure improvement by publicly available data. It is noteworthy that nearly 30 percent of ships discharging in Alaska in 2008 and 2009 were able to meet the water quality standards.[25]

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[23] 33 C.F.R. § 159.3 (2008); 40 C.F.R. § 140.3(d) (2008).

[24] See McAllister, Bill. 2000. "A Big Violation on Wastewater: Some Ship Readings 100,000 Times Allowed Amount," The Juneau Empire, August 27 <*www.juneauempire.com/stories/082700/Loc_wastewater.html*>.

[25] See Klein, Ross A. 2009. *Getting a Grip on Cruise Ship Pollution,* Washington, DC: Friends of the Earth.

Sewage Sludge. Most Type II MSDs and AWTS filter solids from sewage as part of treatment. This yields on average 4,000 gallons of sewage sludge per day;[26] cumulatively, it adds up quickly. It is estimated that 4.2 million gallons of sewage sludge are produced every year by ships as they pass through Washington State waters on their way to Alaska[27]—this is small compared to what cruise ships generate outside Washington state waters. In some cases (about one in sixteen ships with an AWTS), sewage sludge is dewatered and then incinerated. In other cases sludge is dumped at sea. Most jurisdictions permit sludge to be dumped within three miles of shore; in California a ship must be beyond three miles from shore and in Washington beyond twelve miles. In either case, these sludges have a high oxygen demand and are detrimental to sea life. Sewage sludge poses the same problem as sewage, but in a more concentrated form.

A report issued in August 2003 by the California Environmental Protection Agency and the California State Water Resources Control Board said "it found 'particularly troubling' the discharging of sludge twelve miles out to sea."[28] This concern is in stark contrast to regulations elsewhere that define sewage sludge as treated sewage and permit its discharge within three miles of the U.S. shoreline. The need for minimum regulations applicable to the entire U.S. coastline is obvious.

One option is to require sewage sludge to be dewatered and incinerated onboard, however incineration creates an air quality problem and the ash must be disposed of somewhere. Dumping the ash overboard raises new problems. Another option is to require sewage sludge to be held onboard and offloaded for treatment in port. Washington State has in recent years explored the commercial use and value of sewage sludge as a fertilizer, but no clear plans have yet been made.[29] Clearly, a workable solution to the huge volume of sludge being dumped into the waters of the U.S.—28,000 gallons per week on an average-sized cruise ship—must be identified and implemented.

Incinerators

Cruise ships incinerate and burn a variety of wastes, including hazardous wastes, oil, oily sludge, sewage sludge, medical and bio-hazardous waste, outdated pharmaceuticals, and other solid wastes such as plastics, paper, metal, glass, and food.[30] A cruise ship may burn 1 to 2.5 tons per day of oily sludge in these incinerators and boilers.[31] The emissions from onboard incineration and its ash can include furans and dioxins, both found to be carcinogenic, as well as nitrogen oxide, sulfur oxide, carbon monoxide, carbon dioxide, particulate matter, hydrogen chloride, toxic and heavy metals such as lead, cadmium and mercury, and hydrocarbons.[32]

In contrast to incinerator use on land, which is likely to be strictly monitored and regulated, incinerators at sea operate with few limits. MARPOL Annex VI bans incineration of certain particularly harmful substances, including contaminated packaging materials and polychlorinated biphenyls (PCBs). There are no national standards limiting emissions from ship incineration.

The State of California has established that air emissions from incineration, generated between 27 and 102 miles off the coast, could negatively impact the air quality of the state.[33] The state initially introduced legislation in 2003 to prohibit ships from using onboard waste incinerators while within 20 miles of the coast, but subsequently passed legislation applicable only to waters over which the state had jurisdiction. The final California law prohibits incinerator use when a ship is within three miles of the coast.

Clear parameters are needed for operational requirements for onboard incinerators, much like on land. In addition, it is wise to do as California has done and ban the use of incinerators within a specific distance from the coast. Any such law

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[26] National Marine Sanctuaries. 2008. Olympic Coast Marine Sanctuary: Condition Report 2008, Washington, D.C.: NOAA. p. 43

[27] King County Wastewater Treatment Division. 2007. Cruise Ship Wastewater Management Report. Seattle: Department of Natural Resources and Parks.

[28] Weiss, Ken. 2003. "Cruise Line Pollution Prompts Legislation," *Los Angeles Times,* August 18. Also see: *Report to the Legislature: Regulation of Large Passenger Vessels in California,* Cruise Environmental Task Force, August 2003 *<www.swrcb.ca.gov/publications__forms/publications/legislative/docs/2003/cruiseshiplegrpt.pdf>*

[29] See Port of Seattle. 2008. *Cruise Vessel Biomass Management Study, Phase 1A (Draft): Data Compilation and Initial Assessment,* Port of Seattle, Nov. 18.

[30] California Cruise Ship Environmental Task Force. 2003. *Report to the Legislature: Regulation of Large Passenger Vessels in California,* August, p. 54

[31] California Cruise Ship Environmental Task Force. 2003. *Report to the Legislature: Regulation of Large Passenger Vessels in California,* August, p. 56

[32] Bluewater Network's EPA petition on cruise ship incineration, April 2000.

[33] California Cruise Ship Environmental Task Force. 2003. Report to the Legislature: Regulation of Large Passenger Vessels in California, August, p. 66

must take into account the potential for onshore winds and ocean currents to move incinerator pollutants on-shore.

Solid Waste

A cruise ship produces a large volume of non-hazardous solid waste. This includes huge volumes of plastic, paper, wood, cardboard, food waste, cans, glass, and the variety of other wastes disposed of by passengers. It was estimated in the 1990s that each passenger accounted for 3.5 kilograms of solid waste per day. With better attention to waste reduction this volume in recent years has been cut nearly in half. But the amount is still significant, more than eight tons in a week from a moderate sized cruise ship. Twenty-four percent of the solid waste produced by vessels worldwide comes from cruise ships.[34] Glass and aluminum are increasingly held onboard and landed ashore for recycling, but only when the itinerary includes a port with reception facilities.

Food and other waste not easily incinerated is ground or macerated and discharged into the sea. These ". . . food waste can contribute to increases in biological oxygen demand, chemical oxygen demand, and total organic carbon, diminish water and sediment quality, adversely effect marine biota, increase turbidity, and elevate nutrient levels."[35] They may be detrimental to fish digestion and health and cause nutrient pollution.[36] An additional problem with discharging food waste at sea is the inadvertent discharge of plastics. Under MARPOL, 38 throwing plastic into the ocean is strictly prohibited everywhere. Plastic poses an immediate risk to sea life that might ingest or get caught in it. It poses a longer-term risk as it degrades over time, breaking down into smaller and smaller pieces, but retaining its original molecular composition. The result is a great amount of fine plastic sand that resembles food to many creatures. Unfortunately, the plastic cannot be digested, so sea birds or fish can eventually starve to death with a stomach full of plastic.[37]

Solid waste and some plastics are incinerated on board, with the incinerator ash being dumped into the ocean. Incinerator ash and the resulting air emissions can contain furans and dioxins, both found to be carcinogenic, as well as heavy metal and other toxic residues. For this reason Annex V of MARPOL recommends, but does not require, that ash from incineration of certain plastics not be discharged into the sea.[38] At the very least, incinerator ash should be tested before each overboard discharge. This would include analysis and accounting of the contaminants typically found in cruise ship incinerator ash to determine whether it should be categorized as solid waste or hazardous waste.

Under MARPOL 44 and U.S. law,[39] no garbage can be discharged within three miles of shore. Between three and twelve miles garbage can be discharged if ground-up and capable of passing through a one-inch screen. If not ground-up and capable of passing through a screen, most food waste and other garbage can be discharged at sea when a ship is more than twelve miles from shore.

Although cruise ships have reduced their volume of solid waste, the total amount is still significant. Royal Caribbean's stated commitment in 2003 to not dump any trash overboard is admirable and should set a standard for all cruise ships operating from U.S. ports and in U.S. waters. If it is achievable by Royal Caribbean, then there is no reason why it is not practical for all cruise lines. This should be incorporated in legislation in order to ensure cruise ships can be held accountable for any unnecessary dumping of solid waste in the waters of the U.S.

Oily Bilge

A typical large cruise ship will generate an average of eight metric tons of oily bilge water for each twenty-four hours of operation;[40] according to Royal Caribbean's 1998 Environmental Report its ships produce an average 25,000 gallons of oily bilge water on a 1-week voyage. This water collects in the bottom of a vessel's hull from

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[34] Copeland, Claudia. 2008. Cruise Ship Pollution: Background, Laws and Regulations, and Key Issues. Washington, DC: Congressional Research Service (Report #RL32450)

[35] United States Environmental Protection Agency. 2008. Cruise Ship Discharge Assessment Report, Washington, DC: Environmental Protection Agency (Report #EPA842–R–07–005), p. 5–11

[36] See John Polglaze. 2003. "Can We Always Ignore Ship-Generated Food Waste," Marine Pollution Bulletin 46:1, pp. 33–38

[37] Reid, David. 2007. "Earth's Eighth Continent." The Tyee Nov. 21. <*thetyee.ca/News/2007/11/21/PacificGarbagePatch/*>

[38] See MARPOL Annex V, Appendix B, Section 5.4.6.2, referenced in United States Environmental Protection Agency. 2008. Cruise Ship Discharge Assessment Report, Washington, D.C.: Environmental Protection Agency (Report #EPA842-R–07–005), p. 5–12

[39] See 33 C.F.R. parts 151.63, 151.65, 151.67, 151.69, 151.71, 151.73

[40] National Research Council. 1995. Clean Ships, Clean Ports, Clean Oceans: Controlling Garbage and Plastic Wastes at Sea. Washington, D.C.: National Academy Press.

condensation, water lubricated shaft seals, propulsion system cooling and other engine room sources. It contains fuel, oil, wastewater from engines and other machinery, and may also include solid wastes such as rags, metal shavings, paint, glass, and cleaning agents.

The risks posed to fish and marine organisms by oil and other elements in bilge water are great. In even minute concentrations oil can kill fish or have numerous sub-lethal effects such as changes in heart and respiratory rates, enlarged livers, reduced growth, fin erosion, and various biochemical and cellular changes.[41] Research also finds that by-products from the biological breakdown of petroleum products can harm fish and wildlife and pose threats to human health if these fish and wildlife are ingested.

Oily bilge water in U.S. waters is regulated by the Clean Water Act. The Act prohibits the discharge of oil or hazardous substances, in such quantities as may be harmful within 200 miles of the coast. In addition, Coast Guard regulations specifically prohibit discharges within 12 nautical miles of shore unless it has been passed through a fifteen parts per million (ppm) oily water separator and does not cause a visible sheen.[42] The NPDES VGP reinforces the 15 ppm standard and it requires large vessels (over 400 gross tons) to discharge oily bilge beyond 1 nautical mile from shore if the vessel is underway and the discharge is technologically feasible and safe. Beyond 12 nautical miles, oil or oily mixtures can be discharged while a vessel is proceeding en route so long as the undiluted oil content is less than 100 ppm. The oil extracted by the separator can be reused, incinerated, and/or offloaded in port. Vessels are required to document the disposal of oil, oily bilge water or oily residues in an Oil Record Book.[43]

To address the deleterious effect of oil to marine life, even in minute quantities, the discharge of oily bilge water should be prohibited in sensitive areas and in coastal zones out to 12 nautical miles. Additionally, consistent minimum water quality standards for oily bilge should be set across all waters under U.S. control either at the Coast Guard's current level of 15ppm or as low as 5 ppm. The reduction to 5 ppm is achievable.[44]

Patchwork of Regulations and the Clean Cruise Ship Act

There is a patchwork of different regulations in the U.S. Cruise ships are permitted to legally discharge waste in one place but not another. On the west coast for example, enforceable regulations have had a positive effect in Alaska, Washington, and California, but leave open for greater environmental harm in neighboring jurisdictions such as Oregon and British Columbia. In fact, British Columbia is a good illustration of the problem with a patchwork approach. In some circles it is referred to as the toilet bowl of the Alaska cruise industry. This is because a ship may not discharge wastes in certain areas in Washington State (such as sewage sludge, untreated gray water, and sewage treated with a MSD) and it is restricted in the waste permitted for discharge in Alaska, but it can discharge those same wastes in Canada. The reason is weaker Canadian regulations (except for sewage) and Canada's failure to enforce the regulations it has. The same scenario operates on the east coast where gray water cannot be discharged in the waters of Maine, but can be discharged in the waters of Canada, and until the extension of the NPDES comes into effect every other coastal state.

Inconsistent regulations permit the cruise industry to argue that it meets or exceeds all environmental regulations while at the same time showing relatively different regard for environmental protection from one place to the next. These differences are even seen in the fuel ships use. It was reported in 2007 that when Holland America Line's *Zaandam* operated on the west coast of North America (British Columbia and Alaska) it used fuel with a sulfur content of about 1.8 percent; while operating during the winter months in the Caribbean the sulfur content was as

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[41] Copeland, Claudia. 2008. Cruise Ship Pollution: Background, Laws and Regulations, and Key Issues. Washington, D.C.: Congressional Research Service (Report #RL32450), November 17, p. CRS–5.

[42] See 33 C.F.R. § 151.10.

[43] Copeland, Claudia. 2008. Cruise Ship Pollution: Background, Laws and Regulations, and Key Issues. Washington, D.C.: Congressional Research Service (Report #RL32450), November 17, p. CRS–14

[44] An example of current technology that demonstrates the achievability of 5 ppm is a system manufactured by North Carolina-based EnSolve Biosystems. The company's PetroLiminator oily water separator "is a green technology that consistently achieves effluent levels of less than 5 parts per million (PPM)." See "EnSolve Biosystems Launches Operating Cost Guarantee Program For Bilge Water Treatment Program, " EnSolve Biosystems Inc. News, Volume 1, Issue 1, October 2008.

much as 3 percent.[45] The North American Emission Control Area addresses this problem directly.

These variations raise to the forefront the need for comprehensive, minimum national regulations that maintain uniformly high standards for protection of the marine environment. One approach was the *Clean Cruise Ship Act of 2008* (CCSA) sponsored by Durbin in the Senate (S 2881) and Farr with 20 cosponsors in the House of Representatives (HR 6434). This was the third session of Congress in which this legislation was introduced. In the 109th Congress Farr had 47 cosponsors; Durbin had 5 cosponsors, and in the 108th Congress there were 42 cosponsors in the House and 9 cosponsors in the Senate. Key provisions of the CCSA include:

- Prohibits the discharge of sewage, graywater, and bilge water out to 12 miles and in nodischarge zones such as marine protected areas;
- Prohibits the discharge of sewage sludge, incinerator ash, and hazardous waste within 200 miles of the U.S. coastline. Sludge, incinerator ash, and hazardous waste must be offloaded at an appropriate land-based facility;
- Requires EPA to establish effluent standards for sewage, graywater, and bilge water discharges from 12 to 200 miles. These effluent limits must be consistent with best available technology. The ship must be traveling at not less than 6 knots;
- Establishes a monitoring, sampling, reporting and inspection program with unannounced annual inspections and samples;
- Establishes an observer program for monitoring discharges (one observer per ship), similar to the "Ocean Ranger" program in Alaska;
- Establishes the Cruise Vessel Pollution Control Fund to carry out the programs in the Act. The fund is comprised of reasonable and appropriate fees collected from cruise vessels for each paying passenger. This, too, is modeled after how Alaska pays for its monitoring and enforcement program.

III. Medical Care and Illness

International maritime law surprisingly does not require a cruise ship to provide medical services. The only legal requirement is under the Standards of Training, Certification and Watchkeeping for Seafarers (SCTW) Convention, which requires certain crew members to have various levels of first aid and medical training. Regardless, all modern cruise ships maintain an infirmary. Those dispensing medical care are concessionaires for whose actions the cruise line assumes no liability. Their precise qualifications can vary widely. Some small cruise ships may have a nurse but no doctor. Some large ships have two physicians as well as two or more nurses.

In 1996, the International Council of Cruise Lines (ICCL) adopted industry guidelines for medical facilities and personnel on cruise ships. The guidelines were a response to pressure from the American Medical Association (AMA) which had that year called on the U.S. Congress for the development of medical standards for cruise ships. Based on a number of cases of disease, including a recent outbreak of gastroenteritis on Carnival Cruise Line's *Jubilee* in which 150 passengers became ill and one person died, the AMA also called for greater awareness of the limited medical services available aboard ships. The AMA position was supported by a survey administered by two Florida doctors to eleven cruise lines.

> [T]he doctors found that 27 percent of doctors and nurses did not have advanced training in treating victims of heart attacks, the leading killer on ships, and 54 percent of doctors and 72 percent of nurses lacked advanced training for dealing with trauma. Fewer than half of shipboard doctors—45 percent—had board certification, an important credential that is granted after three to 7 years of residency and a written examination in a specialty or its equivalent . . . As for equipment, the survey found that 63 percent of ships did not have equipment for blood tests for diagnosing heart attacks, and 45 percent did not have mechanical ventilators or external pacemakers. "What we found was that the quality of maritime medical care was less than adequate, from the medical facilities to nurse and physician credentials . . ."[46]

The American Medical Association has continued to lobby for government regulation of health care on cruise ships, but with no success.

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[45] Montgomery, Christina. 2007. "Setting Out to Sea in an Eco-Friendly Ship." *The Province,* May 31.

[46] Frantz, Douglas. 1999. "Getting Sick on the High Seas: A Question of Accountability," *New York Times,* October 31.

Some have suggested that Section 3507 (d) (3) of the *Cruise Vessel Security and Safety Act of 2010* addresses this matter. The section states that in the case of a sexual assault the owner of a vessel to which the section applies shall make available on the vessel at all times medical staff who have undergone a credentialing process to verify that he or she——

(A) possesses a current physician's or registered nurse's license and——

(i) has at least 3 years of post-graduate or postregistration clinical practice in general and emergency medicine; or

(ii) holds board certification in emergency medicine, family practice medicine, or internal medicine;

(B) is able to provide assistance in the event of an alleged sexual assault, has received training in conducting forensic sexual assault examination, and is able to promptly perform such an examination upon request and provide proper medical treatment of a victim, including administration of anti-retroviral medications and other medications that may prevent the transmission of human immunodeficiency virus and other sexually transmitted diseases; and

(C) meets guidelines established by the American College of Emergency Physicians relating to the treatment and care of victims of sexual assault.

While this section requires a doctor or nurse to be onboard for the treatment of a victim of sexual assault, it does not dictate where the person has received their training, license, and board certification, so there can still be wide variation in the nature and quality of care (the original proposals made by the International Cruise Victims Association were that these personnel be board certified in the U.S.). In addition, the American College of Emergency Physicians' guidelines are general enough that they provide little assurance, especially given that they are not easily transferable to the setting of a cruise ship.[47] It is relatively easy to comply with this section of the Act, however there is less protection to victims than is apparent at first blush.

Malpractice and Liability

No doubt there are cases of malpractice on cruise ships. Most Americans and Canadians assume they have the same rights and the same protections as they would on land when something happens. But that is not the case. Even though a physician wears the uniform of a senior-ranked officer, is introduced to passengers onboard as the ship's physician (implying he, like the Captain, is an employee of the cruise line), and like other senior officers may host a dinner table for invited guests, the cruise lines without exception say the physician is a private concessionaire and as such the cruise line accepts no liability for mistakes made. It is a hard concept to get one's head around given that the service is offered by the cruise ship and the cruise ship collects the fees, but one that was supported by the Florida Supreme Court in February 2007 and by the U.S. Supreme Court in October 2007.

The case began 10 years before in March 1997. Fourteen-year-old Elizabeth Carlisle was on a Caribbean cruise on *Carnival Destiny* with her family. On the second night out of Miami she developed severe abdominal pain. She consulted the ship's physician, Dr. Mauro Neri—he had finished medical school in his native Italy in 1981, had held nine medical jobs in Italy, Africa, and England in the fifteen years before joining Carnival Cruise Lines and was earning $1,057 a month from the cruise line. Dr. Neri advised that Elizabeth was suffering from the flu and sent her on her way. But her pain became worse. On the third visit to the infirmary, after Elizabeth's parents specifically asked whether the problem could be appendicitis, Dr. Neri conducted his first physical exam. He responded that he was sure the problem was not the girl's appendix.

When the pain continued to grow worse Elizabeth's parents called their family physician in Michigan and he advised they return home. The family took the advice and shortly after arriving home Elizabeth underwent emergency surgery to remove her ruptured appendix. The infection had rendered the fourteen-year-old sterile and caused lifelong medical problems. Elizabeth sued Carnival Cruise Lines in Florida state court, a case she lost on Carnival's motion for summary judgment. The cruise line claimed it was not responsible for the medical negligence of the doctor on board and pointed to the fine print in the passenger cruise contract to support its position.

The family appealed the Circuit Court's decision to Florida's Third District Court of Appeal where the parents argued the cruise line was vicariously liable for the

[47] See American College of Emergency Physicians. 2012. Policy Compendium, 2012 Edition. Dallas, TX: ACEP. Pages 124–125. <*www.acep.org*>

doctor's negligence. Judge Joseph Nesbitt agreed and reversed the lower court's decision. The judge held that the cruise line had control over the doctor's medical services for agency law purposes; the doctor was to provide medical services to passengers and crew in accordance with the cruise line's guidelines. And as it was foreseeable that some passengers at sea would develop medical problems (and that the only realistic alternative for such a passenger was treatment by the ship's doctor) the cruise line had an element of control over the doctor-patient relationship. As such, the cruise line's duty to exercise reasonable care under the circumstances extended to the actions of a ship's doctor placed on board by the cruise line. The doctor was an agent of the cruise line whose negligence was imputed to the cruise line. This invalidated the cruise ticket's purported limitation of the cruise line's liability for the negligence of its agents.

Judge Nesbitt's decision was groundbreaking. It was likely the very first case where a cruise line was held responsible for the care provided by a ship's physician. Not surprisingly, Carnival appealed the case to the Florida Supreme Court. While the court almost agreed with the lower court's assertion that times had changed and that a doctor's negligence at sea also shows negligence by the cruise line, it ultimately found in favor of Carnival. Justice Peggy Quince wrote in her opinion,

> We find merit in the plaintiff's argument and the reasoning of the district court. However, because this is a maritime case, this Court and the Florida district courts of appeal must adhere to the Federal principles of harmony and uniformity when applying Federal maritime law.[48]

The case was appealed to the U.S. Supreme Court and the court refused to hear it. The Florida Supreme Court's decision was the final word. If the Carlisle family wanted to pursue the case they would have to sue the physician directly. But this is difficult in their case, and in most involving medical malpractice on cruise ships, given that they'd first have to locate the physician in his or her present home, something with which cruise lines historically have not provided assistance. Malpractice cases involving treatment in international waters must be filed in the courts of the physician's country of origin, which is both difficult and expensive.[49]

The bottom line is that cruise lines escape liability for the medical errors committed (on a daily basis) of its employed staff and it's independent contractor staff/doctors. The decisions are all based on a relatively old 5th Circuit Court case, Barbetta.[50] The court in Barbetta said that the cruise line is not in the business of providing medical care and that the passenger has alternatives. Neither is correct. The cruise lines are in the business of providing medical care because (1) they attract passengers by representing that they have medical staff onboard, and (2) by having onboard medical care they avoid the obligation of diverting the course of the vessel every time there is a medical situation onboard. The passenger has no alternative for medical care when the vessel is at sea and the passenger gets sick or injured. Even when the ship is at or near port, the port is usually in a developing world country with developing world medical care. Cruise lines know that an overwhelming majority of their business is from Americans who expect and deserve first world medical care.

It is worth noting here that emergency medical evacuations from cruise ships are not uncommon. Here again we have the U.S. taxpayer often footing the bill for these endeavors, supporting a cruise industry that doesn't fall under many U.S. laws and regulations and that does not pay corporate income tax to the U.S. Government.

Norovirus and Other Illness Outbreaks

The complexion of illnesses found on cruise ships has shifted over the past two decades. In the 1980s and 1990s outbreaks were commonly caused by food borne bacteria such as shigella, salmonella and E coli, but these gave way to norovirus as it increased in incidence in 2001. Also in 2001 the Food Standards Agency in the United Kingdom announced that it would give health officials the statutory right to enter and inspect cruise ships (similar to the Vessel Sanitation Program in the United States). It was reacting to a report from the Consumers' Association which indicated an increase of food poisoning cases among cruise ship passengers. The Consumers' Association had received complaints about fourteen ships in 2000 and

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[48] Supreme Court of Florida. 2007. *Carnival Corporation vs. Darce Carlisle,* Case No. SC 04–393, February 15.

[49] Chen, Stephanie. 2007. "Trouble at Sea: Free-Agent Doctors," *Wall Street Journal,* October 24.

[50] See *Barbetta* v. *S/S Bermuda Star,* 848 F.2d 1364 (5th Cir. 1998).

2001, with illnesses ranging from salmonella poisoning to the potentially fatal Legionnaires' disease.[51]

With better food processing and refrigeration, and more careful testing and treatment of drinking water loaded from shore, incidents caused by bacteria have reduced significantly. In fact, from 2002 through 2011 there are only four known outbreaks caused by salmonella and seven caused by E coli. There were four reports of Legionnaires' disease during the same 9 year period.[52] During the same time there were 378 outbreaks involving norovirus, plus another nine in 2012.

As bacteria-caused illness has decreased, the incidence of illness caused by norovirus increased significantly. Between 1999 and 2001, there were four or five illness outbreaks per year on cruise ships recorded by the U.S. Centers for Disease Control (CDC) that were attributed to norovirus (to be considered an outbreak, 3 percent of passengers or 2 percent of crew members must report illness). In 2002, the CDC's reported numbers jumped to twenty-nine illness outbreaks (most of which were caused by norovirus); in total there were forty-four cases of gastrointestinal illness reported on cruise ships in 2002. The CDC's rate of outbreaks increased from 0.65 per 1000 cruises in 2001 to 6.45 per 1000 cruises in 2002—a tenfold increase.[53] The number of outbreaks has fluctuated since 2002 with a high of fifty-four in 2006 and a low of twenty-three in 2011. The number of passengers reporting ill has ranged from a low of 1,970 in a year to 7,215. Thus far in 2012, 1,725 passengers and crew have reported illness.

While the industry, since 2002, has characterized norovirus as something passengers bring onboard with them, this is not entirely accurate.[54] Rather than debate this point there are two points to be made here.

First, a cruise ship is a perfect incubator for the spread of norovirus and once it takes hold it is difficult to eradicate. A common practice is that crew members reporting ill are taken off work (often 2 days) while they are symptomatic, however this is contraindicated given that the virus continues to be shed (and thus a person is potentially contagious) for up to 2 weeks. Because crew members are often not paid when they are off work, there is an obvious disincentive to report when they are ill, increasing the likelihood that the virus will be transmitted to others (NB: the virus follows a fecal-oral route and is most commonly transmitted by poor personal hygiene: people not washing their hands after using the toilet). This needs to be confronted in a more vigilant manner.

Second, most passengers learn that if they report being ill they will be quarantined to their cabin until they are asymptomatic—reportedly a very unpleasant experience. As a result, there are many cases where ill passengers do not report their illness in order to avoid being quarantined. In other words, there is a disincentive to behaving in ways that minimize the spread of the disease. These disincentives need to be removed. As well, the cruise lines can do a better job of educating passengers about the nature of norovirus and steps to be taken to avoid contracting the illness, and its spread if one becomes ill. Rather than engaging in media campaigns that attempt to state how common the illness is and that it isn't a cruise ship virus, the industry can do a better job of accepting the illness as a problem they must deal with and confront norovirus as a problem that manifests itself on cruise ships (as is the case in many institutional settings).

Potable water

While I don't wish to raise alarm, it is necessary to raise one other health concern because it gives some insight into how problems may be dealt with by the cruise industry. This is concern based on a case about which there is incomplete information (it has been sealed by the British courts), about which those involved are not permitted to comment for fear of fine or incarceration and about which the lack of transparency suggests there is a real basis for fear. Information available in October 2005 at <*www.logacomplaint.com*> provided a body of information about toxicity in potable water aboard certain cruise ships. But that material disappeared, as has all information about the case that followed (the case, *Hempel A/S* v. *B Bradford* [2006] EWHC 2528, is cited at the website of the attorney for the industry, but otherwise no information may be found anywhere).

Gleaning from what was on the website, and from recent appeals filed with the High Court of Justice in the UK and European Court of Human Rights, we can ex-

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[51] Gadher, Dipesh. 2001. "Cruise Liners Face Tougher Hygiene Tests," *Sunday Times,* May 6.

[52] See *www.cruisejunkie.com/outbreaks2012.html*, and other years listed.

[53] Cramer, Elaine H., David X. Gu, and Randy E. Durbin. 2003. "Diarreal Disease on Cruise Ships, 1990–2000," *American Journal of Preventive Medicine* 24, 3 (April).

[54] For a fuller discussion of the causes of norovirus and how the industry has characterized the illness and its response see Klein, Ross A. 2008. *Paradise Lost at Sea: Rethinking Cruise Vacations,* Halifax, NS: Fernwood.

trapolate that a paint coating used in potable water tanks on a series of cruise ships built in Pappenburg, Germany (at least four ships owned by two major companies serving North America and Europe, but perhaps as many as 50) was found to be defective. It could purportedly break down and potentially release toxins (acrylonitrile, a known carcinogen) into the water system of these vessels. The problem was apparently discovered and repairs undertaken. Drinking water on these ships could not be certified as safe until repairs were completed.

Rather than take the ships out of service for proper repair, the work was done while ships were in service with passengers and crew onboard. The work required sanding the interior surface of water tanks and then applying a new, safe coating. If done properly, repairs would also address contamination that had already occurred and was now part of the water delivery system. Regardless, while the problem coating was being "solved", the repair may have itself produced another set of problems. There is no certainty that fine dust produced from sanding potable water tanks did not make its way into other areas of the ship, including air ventilation and food preparation areas. On one ship the fine dust clogged vent pipes that allowed air to escape as water tanks were filled, creating a serious and dangerous situation when one of the tanks was put back into use.

The lack of transparency about the case, and the way in which the information has been sealed from public knowledge, gives good reason for a passenger on any cruise ship to be cautious. The purportedly defective paint coating was manufactured by a large-scale provider (Hempel A/S) to shipyards building cruise ships and it is hard to know, without adequate testing for chemical contamination, on which ships there is reason for concern. This isn't a matter of opinion or conjecture—there are apparently affidavits admitting to the problem of toxicity, but these too are sealed. The cruise lines involved suggest there was never any danger to passengers and crew, and that the problem has been fully ameliorated. However, given the effective silencing of Mr. Bradford and the information he had, it is difficult to be confident in those assurances.[55]

IV. Labor Issues

Workers on foreign flag vessels generally work without union protection and their pay is determined by the employer. They may even have to accept arbitrary cuts in pay in order to keep their jobs. In the view of Paul Chapman, a Baptist minister who founded the Centre for Seafarer's Rights in New York in 1981, the typical cruise ship is a sweatshop at sea. "A ship owner can go any place in the world, pick up anybody he wants, on almost any terms. If the owner wants to maximize profit at the expense of people, it's a piece of cake."[56] Though the requirement to pay minimum wage was extended to ships registered in the United States in 1961, Congress left intact the exemption for foreign ships. This exemption was further defined in a 1963 Supreme Court decision that held that U.S. labour laws, including the right to organize, do not apply to foreign vessels engaged in American commerce, even if the owners of these ships are from the United States. This is the context in which the modern cruise ship industry developed and took hold. Foreign labour, whose first language is not English, may be a factor in cruise ship safety and security, especially in an emergency situation.

U.S. Congressional Interest

Working conditions on cruise ships emerged as a momentary concern in late 1980s and early 1990s. William Clay, Chairman of the House Labor-Management Subcommittee of the Education and Labor Committee of the House of Representatives introduced legislation to extend the National Labor Relations Act (NLRA) and the Fair Labor Standards Act (FLSA) to vessels foreign-flagged cruise ships operating primarily in the United States.[57] At hearings in October 1989, the Committee was told of exploitation of sailors, who had no redress for grievances about their working conditions. Reverend James Lingren, the Director of the New England Seaman's Mission, specifically described conditions in the cruise ship industry:

> We have discovered that on several of the largest cruise ship lines calling in U.S. ports a typical seafarer works 100 hours each week with no days off during his 1 year of employment. Many of them work without benefit of anything resembling a true contract of employment. They often earn less than 75 cents an

[55] See Foggo, Daniel. 2011. "Gag Hid Cancer Threat to Cruise Ship Passengers," *Sunday Times,* November 13. Page 4

[56] Reynolds, Christopher and Dan Weikel. 2000 "For Cruise Ship Workers, Voyages Are No Vacations," *Los Angeles Times,* May 30.

[57] See House of Representatives, 1994 *Coverage of Certain Federal Labour Laws to Foreign Documented Vessels* (House Report #103–818), Washington, D.C.: GPO, 1994, page 1.

> hour . . . I personally saw the contract of . . . [a] seafarer who signed for $192 a month to work for 7 days a week for 1 year. He was to be paid overtime for any hours over 8 hours a day, and while he was required to work 12 hours a day, the company refused to pay the overtime. This meant he was effectively making 53 cents an hour. When he complained he was relieved of his duties and sent home." [58]

The subcommittee approved the bill in the summer of 1990 though it never went any further. It was reintroduced in the next Congress on February 27, 1991 and again died in committee.

On March 30, 1993 Clay introduced H.R. 1517, another version of the same legislation. Hearings were again held; they yielded no new information. However, for the first time the cruise industry, through its main lobbyist, the International Council of Cruise Lines (ICCL), threatened that if the House of Representatives passed the legislation the cruise industry would be forced to relocate to non-U.S. ports. In testimony before the Subcommittee on Labor Standards on May 13, 1993 the president of the ICCL, John Estes, stated:

> Some have told you that we will not relocate. I am here to tell you that this industry will relocate if the Bill is passed. It won't happen all at once, but it will happen." [59]

He pointed out the ease with which cruise ships can be moved from one homeport to another and that:

> . . . in order to keep international costs competitive we do in fact on occasion move from country to country. International shipping will always seek a hospitable economic and political climate from which to operate . . . It would be an unfortunate failure of United States policy not to recognize that homeports are unimportant to passengers.[60]

The legislation this time made its way to the floor of the House of Representatives, but it failed to be heard by the full House and died with the end of the Congress.

Pro-industry legislation introduced in 1995 by Representative Don Young had much greater success. He attached a tort reform measure to the Coast Guard Reauthorization bill passed on May 9, 1995. The amendment, referred to by Young as a 'noncontroversial manager's amendment;' was for the most part written by the International Council of Cruise Lines.[61] It passed the House by a vote of 406 to 12. Only afterwards did people read the final print.

For one thing, the amendment limited the rights of foreign seafarers to sue in U.S. courts for grievances against foreign cruise lines. This went against the stream of court cases taken up by the U.S. Government several years earlier. In 1991, the U.S. Equal Employment Opportunity Commission (EEOC) won two cases against foreign flag cruise vessels. In one, the court enjoined a foreign cruise line from discriminating on the basis of sex against any actual or potential job applicant. In the other, Norwegian Cruise Line (NCL) was charged with sex discrimination by an assistant cruise director who alleged she lost her job after becoming pregnant, and with discrimination by race and national origin by a bar manager who says he was forced to resign. NCL disregarded two subpoenas claiming the EEOC lacked jurisdiction. It won in the U.S. District Court in Miami but the decision was reversed by the U.S. Court of Appeals in Atlanta, which affirmed the EEOC's jurisdiction. This was a dangerous precedent for the cruise industry and Young's amendment gave them an out. Another provisions in the amendment was designed to protect ship owners from unlimited liability in suits brought by passengers or crew members who were harmed by medical malpractice at a shore side facility.

The final version of the legislation followed intense lobbying by opponents to the amendments and by the cruise industry. In the end, a cruise line sued by one of its workers in regard to treatment at a U.S. health facility or doctor's office can invoke an award cap allowed medical practitioners under the laws of the state in which the care is provided. The provision limiting seafarer's use of U.S. courts was

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[58] House of Representatives, 1994 *Coverage of Certain Federal Labour Laws to Foreign Documented Vessels* (House Report #103–818), Washington, D.C.: GPO, 1994, page 3.

[59] Estes, John. 1993. *Testimony Before the Subcommittee on Labor Standards, Occupational Health, and Safety of the Committee on Education and Labor of the House of Representatives,* May 13. Washington, D.C.: GPO. (Document # Y4 ED8/1 103–9)

[60] Estes, John. 1993. *Testimony Before the Subcommittee on Labor Standards, Occupational Health, and Safety of the Committee on Education and Labor of the House of Representatives,* May 13. Washington, D.C.: GPO. (Document # Y4 ED8/1 103–9)

[61] Glass, Joel. 1996. "Compromise on U.S. Cruise Tort," *Lloyd's List,* October 1. Page 1.

replaced with a provision that seafarer employment contracts can block the worker from seeking legal remedies in U.S. courts.[62] This provision has crept into seafarer employment contracts and has thus far been ruled enforceable by U.S. courts.

US Courts and Labor

There is a long history of court cases where cruise ship workers have successfully sought relief in cases of, among other things, breach of contract, injury and death. Claims have often been under the Merchant Marine Act of 1920 (Jones Act) or the Federal Seaman's Wage Act. But access to the U.S. courts appears to be waning for seafarers on foreign-flagged cruise ships that operate out of U.S. ports.

A Federal court decision issued in October 2003, and upheld on appeal in January 2005, ruled that the families of Filipino cruise ship workers injured and killed during a 2003 boiler explosion aboard NCL's *Norway* had to resolve claims in the Philippines per their employment contract. The decision meant that death claims for the eight crew members killed in the accident were limited to $50,000. The U.S. National Transportation Safety Board subsequently ruled that the accident, which also severely injured about 20 crew members, was the result of ". . . deficient boiler operation, maintenance, and inspection practices of Norwegian Cruise Line, which allowed material deterioration and fatigue cracking to weaken the boiler."[63]

The court's ruling had more far reaching consequences. It upheld the enforceability of employment contracts that require disputes to be resolved through arbitration and only in particular places—for Filipino workers the place is Manila. It also lent support to Carnival Cruise Lines' desire to have a new clause inserted in its new crew member contracts requiring all claims against the employer to be arbitrated internationally in London, Manila, Panama City, or Monaco, whichever is closer to the crew member's home.

Arbitration Clauses

Arbitration clauses are now commonplace in cruise ship worker contracts. These clauses have dire consequences for crew members. The fact is that foreign seaman have no rights to sue in U.S. Courts. Because a cruise line can have foreign law apply thereby circumventing the Jones Act, it has a disincentive to hire American workers. The arbitration clauses, and the opinions enforcing them, are therefore job killers for Americans, and they circumvent long standing U.S. Law—the Merchant Marine Act of 1920.

For those who are not familiar with the Jones Act, it provides to the worker the right to sue for pain and suffering damages for job related injuries. The general maritime law that was inherited from the English also provides for the obligation to pay the seaman maintenance (expenses of daily living) and cure (prompt and adequate medical care) until the seaman reaches maximum medical improvement. Historically, the seaman was viewed as a ward of the court because typically s/he is in a place where s/he does not know anyone and s/he has little resources. Thus the law says that if the shipowner/employer does not pay maintenance and cure properly, punitive damages can be awarded. The shipowner/employer escapes these obligations with the arbitration clauses that apply foreign law. This was seen in a case brought by a Filipino worker with Holland America Line, filed in U.S. Federal court in Seattle, Washington on April 27, 2007 (Case #C07–0645) and which sought class action status. The suit claimed the company illegally forced crew members to pay back the cost of airfare to and from the ships and fired them if they failed to do so. The worker was a bartender who had signed a standard twelve-month contract with the cruise line, working a mandatory 77 hour workweek. He received a monthly guaranteed salary of $442 per month (inclusive of overtime, vacation and allowances) and was required to repay $212 per month for "deployment costs"—leaving a net income of $230 per month. Deployment costs include round trip air far to/from the ship, uniforms, medical exams, visas, recruiting costs, and union dues.

The U.S. court refused to hear the case given terms of the employment contract between the crew member and the cruise line; it referred the case to the Philippines for arbitration. The arbitration board ruled in favor of the individual claimant, but there was no basis on which it could certify a class action claim. The cruise line benefits because the penalties assessed by an arbitration board are small by comparison to those historically garnered through the U.S. courts, and it avoids a payout to other workers in the same situation.

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[62] Glass, Joel. 1996. "Compromise on U.S. Cruise Tort," *Lloyd's List,* October 1. Page 1.

[63] NTSB. 2007. *Marine Accident Brief: Boiler Rupture on Bahamian Cruise Ship S.S. Norway, Port of Miami,* May 25, 2003. NTSB Report Number MAB 07/03, November.

Crew Member Work Conditions

There are many work conditions I could discuss, but there are only three worthy of mention here. The first relates to the normal contract from cruise ship employees. The typical workweek is a mandatory 77 hours—11 hours a day, 7 days a week. The length of a contract generally varies by work role (officers typically work 4 months; laborers work six to twelve months, depending on whether they work on a European contract or a Filipino, Central American, or Asian contract), and salary also varies by the worker's national origin within the same job category. Whether this is fair is a matter of vantage point; it is a matter of fact. With these hours, worker fatigue may also be an issue in emergency situations.

A second issue is the common use of recruiting agents. Though International Labor Organization (ILO) regulations prohibit agents from collecting fees from the worker—they are supposed to be paid by the employer—workers are often required to pay to secure a position. These can range as high as $4,000. According to the International Transport Workers Federation, Filipinos normally pay $1,500 to join a ship.[64] A 1997 story in the *Wall Street Journal* cites a Croatian worker who paid $600 to an agent to confirm his employment. In addition, he started work with a $1,400 debt to Carnival Cruise Lines, which had advanced the cost of his transportation to the ship.[65] In February 2000, an article in the *Miami New Times* described a cook on Carnival Cruise Line's Paradise who had given a Bombay agency $2,000, which included airfare. That sum, much of which he borrowed from relatives, is almost one-third of the $7,000 he will make during his ten-month contract.[66] And in 2001 it was reported that an agent in Rumania was charging $500 to interview for a position with Norwegian Cruise Line; if the person is hired s/he paid an additional $1,000 to secure the position.[67]

The final issue is unpaid overtime. This matter was successively resolved with each of the major cruise lines through class action suits between 2002 and 2006. However the problem re-emerged recently with NCL America, a U.S. registered carrier. The company agreed to pay $526,602 in back wages to 2,059 employees in Hawaii after a Federal labor investigation found that the company had violated minimum wage, overtime (many employees were working 60 hours a week), and record-keeping provisions for employees on *Pride of America* between July 2009 and November 2011. The investigation also found that because NCL Amereica took large meal and lodging credits, some employees were paid less than the Federal minimum wage of $7.25 per hour, and that the cruise line failed to record and pay the housekeeping staff for cleaning the cabins between cruises. Following the investigation, the cruise line agreed to bring its pay practices into compliance with the law.[68]

V. In Closing

Thanks again for the opportunity to share my observations and insights generated from my 16 years as an academic whose research has focused on the cruise industry. I welcome your questions.

APPENDIX A: EVENTS AT SEA*

A.1—Cruise Ships that Have Sunk, 1980–2012
A.2—Cruise Ships Running Aground, but not Sinking, 1973–2012
A.3—Fires Onboard Cruise Ships, 1990–2011
A.4—Collisions Involving Cruise Ships, 1990–2011
A.5—Other Significant Events Involving Cruise Ships, 2000–2011

http://www.cruisejunkie.com/Sunk.html
http://www.cruisejunkie.com/Aground
http://www.cruisejunkie.com/fires.html
http://www.cruisejunkie.com/collides.html
http://www.cruisejunkie.com/Disabling.html

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[64] ITF. 2000. "The Dark Side of the Cruise Industry," Seafarers' Bulletin, no. 14. Page 17.
[65] Prager, Joshua Harris. 1997. "For Cruise Workers, Life Is No 'Love Boat'" *Wall Street Journal,* July 3. Page B1.
[66] Nielsen, Kirk. "The Perfect Scam: For the Workers Life Is No Carnival, Believe It or Not," *Miami New Times,* February 3–9, 2000
[67] Klein, Ross A. 2002. *Cruise Ship Blues: The Underside of the Cruise Industry,* Gabriola Island, BC: *New Society.* Page 128.
[68] Gale, Kevin. 2012. "Norwegian Cruise Lines Settles Overtime Investigation," *South Florida Business Journal,* February 16.
* Source: Cruise Junkie dot Com

A.1—Cruise Ships That Have Sunk, 1980–2012

Year	Ship (Cruise Line)	Incident
2012	Costa Concordia (Costa Cruises)	Hit submerged rock off Giglio, Italy, partially sunk after taking on water and severely listing. *~4,200 evacuated; 32 deaths*
2007	Explorer (GAP Adventures)	Ship abandoned near the South Shetland Islands after it hit an unidentified object (likely ice). Environmental impact. *154 evacuated; no deaths*
2007	Sea Diamond (Louis Cruises)	Ship abandoned after hitting a reef a half mile from shore in Santorini. *1,524 evacuated; 2 deaths*
2004	Wilderness Adventurer (Glacier Bay Cruise Line)	Ship evacuated after striking ice and taking on water in Tracy Arm, AK. *All evacuated safely.*
2003	Safari Spirit (American Safari Cruises)	Ship hit some rocks about 80 miles in SE Alaska. Sank in 30 feet of water. *All evacuated safely to lifeboats.*
1999	Sun Vista (Sun Cruises)	Engine room fire—Sinks of Malaysia. *1,090 evacuated safely*
1998	Fantome (Windjammer Cruises)	Sinks trying to outrun Hurricane Mitch. *30 crew deaths*
1995	Club Royale	Gambling ship sinks off Florida coast trying to outrun Hurricane Erin. *8 crew rescued; 3 crew deaths*
1994	Estonia (Estline)	The passenger cruise ferry sunk in a storm in the Baltic Sea. Sunk in 30 minutes. *~852 deaths*
1992	Royal Pacific (Greek cruise ship)	Collided with a fishing trawler in the Straits of Malacca with *500 rescued; more than 30 deaths*
1991	Oceanos (Greek cruise ship)	Sunk in a storm off South Africa. *All 571 people onboard were saved*
1988	Jupiter (Greek cruise ship)	Sank within 40 minutes after a collision with a car carrier outside Piraeus. *581 safely rescued; 4 deaths.*
1986	Admiral Nakhimov (Russian cruise ship)	Sank in 7 minutes after colliding with a large bulk carrier. *811 safely rescued; 423 deaths*
1986	Mikhail Lermontov (Baltic Shipping Company)	Ran aground on rocks off New Zealand and sank within 3 hours. *More than 1,000 rescued safely; 1 death*
1984	Sundancer (Sundancer Cruises)	The ship declared a total loss after hitting a rock north of Vancouver. Investigators found that crew were disorganized and evacuation was largely coordinated by passengers. *All evacuated safely.*
1980	Prinsendam (Holland America Line)	An engine room fire forced evacuation to lifeboats while 140 miles from Alaska. *All evacuated safely.*

A.2 Ships Running Aground (but not sinking), 1972–2011

Year	Ship (Cruise Line)	Incident
2012	Poesia (MSC Cruises)	Ran aground near Freeport, Bahamas. Waited for tide to get high.
2011	Polar Star (Polar Star Cruises)	Sustained a minor breach of its outer hull by grounding on a rock near Antarctica's Detaille Island. *Cruise terminated*
2010	Clipper Adventurer (Clipper Cruises)	Ship evacuated after it ran aground 55 nautical miles from Coppermine, Nunavut. *Cruise terminated*
2009	Zenith (Pullmantur Cruises)	Ship went aground on the approach to Copenhagen having cruised too close to a wind farm of twenty-four turbines in the Oresund Strait.
2009	Ocean Nova (Quark Expeditions)	Ran aground about one mile from the San Martin base (Antarctica), pushed by "extremely high winds" into craggy rocks. 64 passengers and 41 crew members aboard. *Cruise terminated.*
2009	Richard With (Hurtigruten)	Ran aground at the port of Trondheim on the west coast of Norway. Suffered propeller damage and took on board water through a leak in a seal. 53 passengers on board evacuated. *Cruise terminated*
2008	Ushuaia (Fathom expeditions)	Ran aground on a rock close to Wilhelmina Bay in Antarctica causing a hull breach, and possibly fuel leak. All 130 aboard safely evacuated. *Cruise terminated*
2008	QEII (Cunard Line)	Ran aground at the Brambles sandbank near Calshot, Southampton, with three tugs attached to her stern. Five tugs were sent out to assist her getting off the sandbank.
2008	Antarctic Dream (Antarctic Shipping)	Ran aground off Svalbard, just east of the island of Spitsbergen, with 130 passengers on board. Freed after 6 hours.
2008	Queen Victoria (Cunard Line)	Ran aground while leaving port. Freed in about an hour.

A.2 Ships Running Aground (but not sinking), 1972–2011—Continued

Year	Ship (Cruise Line)	Incident
2008	Spirit of Glacier Bay (Cruise West)	Grounded in Tarr Inlet near Glacier Bay. Refloated the next day and towed to port. Crack in hull.
2008	EasyCruise Line (EasyCruise)	Ran aground inside the port of the Aegean island of Syros with 353 passengers and 105 crew on board. Freed by tug.
2008	Spirit of Alaska (Cruise West)	Touched bottom in Tracy Arm, AK. It did not take on water and did not have interior damage but is having a problem with its propulsion system Towed to Juneau for inspection and repairs; passengers disembarked. *Cruise terminated*
2008	Mona Lisa	Ran aground on a sandbank about 10 miles from the Latvia coast. Attempts to free itself were unsuccessful; almost 1000 passengers needed to be evacuated . *Cruise terminated*
2008	Sky Wonder (Pullmantur)	Ran aground in port of Kusadasi (Turkey). All 1,029 passengers evacuated. *Cruise terminated*
2007	Spirit of Nantucket (Cruise West)	Ran the vessel aground in Virginia Beach *to prevent it from sinking.* It began taking on water while passing through the Intercoastal Waterway after striking something that left a 2 inch by 12 inch gash in the hull near the end of the ship. None of the 61 passengers or five crew members were as injured. *Cruise terminated*
2007	Spirit of Columbia (Cruise West)	Ran aground in Prince William Sound. Refloated when tide came up.
2007	Royal Express 4 (SunCruz)	Ran aground as it was returning to shore. Several passengers injured.
2007	Millenium (Celebrity Cruises)	Drifted onto submerged rocks while at Villefranche, France, damaging propulsion system. *Cruise terminated next day*
2007	Disko II (Albatros Travel)	Ran aground off Greenland and more than 50 people evacuated. *Cruise terminated*
2007	Empress of the North (Majestic America Line)	Ran aground off Alaska coast and began taking on water. 281 of 320 aboard evacuated. *Cruise terminated*
2007	Regal Princess (Princess Cruises)	Sustained damage after touching bottom. Out of service for 3 weeks for repairs.
2007	Nordkapp (Hurtigruten)	Touched ground near Deception Island in the Antarctic. The ship sustained an 82 foot long gash to its outer hull—environmental damage. All evacuated. *Cruise terminated*
2007	Sky Wonder (Pullmantur)	Ran aground in Rio de la Plata. Freed at high tide.
2006	Lyubov Orlova (Quark Expeditions)	Ran aground in Whalers' Bay while visiting Deception Island in the South Shetland Islands with 150 passengers onboard. Towed free after 8 hours.
2006	Statendam (Holland America Line)	Touched bottom in Port of Melbourne with 1,700 persons onboard. Found to be traveling too fast. Minor damage.
2006	Grand Princess (Princess Cruises)	Ran aground while heading out of Livorno harbor. Freed after 30 minutes.
2006	Norwegian Crown (NCL)	Ran aground in Bermuda. Freed after 10 hours.
2006	Columbus (Hapag-Lloyd)	Scraped bottom during her visit to Sault Sainte Marie, sustaining no damage.
2006	Celebration (Carnival Cruise Lines)	A propeller struck bottom while approaching the dock at Nassau spilling an estimated 200 liters of lubricating oil and affecting the operation of the engine.
2006	Yorktown Clipper (Clipper Cruises)	Ran aground at Matia Island in Washington state. Company fined $1000 for placing passengers at risk because company officials did not report a dent the ship sustained on its bottom.
2006	Regal Princess (Princess Cruises)	Became stuck on a sandbar in the Amazon. Freed after 1.5 hours, "by using its bow thrusters, emptying the pools and probably grey water and some ballast."
2006	Empress of the North (American West Steamboat)	Ran aground on the Columbia River with 250 people onboard. Refloated 2 days later. *Cruise terminated*
2006	Queen Mary 2 (Cunard Line)	Touch a submerged object, damaging propulsion system. Departure delayed 41 hours.
2005	Pacific Sky (P&O Princess)	Suffered engine problems and drifted onto a reef. Ship freed one day later by tugs.
2005	Hanseatic (Hapag-Lloyd)	Ran aground near the island of Luroy off the Norwegian, causing a 5 meter hole in the ships hull. *Cruise terminated*

A.2 Ships Running Aground (but not sinking), 1972–2011—Continued

Year	Ship (Cruise Line)	Incident
2004	Sapphire Princess (Princess Cruises)	Lost power and out of control for about 5 minutes, which caused it touching the coral reef at Moorea. Damage to thrusters.
2004	Clipper Odyssey (Clipper Cruises)	Ran hard aground on rocks in the Aleutian Islands, forcing 153 passengers and crew to transfer to other ships and spilling an undetermined amount of fuel from a ruptured tank. *Cruise terminated*
2004	Mona Lisa (Holiday Kreuzfahrten)	Got stuck in the mud close to St. Mark's Square in Venice, Italy with 1000 passengers onboard. Freed.
2004	Astor (Transocean Cruises)	Grounded in the shipping channel after leaving Townsville port. Detained for 2 hours.
2004	Empress of the North (American West Steamboat)	Hit the gate at Ice Harbor Dam and became stuck in the navigational lock. 200 passengers bussed back to Portland. *Cruise terminated*
2003	Empress of the North (American West Steamboat)	Went aground on the Oregon side of the Columbia River. Two crew and one passenger suffered minor injuries.
2003	Mona Lisa (Holiday Kreuzfahrten)	670 passengers were evacuated after the ship ran on to rocks near Sptisbergen. Both propellers and the hull damaged. *Cruise terminated*
2003	Summit (Celebrity Cruises)	Hull damaged when the ship hit a rock leaving Hubbard Glacier. The result was a 10-foot-long hole in the ballast tank midway along the hull, and a 140-foot-long crease.
2003	Spirit of Columbia (Cruise West)	Hit bottom and possibly bent port shaft and propeller in Prince William Sound.
2003	Vistamar (Plantours & Partners)	Collided with underwater rocks near the port of Ibiza. Towed by tugs to Ibiza and all passengers and crew evacuated. *Cruise terminated*
2003	Safari Spirit (American Safari Cruises)	Hit rocks in SE Alaska. All evacuated to lifeboats. *Cruise terminated*
2002	Olympic Voyager (Royal Olympic Cruises)	Grounded and experienced minor damage. Passengers evacuated. *Cruise terminated*
2002	Clipper Adventurer (Clipper Cruises)	Ran aground in the vicinity of Deception Island. Freed by a Chilean icebreaker.
2002	Holiday (Carnival Cruise Lines)	Lodged on a sandy bottom of the Caribbean Sea, a quarter mile off the coast of Playa del Carmen. Passengers evacuated. Freed 3 days later. *Cruise terminated*
2002	Clipper Odyssey (Clipper Cruises)	Went aground on St. Matthew Island in the Bering Sea in favorable conditions with 184 persons onboard.
2002	Clipper Adventurer (Clipper Cruises)	Ran aground on a sand-bank in the Essequibo River (Guyana's major waterway). Stuck for more than a day.
2002	Black Prince (Fred Olsen Cruises)	Ran aground on a sand bank while leaving Casilda, Cuba. Passengers evacuated. *Cruise terminated*
2001	Costa Tropicale (Costa Cruises)	Grounded at Venice, towed free by tugboats.
2001	Costa Tropicale (Costa Cruises)	Grounded at Mykonos, towed free by Costa Atlantica
2001	Wilderness Explorer	Grounded in Alaska
2001	Regal Princess (Princess Cruises)	Grounded in Cairns. Freed and continues.
2001	Mistral (Festival Cruises)	Grounded off Nevis. Stuck for a day.
2000	World Discoverer	Hit rock or reef and holed—Forced to beach. 100 passengers rescued—Solomon Islands. *Cruise terminated*
2000	Carousel Sun (Sun Cruises)	Ran over rocks causing propeller damage and oil leak (50 ton spill)—Abandon ship at Calica. *Cruise terminated*
1999	Norwegian Sky (NCL)	Grounded in St. Lawrence Seaway. Out of service for 8 weeks. *Cruise terminated*
1999	Radisson Diamond (Radisson Seven Seas Cruises)	Grounded near Stockholm—Refloated
1999	Spirit of '98	Grounded in mouth of Tracy Arm (SE of Juneau)—Holed. Evacuated. *Cruise terminated*
1999	Wilderness Explorer (Glacier Bay Cruise Line)	Grounded west of Juneau—Refloated
1998	Monarch of the Seas (RCCL)	Strikes charted reef at St. Maarten—holed. 27,000 sq feet of coral reef damaged. Out for 4 months. *Cruise terminated*

A.2 Ships Running Aground (but not sinking), 1972–2011—Continued

Year	Ship (Cruise Line)	Incident
1997	Leeward (NCL)	Collides with Great Mayan Reef near Cancun—damages 460 sq yard swath of coral
1997	Noordam (Holland America Line)	Soft grounding off Mexican coast—Propeller damage. Passengers sent home. *Cruise terminated*
1997	Hanseatic (Hapag Lloyd)	Grounded in Norwegian Arctic—Evacuated, refloated, continues.
1997	Albatross (Phoenix Horizon)	Holed while leaving Isles of Scilly—Out for 2 weeks. *Cruise terminated*
1996	Hanseatic (Hapag Lloyd)	Grounded in Northwest passage—refloated after being evacuated.
1996	Gripsholm (Cunard Line)	Grounded 2 miles from Swedish port. *Cruise terminated*
1996	Royal Viking Sun (Cunard Line)	Collision with reef in Red Sea—Holed. Out for 2 months. *Cruise terminated*
1996	Tropicale (Carnival Cruise Lines)	Grounded while leaving Tampa—Freed. Harbor pilot complains that ship failed to respond to 3 different orders to turn.
1995	Sovereign of the Seas (RCCL)	Grounded in mud bank in San Juan Harbour—Freed after 80 minutes; Towed to port, leaves 24 hours late.
1995	America Queen (Delta Steamboat)	Grounded in Ohio River for 1 day—Refloated
1995	Star Princess (P&O Cruises)	Grounded in Alaska—40' long, 8" wide gash + 100' gash,modest pollution. Evacuated by tender. *Cruise terminated*
1995	Royal Majesty (Majesty Cruise Line)	Grounded off Nantucket—17 mi off course.
1995	Renaissance Six (Renaissance Cruises)	Grounded, eastern Aegean—Evacuated. *Cruise terminated*
1994	Royal Odyssey (Royal Cruises)	Grounded leaving Rome. *Cruise terminated*
1994	Starward (NCL)	Grounded in St. John, VI—oil spill of 100 gallons.
1994	Nieuw Amsterdam (Holland America Line)	Grounded in SE Alaska—200 ft crease in hull, damaged propeller, puncture in ballast tank, 260 gallon spill. Refloated in 30 minutes. *Cruise terminated*
1994	Sally Albatross (Silja Line)	Grounded in Gulf of Finland—Half-sunk. *Cruise terminated*
1993	Yorktown Clipper (Clipper Cruises)	Grounded in Glacier Bay—Spills 28,000 gallons of fuel 45 west of Juneau Evacuated. *Cruise terminated*
1993	Ocean Princess (Pacquet Cruises)	Grounded near Belem—Life boat evacuation Declared a total loss. *Cruise terminated*
1992	Nantucket Clipper (Clipper Cruises)	Aground off Maine—4 minor injuries. Refloated 3 hours later—Damage to hull and diesel tank
1992	QEII (Cunard Line)	Grounded off Cape Cod—74 foot gash. *Cruise terminated*
1992	Mermoz (Pacquet Cruises)	Grounded off Scandinavia. *Cruise terminated*
1992	Tropic Star (Starlite Cruises)	Ran aground in Freeport.
1991	Seaward (NCL)	Runs aground near Miami after plastic bag caught in an air intake and engine shut down.
1990	Regent Star (Regency Cruises)	Fire and grounded while approaching Philadelphia—Evacuated. *Cruise terminated*
1990	Bermuda Star (Bahamas Cruise Line)	Grounded off Nova Scotia—evacuated. Freed after 13 hours. *Cruise terminated*
1986	Dolphin (Dolphin Cruises)	Grounded in Bahamas
1985	Amerikanis (Fantasy Cruise Line)	Grounded off Mexico—5 days to free. *Cruise terminated*
1985	Bermuda Star (Bahamas Cruise Line)	Grounded off Key West
1984	Yankee Clipper (Clipper Cruises)	Grounded after tearing from anchorage at St. Martin.

A.2 Ships Running Aground (but not sinking), 1972–2011—Continued

Year	Ship (Cruise Line)	Incident
1984	Rhapsody	Grounded off Cayman Islands—Evacuated after 4 days; freed after 12 days. *Cruise terminated*
1982	Alaskan Majestic Explorer (Exploration Cruises)	Grounded—Evacuated 1 dead; 2 injured. Captain charged with negligence. *Cruise terminated*
1978	Kungsholm	Aground for 5 days at Martinique
1973	Mardi Gras (Carnival Cruise Lines)	Maiden Voyage—runs aground leaving Miami Harbour. Stuck for 24 hours.

A.3—Fires Onboard Cruise Ships, 1990–2011

Year	Ship (Cruise Line)	Incident
2011	Amsterdam (Holland America Line)	Fire in hydraulic unit in incinerator room. Put out in 35 minutes.
2011	Ocean Princess (Princess Cruises)	Fire in one of the generators, contained without serious damage.
2011	Queen Mary 2 (Cunard Line)	Fire in gas turbine rendering it useless. Passengers told to get their children and stay in cabins.
2011	Nordlys (Hurtigruten)	Fire in engine room. 100 passengers and crew evacuated by lifeboat; 162 evacuated when towed to port. *2 deaths. Cruise terminated*
2011	Ocean Star Pacific (Ocean Star Cruises)	Generator fire knocked out power to the ship, forcing the evacuation of nearly 800 passengers and crew off Mexico's coast. *Cruise terminated*
2011	Thomson Dream (Thomson Cruises)	A starboard engine fire early in the cruise that departed Barbados. No impact on itinerary and no reported injuries.
2010	Musica (MSC Cruises)	Fire in engine room knocked out air conditioning and the water supply. Cruise terminated
2010	Carnival Splendor (Carnival Cruise Lines)	Engine room fire disabled the ship's electrical system (3,299 guests, 1,167 crew). Towed to San Diego. *Cruise terminated*
2010	Infinity (Celebrity Cruises)	Electrical fire caused loss of power for several hours while in Alaska.
2010	Deutschland (Peter Deilmann Cruises)	Fire in engine room while docked. Passengers evacuated. *Cruise terminated*
2009	Zenith (Pullmantur Cruises)	All passengers were evacuated when the ship had a major fire while docked at Stockholm. Sailed one day late.
2009	Crown Princess (Princess Cruises)	Fire in passenger cabin. Contained.
2009	Royal Princess (Princess Cruises)	Fire in engine room. Passengers called to muster stations. *Cruise terminated*
2009	Sea Cloud (Sea Cloud Cruises)	Fire extinguished by fire brigade before returning to port.
2009	Golden Princess (Princess Cruises)	Fire in main engine room. Contained within 1.5 hours.
2009	Costa Romantica (Costa Cruises)	Fire in the generator room causes brief blackout. 1,429 passengers and 590 crew members evacuated. *Cruise terminated*
2009	Ecstasy (Carnival Cruise Lines)	Fire in passenger cabin at 2:30 AM—several cabins damaged.
2008	Zuiderdam (Holland America Line)	Small electrical fire reported overnight—No injuries or known damage.
2008	Eurodam (Holland America Line)	Passengers awakened at 4AM by fire alarm. Fire in engine room.
2008	Norwegian Dream (NCL)	At about 2:45 a.m. an electrical fire broke out on deck three in an electrical locker of the ship.
2008	Azamara Quest (Azamara Cruises)	While docked in Chios (Greece) there was a fire in the ship laundry room. The fire was contained quickly and it did not affect the schedule.
2008	Fantasy (Carnival Cruise Lines)	Fire (or smoke) caused by welder. Embarkation suspended; passengers onboard moved to Lido Deck. Contained.
2008	Zuiderdam (Holland America Line)	Onboard fire while docked at Dubrovnik. Firefighters called from city. Under control within 45 minutes.
2008	Queen of the West (Majestic America Line)	Fire broke out in the engine room while the ship was near Maryhill, WA. Passengers evacuated. *Cruise terminated*

A.3—Fires Onboard Cruise Ships, 1990–2011—Continued

Year	Ship (Cruise Line)	Incident
2008	Star Princess (Princess Cruises)	Fire in incinerator room. Contained.
2007	Norwegian Spirit (NCL)	Fire in engine room. Contained.
2007	Jewel of the Seas (Royal Caribbean International)	Fire in laundry room at 2:30AM. Contained.
2007	Pacific Star (P&O Australia)	Small fire in an electrical panel; mustering of crew to prepare for a possible emergency. Contained.
2007	Enchantment of the Seas (Royal Caribbean International)	Fire in closet of unoccupied cabin. Contained in less than an hour.
2007	Mariner of the Seas (Royal Caribbean International)	Incinerator fire. Contained.
2007	Norwegian Star (NCL)	Escorted into the Prince Rupert harbor by the a Canadian Coast Guard vessel following a small fire in the engine room.
2007	Disney Magic (Disney Cruise Line)	Fireworks mishap caused fire by Palo's restaurant. Contained.
2006	Seabourn Spirit (Seabourn Cruises)	Small fire in Verandah Café. Contained.
2006	Radiance of the Sea (Royal Caribbean International)	Fire at 2AM in Windjammer Café. Contained in less than an hour.
2006	Oosterdam (Holland America Line)	Engine room fire disables one of the Azipod propulsion systems. Contained.
2006	Jewel of the Sea (Royal Caribbean International)	Fire in trash can. Contained. Seven staterooms evacuated and passengers moved.
2006	Statendam (Holland America Line)	At 5:30AM fire alarm went off. Fire in stack of incinerator contained.
2006	Calypso (Louis Cruises)	Disabling fire off UK coast. 462 passengers and 246 crew were at muster stations, but evacuation was not necessary. Towed to port. *Cruise terminated*
2006	Seabourn Pride (Seabourn Cruises)	Serious fire in engine room. Contained
2006	Star Princess (Princess Cruises)	Fire in passenger accommodations. About 150 cabins damaged. *1 death; cruise terminated*
2005	Costa Classica (Costa Cruises)	Escorted back to Athens after a fire broke out in mooring area, aft side. *Cruise terminated*
2005	Carnival Legend (Carnival Cruise Lines)	Heavy smoke from engine room. Passengers mustered to lifeboats. All clear given an hour later.
2005	Infinity (Celebrity Cruises)	Fire in stateroom 7067 that gutted the room.
2005	Seven Seas Navigator (Radisson Seven Sea Cruises)	Electrical fire in generator room at 1AM caused temporary blackout and propulsion problems. *Next cruise canceled*
2004	Carnival Destiny (Carnival Cruise Lines)	Fire in trash incinerator while at St. Thomas. Embarkation delayed 45 minutes.
2004	Sun Cruz V (Sun Cruz)	Engine room fire extinguished. Towed back to port with 160 passengers onboard.
2004	Majesty of the Sea (Royal Caribbean International)	Passengers directed to muster stations when a galley fire broke out at 5 AM in the Windjammer Cafe. Contained in less than an hour.
2003	Explorer of the Sea (Royal Caribbean International)	A minor fire at the aft end of Deck 13 extinguished within 15 minutes, causing damage to the inline skating facility and the top of the waterslide on Deck 12.
2002	Statendam (Holland America Line)	Five tugs boats tow ship back to Vancouver after a small fire knocked out four generators and two main propulsion motors. *Cruise terminated*
2002	Disney Magic (Disney Cruise Line)	Smoke stack fire; extinguished within an hour. Passengers were awakened at 5 AM and told to go to their assembly stations with their life jackets.

A.3—Fires Onboard Cruise Ships, 1990–2011—Continued

Year	Ship (Cruise Line)	Incident
2001	Arkona	Runs into dock after engine room fire causes loss of power. Cruise terminated
2001	Nordic Prince (Royal Caribbean International)	Engine room fire, loss of power. Passengers flown home from Bermuda. Cruise terminated
2000	Nieuw Amsterdam (Holland America Line)	Fire in crew quarters while in Glacier Bay—Delayed 12 hours until given clearance by U.S. Coast Guard.
2000	Celebration (Carnival Cruise Lines)	Fire in generator—Adrift for 6 hours until power restored. No toilets or air conditioning.
1999	Tropicale (Carnival Cruise Lines)	Engine fire—Disabled. Arrives in port 2 days late. *Next 6 cruises canceled*
1999	Sun Cruz	Engine room fire before it left port—Evacuated. *Cruise canceled*
1999	Norway (NCL)	Fire in turbocharger room while in Barcelona mid-cruise. *Cruise terminated*
1999	Sun Vista (Sun Cruises)	Fire in engine room—Sinks off Malaysia.
1999	Enchantment of the Sea (Royal Caribbean International)	Engine fire/failure 60 miles from St. Thomas. *Cruise terminated*
1998	Ecstasy (Carnival Cruise Lines)	Fire in laundry room while leaving Miami—54 injured and 4 hospitalized. *Cruise terminated*
1997	Romantica (New Paradise Cruises)	Fire 10 mi off Cypress (total loss)—Evacuated. *Cruise terminated*
1997	Vistafjord (Cunard Line)	Fire while in Straits of Magellan—disabled for 2 days.
1997	Vistafjord (Cunard Line)	Fire in ship's laundry room. *1 death; cruise terminated.*
1997	Fair Princess (P&O Cruises)	Fire in casino—passengers called to muster stations—fire contained.
1996	Universe Explorer (Commodore Cruises)	Laundry room fire, 67 crew and 6 passengers injured. *5 deaths; cruise terminated*
1996	Golden Princess (Princess Cruises)	Fire in engine room—Towed to Victoria. *Cruise terminated*
1996	Sagafjord (Cunard Line)	Fire—Stranded off coast of Manila (listing)—Towed to dock. *Cruise terminated*
1995	Regent Star (Regency Cruises)	Engine room fire while in Prince William Sound-Disabled. Passengers transferred to Rotterdam. *Cruise terminated*
1995	Celebration (Carnival Cruise Lines)	Engine room fire when 370 miles south of Miami—Adrift for more than 2 days. No a/c or hot food or elevators. Passengers transferred to Ecstasy. *Cruise terminated*
1994	Regal Empress (International Shipping)	Fire when 30 min from NYC—Evacuated.
1994	Pallas Athena (Epirotiki)	Fire while berthed in Piraeus—Total loss.
1992	Star Majestic	Fire—Evacuated
1991	Pegasus (Epirotiki)	Fire while berthed in Venice—Total loss
1991	Eurosun (Europe Cruise Line)	Fire off Canary Islands
1991	Sovereign of the Seas (RCCL)	Fire in lounge while in port at San Juan—Evacuated. Cruise resumed.
1990	Crystal Harmony (Crystal Cruises)	Temporarily disabled from fire in auxiliary engine room—Drifted for 16 hours. Evacuated at port. *Cruise terminated*
1990	Regent Star (Regency Cruises)	Fire—put under control. Possible arson.
1990	Scandinavian Star (International Shipping)	Fire while in North Sea—Evacuated. *159 deaths; cruise terminated*
1990	Fairstar (Sitmar Cruises)	Engine room fire—Not disabled. *1 death*

A.4—Collisions Involving Cruise Ships

Year	Ship (Cruise Line)	Incident
2011	Veendam (Holland America Line)	A container derrick tore off a 50 foot section of railing on deck 12 and cracked a window in the Crows Nest while leaving Buenos Aires.
2011	Avalon Tranquility (Avalon Waterways)	Danube cruise abandoned after vessel struck by a cargo ship. *Cruise terminated*
2011	Oriana (P&O Cruises)	Ship dented after bashing into quay at Kristiansand, Norway. Ship's stern stoved in.
2011	Emerald Princess (Princess Cruises)	Sustained considerable damage to several lifeboats when a fuel loading barge collided with the side of the ship while in the port of St Petersburg, Russia.
2011	Westerdam (Holland America Line)	Collision between the ship and ice in the vicinity of Yakutat Bay, Alaska. Sustained damage approximately 15 feet below the water line.
2011	Opera (MSC Cruises)	Collided twice with the pier as it was leaving Buenos Aires, damaging several cabins. Detained in port for 10 hours.
2010	Costa Classica (Costa Cruises)	Collided with a cargo ship near the deep water channel of the Yangtze River. News images show a scrape or gash stretching about 20 meters along the starboard side of Deck 5 midships. Passengers disembarked. *Cruise terminated*
2010	Sergei Kirov (Russian ship)	The cruise ship, carrying hundreds of U.S. and German tourists, collided with a barge on the Volga River. *Cruise terminated*
2010	Black Watch (Fred Olsen Cruises)	The ship's port bow collided with an iceberg off Greenland resulting in a significant impact. Superficial damage.
2010	Caribbean Princess (Princess Cruises)	The ship hit the gangway structure and was delayed several hours in departure.
2010	Columbus (Hapag-Lloyd)	Ship bumped a cargo vessel and hit a steel bar while docking at the Iloilo International Port in Loboc, La Paz (Philippines). The front part of the cruise ship was damaged. Departure delayed for repairs.
2010	Costa Europa (Costa Cruises)	Crashed into a pier in the Egyptian resort town of Sharm el-Sheikh. *3 deaths; cruise terminated*
2010	Ecstasy (Carnival Cruise Lines)	While docking at Galveston, hit the elevated gangway used to embark & disembark guests. Little damage to the ship, but several window panels fell out of gangway. The $1.8 million structure was out of commission for 30 days or more for repairs.
2009	Carnival Splendor (Carnival Cruise Lines)	Collided with the pier at Puerto Vallarta causing damage to the stern. Departure delayed 20 hours for repairs.
2009	Saga Ruby (Saga Holidays)	Hit a concrete bollard while berthing in New York, and had to have emergency repairs to a hole in the bow before setting off back to the UK. One day delayed departure.
2009	Carnival Legend (Carnival Cruise Lines) & Enchantment of the Seas (Royal Caribbean International)	Two ships collided in Mexican port in an incident that left both vessels with minor damage.
2009	Antarctic Dream	While coming alongside the quay in Longyearbyen the ship collided with a smaller passenger vessel. Damage repaired.
2009	Avalon Tranquility (Avalon Waterways)	Collided with the tall ship Schoenbrunn while it was maneuvering in Linz on the Danube River. Damage to the Schoenbrunn was extensive; damage to the riverboat was minimal.
2009	Golden Princess (Princess Cruises)	A 31-foot-long fishing vessel "erratically" crossed within about 30 feet of the front of the cruise ship as it entered Los Angeles harbor. Near miss.
2008	Costa Concordia (Costa Cruises)	Ship hit the dock in Palermo harbor. The bow was damaged. Repairs were undertaken after the ship was firmly docked.
2008	Imagination (Carnival Cruise Lines)	A minor crash that left a huge dent and needing some paint touch up on the front side of the ship.
2008	Boudicca (Fred Olsen Cruises)	Sustained minor damage to bow whilst in Barbados. The damage caused a 7ft dent which needed to be repaired. Held in port for a day.
2008	Seven Seas Voyager (Regent Seven Seas Cruises)	Hit the quay in Rhodes with her stern, no injuries but minor damage done to the ship.
2008	Spirit of Adventure (Saga Holidays)	In Kepez, Turkey the ship hit the quay after tug failed and gashed hull. It was repaired and continued cruise.

A.4—Collisions Involving Cruise Ships—Continued

Year	Ship (Cruise Line)	Incident
2008	Crystal (Louis Cruises)	Collided with a ferry at Piraeus port. There were 955 passengers on board the cruise ship. Only material damage was caused to both vessels.
2008	Zenith (Pullmantur) and Aegean Pearl (Louis Cruises)	Ships collided in Greece's main port of Piraeus causing damage but no injuries. *Aegean Pearl's* cruise canceled.
2008	Costa Classica (Costa Cruises) and Poesia (MSC Cruises)	Collided in the Adriatic Sea near the Croatian tourist town of Dubrovnik, but no one was injured.
2008	Norwegian Spirit (NCL)	While docking in NYC the ship rammed into Pier 90 at 50th St. and 12th Ave. The city Buildings Department said the accident damaged beams supporting upper-level parking lots.
2008	Queen Victoria (Cunard Line)	Hit the quay of the Valletta Waterfront, denting the stern of the ship. Malta Maritime Authority officially attributed the incident to a mechanical failure in the ship. Detained for repairs.
2008	Aquamarine (Louis Cruises)	Scraped against a pier as it was leaving Iraklion (Crete) causing damage to the hull.
2007	QEII (Cunard Line)	A cross-channel ferry had to slam on the brakes when the cruise liner failed to give way at sea off the Dover coast and sailed into the passenger ferry's path.
2007	Fram (Hurtigruten)	Had engine failure and was without power for about 2 hours while near Brown Bluff on the northern tip of the Antarctic Peninsula. Drifted into a towering wall of ice; bent the railing and a lifeboat was completely crushed.
2007	Norwegian Dream (NCL)	Collided with a barge being pulled by a tug in Uruguay's main port, sending several cars and containers off the barge and shutting the port down. The ship received damages above the water line, which did not appear serious. Detained for repairs.
2007	Lirica (MSC Cruises)	Damaged in Civitavecchia when it scraped the pier. An area between the bow and portside bulwarks was damaged.
2007	Thomson Celebration (Thomson Cruises) and Ocean Majesty (Page and Moy)	Collided in the Greanger fjord (Norway) as the two were berthing. The damage was reported as slight with some lifeboats and davits taking the brunt of the slow collision. *Ocean Majesty's cruise terminated*.
2007	Spirit of Yorktown (Cruise West)	Collided with a Seattle-based fishing vesssel, leaving the seiner "dead in the water" with a disabled steering mechanism. The cruise ship appeared undamaged.
2007	Serenade (Louis Cruises)	Slightly damaged when it grazed the pier while docking at the Greek island of Tinos, leaving a small hole on the left side of the ship's bow above the water line. Repaired.
2007	Kristina Regina (Kristina Cruises)	Collided with a timber loaded deck barge in dense fog south of Gedser. Only slight damage and continued to Helsinki.
2007	Fantasy (Carnival Cruise Lines)	A barge struck the ship on the Mississippi River near New Orleans, leaving a 30 foot gash (about 5 feet above the waterline) in its hull. Cruise canceled
2006	Enchantment of the Seas (Royal Caribbean International)	Ship dragged its anchor 300 metres before it ran into a moored barge off Pageant Beach Georgetown , Cayman Islands . Other than two dents in the port side and a long 100-foot scrape, there was no damage to the ship.
2006	Pride of America (NCL America)	Struck a 2,800 pound navigational buoy as it left Honolulu and dragged the buoy chain all the way to Maui . Remained in Maui an extra day for inspections and repairs of the propeller, to which the chain became attached.
2006	Freedom of the Seas (Royal Caribbean International)	Collided with a refueling ship as it was leaving Montego Bay. Damage was not significant.
2006	River Empress (Uniworld)	Hit a bridge on the Danube near Melk at 6 AM. All passengers (111) were evacuated. *Cruise terminated*
2005	Norwegian Spirit (NCL)	Collided with the pier as it docked at Juneau , breaking out windows in 3 or 4 rooms and making a large dent in the side.
2005	Norwegian Majesty (NCL)	As the ship moored at St. George's, Bermuda, it knocked into three yachts moored in Powder Hall anchorage and almost sucked one yacht under. The ship's propeller appears to have been damaged.

A.4—Collisions Involving Cruise Ships—Continued

Year	Ship (Cruise Line)	Incident
2005	Grandeur of the Seas (Royal Caribbean International)	Struck the pier in Costa Maya, Mexico while docking causing a puncture 42 feet long and 5 feet wide at its widest point. The puncture was in the first deck, approximately five feet above the waterline. Delayed 2 days for repairs.
2005	River Duchess (Uniworld)	Crashed into a dockside restaurant in Amsterdam on Sunday. Police said the ship—owned by U.S. firm Uniworld—went off course due to technical reasons.
2004	Enchantment of the Seas (Royal Caribbean International)	While docked at Key West, struck by a barge leaving an 8 foot hole in the vessel's hull. Repaired.
2004	Holiday (Carnival Cruise Line)	Lost engine power and collided with some pilings along the Mobile River before dawn.
2004	Van Gogh (Travelscope)	Collided with an oil tanker in foggy conditions off the southern coast of Spain. *Cruise terminated*
2004	Viking Europe (Viking River Cruises)	The ship (135 passengers; 39 crew) hit a bridge in Vienna , injuring 19 passengers.
2004	Diamond Princess (Princess Cruises)	Ship pushed into pier at Victoria, BC, while docking. Damage minor, except for bent propeller blade tips, which caused altered itineraries and missed ports.
2004	American Glory (American Cruise Lines)	Destroyed a 40 foot section of the Downtown Marina dock in Beaufort, SC (and damaged two yachts) when a strong current and tide combination forced the stern into the pier. One of the cruise ship's doors was damaged and two windows shattered.
2004	Stena Nautica (Stena Line)	Collided with a cargo ship (the Jamaican registered Joanna) en route from Denmark to Varberg in Sweden. 91 passengers and 37 crew were evacuated to another ship. The collision caused an 11-metre hole in the ship's hull. *Cruise terminated*
2003	Royal Princess (Princess Cruises)	Collided with the pier when it was docking, causing an 8 foot rent in the bow of the vessel and delaying its departure until repairs were completed.
2003	Opera (Silja Line)	Collided with a Yermak icebreaker stationed at the exit of a St. Petersburg port. The ship's lifeboats were damaged but the ship remained capable of traveling.
2003	Sundream (Sun Cruises)	Collided with the pier. It required repairs at Tenerife and returned early to Southampton for further repairs.
2003	Opera (Silja Line)	Collided with several ships and a crane at St. Petersberg. Damage not sufficient to delay itinerary.
2003	Melody (MSC Cruises)	Ran into the pier at Kusadasi harbor. Ship had to wait several days for repairs to be completed.
2003	Star Flyer (Star Clippers)	Sustained minimal damage and a small section of the wharf collapsed at Port Klang, Malaysia after it collided with the wharf.
2001	Asuka	Collision with cargo ship off coast of Kobe.
2001	Royal Princess (Princess Cruises)	Broke loose from mooring at Port Said; drifted into the path of a cargo ship.
2000	Island Breeze (Premier)	Collision w/tugboat—damaged propeller; Tug sinks. *2 cruises canceled*
2000	Carnival Destiny (Carnival Cruise Lines)	Propulsion problems—Adrift for 27 hours.
1999	Norwegian Dream (NCL)	Collision with cargo ship in English Channel—Out for 2 months.
1998	Rhapsody of the Seas (Royal Caribbean International)	Hits pier in Curacao causing a 7 meter hole above water line—Repaired and continues.
1997	Island Princess (Princess Cruises)	Collision with unmarked obstruction at Civitavecchia—2 cruises canceled.
1996	Statendam (Holland America Line)	Near miss with barge carrying 80,000 liters of propane and pallets of dynamite in the Discovery Passage, British Columbia. Collision averted by barge's action.
1993	Noordam (Holland America Line)	Collision with freighter in the Gulf of Mexico.
1992	Europa (Hapag-Lloyd)	Collision with freighter 180 miles off Hong Kong.

A.4—Collisions Involving Cruise Ships—Continued

Year	Ship (Cruise Line)	Incident
1991	Regent Sea (Regency Cruises) Island Princess (Princess Cruises)	2 ships collide in strong winds at Skagway—Regent Sea had its steel hull plating on the stern ripped; Island Princess had a 50' gash 30 ft above water line and 11 cabins were exposed.
1990	Azure Seas	Struck while moored by container ship in LA harbor.

A.5 Other Significant Events Involving Cruise Ships, 2000–2012

Year	Ship (Cruise Line)	Incident
2012	Independence (America Cruise Line)	The starboard engine drive shaft broke on leaving Savanah. Returned to port where the problem was determined. Left port with blessing of the CG. On one engine cruised to Brunswick, GA where the CG withdrew its approval to continue with the passengers. *Cruise terminated*
2011	Disney Magic (Disney Cruise Line)	Loss of power and adrift at sea for more than 90 minutes.
2011	Balmoral (Fed Olsen Cruises)	Ship detained by Maritime and Coastguard Agency after finding fault with life boats and inconsistent record keeping of crew hours of rest.
2011	Opera (MSC Cruises)	Detained in Southampton following an inspection by Maritime and Coastguard Agency. The MCA said: "The ship was not fully compliant with international maritime safety regulations."
2011	Opera (MSC Cruises)	Suffered a failure to an electric panel, causing an initial low power and afterwards a total loss while the ship was near Wisby in Baltic Sea. It was adrift for more than 9 hours.
2011	Radiance of the Seas (Royal Caribbean International)	The ship is currently operating under USCG Captain of The Port Order (COTP) due to one of two main propulsion azipods being inoperative for maneuver and requires a tractor tug tethered escort every arrival & departure from Tampa Bay to insure safe transit should the one remaining azipod propulsion fail.
2010	Clelia II (Travel Dynamics International)	A large wave slammed into the ship with 88 passengers and 77 crew members aboard, but the ship's crew overcame minor damage and is heading safely back to its scheduled port (Ushuaia). The ship declared an emergency yesterday, reporting it had suffered engine damage amid heavy seas and 90 kph winds when it was northeast of the South Shetland Islands and about 845km from Ushuaia. The International Association of Antarctica Tour Operators issued statement saying the wave that hit the Clelia II caused a broken bridge window and some electrical malfunctions that temporarily knocked out some communications and affected engine performance.
2010	Costa Atlantica (Costa Cruises)	The ship experienced steering problems minutes after leaving Bermuda. The Bermuda Maritime Operations received a distress call. The duty officer said: "The ship departed Dockyard at 1:10pm. She reported problems with her steering. The pilot immediately stopped the ship and ordered two tugs to come out to assist. The tugs came alongside and took her to an area with more sea room and then the engineers were able to fix the problem."
2010	Celebrity Century (Celebrity Cruises)	Passengers were offloaded in Villefranche after the ship's rudders were damaged. *Cruise terminated*
2010	Queen Mary 2 (Cunard Line)	The ship was approaching Barcelona when one of 12 capacitors in a harmonic filter failed, accompanied by a loud explosion. The explosion resulted in extensive damage to the surrounding electric panels and caused the vessel to black out. The ship was adrift for an hour.
2010	Atlantic Star (Pullmantur)	An electrical problem meant no air conditioning and problems with toilets. *Cruise terminated*
2010	Clelia II (Travel Dynamics International)	The ship lost all power, apparently the result of human error.
2010	Pacific Dream (Pullmantur Cruises)	Experienced engine failure. *Cruise terminated*
2010	Fascination (Carnival Cruise Lines)	Lost power for several hours and was adrift at sea. Carnival says the ship had a "technical malfunction."

A.5 Other Significant Events Involving Cruise Ships, 2000–2012—Continued

Year	Ship (Cruise Line)	Incident
2010	Vistamar (Plantours & artner)	The UK Maritime and Coastguard Agency detained the ship at Belfast Docks after numerous faults were identified on board including broken or missing fire doors and failure to maintain the vessel in line with International Safety Management (ISM) code. The coastguard had said that 10 of the ship's 100 fire doors were faulty. It also said that one of the lifeboat engines would not start. *Cruise canceled*
2010	Prince Albert II (Sliverseas Cruises)	The ship was impounded for several hours in Portsmouth amid safety fears. One concern was that it was overloaded. The other concern was that senior officers had not had enough rest. The report also says the ship's lifeboats were 'not ready for use,' there were three unsafe emergency routes in case of fire, and there was an air bubble in the ship's magnetic compass.
2010	Minerva (Swan Hellenic)	The ship broke down in the Mediterranean and was taken for emergency dry dock in Syros in Greece for engine repair. No a/c or lighting. Cruise terminated
2010	Pacific Dawn (P&O Australia)	A pilot averted a possible disaster by bringing the out-of-control ship to a stop just 700m away from the six-lane Gateway Bridge over the Brisbane River. Two tugboats got the ship under control, bringing her to a complete standstill 70m shy of the bridge.
2010	Caribbean Princess (Princess Cruises)	A steering malfunction caused the ship to list 5 to 9 degrees as it approached port.
2010	Explorer of the Seas (Royal Caribbean International)	Human error caused a severe list (10 to 12 degrees) that put passenger windows on Deck 3 under water. The list lasted 2–3 minutes.
2010	Louis Majesty (Louis Cruises)	26-foot waves crashed into the ship off France, smashing glass windshields and killing two passengers. Another fourteen people suffered light injuries. 2 deaths
2009	Norwegian Dawn (NCL	The ship temporarily lost all power off the coast of Puerto Rico. Power was restored much later in the day.
2009	Silja Europa (Silja Line)	With almost 1,700 people onboard, the ship was towed to the Finnish port City of Turku due to problems with its rudder system.
2009	Brilliance of the Seas (Royal Caribbean International)	The ship's departure was delayed because of needed repairs after a storm broke out a number of windows on Decks 3 and 4.
2009	Oceanic (Peace Boat)	The ship (with 848 passengers) was detained after U.S. Coast Guard inspectors found a small hole in the ship's hull during a routine safety inspection. About a gallon of water per hour was coming into the ship. An additional 16 safety violations were cited.
2009	Maasdam (Holland America Line)	The ship severely listed, causing damage onboard, when the captain took evasive action to avoid running aground on a sandbar in the St. Lawrence Seaway.
2009	Seven Seas Voyager (Regent Seven Seas Cruises)	One of the pods was caught in a fishing net. Attempts to release the pod failed. The ship is on its way to Dubai where it will be dry docked to fix the pod. Cruise delayed; itinerary adjusted.
2009	Costa Europa (Costa Cruises)	The ship underwent repairs in the Kenyan port of Mombasa, before sailing toward Reunion Island, but passengers said the vessel's speed remained "erratic," while others noticed black smoke coming from the engines. Itinerary changed.
2009	Aurora (P&O Cruises)	Broke down 4 hours after leaving Sydney. The Port Shaft Thrust Bearing had gone. Sailed at reduced speed to Auckland for repairs (taking 4 days instead of two). Itinerary changed.
2009	Explorer of the Seas (Royal Caribbean International)	A propeller on one of the ship's engines struck an unidentified object and was bent while leaving Samana. Cruise continued. Repaired on the next cruise when the ship was in St. Thomas.
2008	Grand Princess (Princess Cruises)	The ship diverted to safe harbour, anchoring outside English Harbour (Antigua). It had to be diverted to that part of the island because it was having problems with its bow thruster.
2008	Lyuba Orlova (Quark Expeditions)	The ship was detained by Argentinian officials due to mechanical problems. Four cruises were canceled.
2008	Queen Victoria (Cunard Line)	The ship suffered a severe list of about 7 degrees causing damage onboard, and later in the cruise had a full power failure that lasted for some time.

A.5 Other Significant Events Involving Cruise Ships, 2000–2012—Continued

Year	Ship (Cruise Line)	Incident
2008	Sea Princess (Princess Cruises)	The ship encountered 'technical difficulties' as it attempted to dock at Port Zante, which resulted in passengers being ferried to the nearby marina by the ship's life crafts. Initial reports were there had been a fire onboard that caused engine damage to the vessel and hindered its berthing.
2008	Fantasy (Carnival Cruise Lines)	There was a minor technical glitch a few hours after the ship left New Orleans, leaving the ship adrift. The problem was fixed and the ship resumed sailing.
2008	Discovery (Voyages of Discovery)	The ship was detained by Polish and later by UK authorities for safety deficiencies. The ship was cited for seven deficiencies.
2007	Enchantment of the Seas (Royal Caribbean International)	The ship had a power failure in the early morning and was assisted by a tug into Fort Lauderdale at the cruise's end.
2007	Norwegian Star (NCL)	A severe list causing damage onboard attributed to human error.
2007	Island Princess (Princess Cruises)	Engines failed off the coast of France, plunging the ship into darkness. Passengers were ferried to shore by the ship's tenders. *Cruise terminated*
2007	Black Prince (Fred Olsen Cruises)	Propeller damaged. *Cruise terminated*
2007	QEII (Cunard Line)	The ship was delayed in port for 24 hours, mid-cruise, because of mechanical problems.
2007	Ryndam (Holland America Line)	Power failure and propulsion failure. Power restored. The Coast Guard required the ship to have 2 tugboats to assist entering San Diego harbor and docking.
2007	Brilliance of the Seas (Royal Caribbean International)	A complete power loss, leaving the ship adrift for 2.5 hours.
2006	Ryndam (Holland America Line)	The ship reported engine problems about an hour after sailing and stalled in the channel between the port and the Skyway Bridge. Power was subsequently restored, but the Coast Guard said the ship would remain moored overnight while they investigated the problem with the engines.
2006	Thomson Destiny (Thomson Cruises)	The ship's toilets did not work for 3 days and there was no hot water for 24 hours. A series of blockages in the plumbing system were blamed for the problem; experts were dispatched to deal with the problem.
2006	Crown Princess (Princess Cruises)	Severely rolled (15 degrees) to one side shortly after leaving Port Canaveral (at 3:25 PM). ~240 passengers were treated for various injuries; 94 were transferred to local hospitals ashore for evaluation and treatment. The roll was attributed to a problem with the auto-pilot.
2006	Costa Allegra (Costa Crociere)	The ship twice lost all power for 30 minutes or so (shortly after leaving Shanghai and again on its return).
2006	Seabourn Pride (Seabourn Cruises)	Sailed through very heavy seas on way to Bergen . There was a substantial amount of water damage on board—forward suites had broken windows and flooding; other rooms also had water damage (including electrical systems).
2006	Vistamar (Plantours & Partners)	Ship impounded in London because of serious safety deficiencies, including inoperable lifeboats.
2006	Rhapsody of the Seas (Royal Caribbean International)	The ship listed 10 degrees due to a malfunction with the stabilizing mechanism. Considerable damage onboard.
2006	Zuiderdam (Holland America Line)	The ship lost all power and was adrift for about an hour (midnight to 1 AM) while between St. Thomas and Tortola.
2006	Sensation (Carnival Cruise Lines)	Coast Guard inspectors detained the ship at Port Canaveral until the captain and crew could fix violations related to the ship's fire-control systems.
2006	Carnival Liberty (Carnival Cruise Lines)	There was a complete power failure that lasted approximately 1 hours (10—11PM) and it was another hour or so before everything appeared "back to normal".
2006	Pacific Sky (P&O Australia)	Five hours after leaving Singapore the ship experienced engine problems, came to a shuddering halt, and sat anchored in the Malacca Strait for 30 hours while crew tried to fix the problem. The cruise finally resumed on one engine.

A.5 Other Significant Events Involving Cruise Ships, 2000–2012—Continued

Year	Ship (Cruise Line)	Incident
2006	Grand Princess (Princess Cruises)	Two hours after leaving Galveston, a medical emergency required return to port. The ship made a sharp turn while traveling at 21 knots, causing 18.5 degree list, which resulted in considerable damage onboard. Twenty-seven passengers and ten crew suffered injuries
2006	Norwegian Spirit (NCL)	Several windows were smashed and 11 cabins flooded when the ship encountered a storm.
2005	Funchal (Classic International Cruises)	The ship was stuck in Safaga (Egypt) for a week, mid-cruise, while repairs undertaken to the port main engine. Many passengers canceled the remainder of the cruise.
2005	Sun Princess (Sun Princess)	A power outage while docked at St. Thomas, USVI, left passengers mostly in the dark for more than 2 hours. Backup generators provided limited power. Power was restored and the ship left port 2 hours late.
2005	Norwegian Jewel (NCL)	The ship lost power as a result of problems with the port-side azipod while leaving St. Petersburg . The ship was assisted by Finnish tugs to reach the next port.
2005	Carnival Legend (Carnival Cruise Lines)	Heading for NYC a, "computer glitch" caused a hard left turn, that resulted in a 14 degree list causing injuries and damage.
2005	Carnival Destiny (Carnival Cruise Lines)	The ship lost power and propulsion at 7AM—it was dead in the water for 8 hours and without electricity and air conditioning for about 2 hours.
2005	Thomson Celebration (Thomson Cruises)	600 passengers flown home after the plumbing in 250 cabins failed. *Cruise terminated*
2005	Norwegian Dawn (NCL)	The ship was struck by a 70 foot wave enroute from the Bahamas to New York . The wave knocked out windows in two passenger cabins and on the navigation bridge and damaged the ships hull. Diverted to Charleston for repairs. 300 passengers chose to fly home.
2005	Pacific Sky (P&O Australia)	Problem with the shipboard's gearbox ends cruise. Cruise terminated
2005	Grand Voyager (Iberojet Cruises)	A huge wave breached a bridge window, resulting in damage to electrical control systems, a temporary loss of propulsion, and loss of all communications. A distress call was issued. Twenty passengers reported minor injuries (including eight with broken bones).
2005	Explorer (Semester at Sea)	Lost power in three of its four engines when a 50-foot wave broke bridge windows and damaged controls while 650 miles south of Alaska's Aleutian Islands.. Crew members were able to start a second engine and the ship "limped" to Honolulu for needed repairs.
2005	QEII (Cunard Line)	The ship lost power in the early hours of New Year's Day. Without power there is no propulsion, ventilation, lighting or water. The ship drifted for about an hour before power was restored.
2004	Pacific Sky (P&O Australia)	Cruise aborted because of problems with the starboard engine. Departure had been delayed for more than a day because of a faulty boiler and a damaged gerarbox. *Cruise terminated*
2004	Rotterdam (Holland America Line)	Ambulances greeted the ship in Halifax after passengers and crew endured monster waves generated by hurricane Karl in the North Atlantic . About a dozen passengers were taken to hospital with suspected fractures and severe bruising. 90 people (including 5 crew) reported minor injury. Ship lost power and for 3.5 hours was tossed around in high waves and in total darkness.
2004	Carnival Destiny (Carnival Cruise Lines)	The ship lost power and was adrift for several hours while cruising to St. Thomas from Dominica.
2004	Caronia (P&O Cruises)	The ship "suffered a total power failure following a leak from a swimming pool that took out the main electric board. Drifted for approximately 2 hours before partial power restored.
2004	Norwegian Crown (NCL)	Fuel fumes filled 50 cabins as a result of a hole in a ventilation duct in the air conditioning system, and there were reportedly power outages.
2004	Black Prince (Fred Olsen Cruises)	Enroute to her first journey after engine repairs, the ship broke down just off Southampton docks and lost all power.
2004	Diamond Princess (Princess Cruises)	The ship suffered several short power failures on one cruise and "technical difficulties" on the next cruise.
2003	Brilliance of the Seas (Royal Caribbean International)	While cruising between Corfu and Civitivecchia, the ship was hit by a storm—twice listing hard to the port side approximately 13.6 degrees. After daybreak the ship had a power blackout that lasted several hours.

A.5 Other Significant Events Involving Cruise Ships, 2000–2012—Continued

Year	Ship (Cruise Line)	Incident
2003	Norway (NCL)	A boiler explosion killed 8 crew members and injured dozens of others. All future cruises canceled. *8 deaths*
2003	Pacific Sky (P&O Australia)	The ship had to turn back to Auckland on an 11 day cruise to Fiji. The ship took on 17 tonnes of water after it sprang a leak through cracked and corroded plating on the side of the 19-year-old ship.
2003	Ryndam (Holland America Line)	The ship listed to the port side around 6:30 PM, causing injuries and considerable damage onboard. The incident was explained as the result of a mechanical failure from going from manual to automatic pilot
2003	Carnival Conquest (Carnival Cruise Lines)	The USCG investigated a sharp roll that sent passengers running for life vests, and glass crashing to decks. Seven passengers reported to a newspaper in New Orleans that they saw the lights of another vessel silhouetted in thick fog less than 200 yards from the ship.
2003	Radiance of the Seas (Royal Caribbean International	Ship struck by strong winds as it crossed a squall line and briefly went into a seven degree list. No injuries.
2003	Marco Polo (Orient Lines)	After being pushed by wind on to shallow waters while in the South Shetland Islands, the hull of the ship was found to have three cracks (4, 3, and 1.7 meters long by 2 centimeters wide). Eight millimeter thick plates were welded over the cracks at Ushuaia and the cruise continued.
2003	Wind Spirit (Windstar Cruises)	The ship experienced engine problems and generator problems that left it adrift for a night and part of a day. The ship made it back to Torotola and underwent necessary repairs.
2002	Olivia (Ukraine-registered)	With 650 passengers onboard, the ship was detained for a full day by the New Zealand Marine Safety Authority. Safety inspectors found problems with an emergency pump and with equipment that separates oil from water in the ship's bilges.
2002	Brilliance of the Seas (Royal Caribbean International)	A propulsion problem required shutdown of the complete propulsion system at sea while technicians worked to repair it.
2002	Radiance of the Seas (Royal Caribbean International)	USCG reports the ship experienced a 3-minute power outage disabling the ship's steering and propulsion capability while in Frederick Sound (preparing to transit the Gatineau Channel en route to Juneau).
2002	Ryndam (Holland America Line)	A generator stopped running while the ship was in the Lynn Canal (Alaska) causing it to lose power—it lost all propulsion and was adrift for about 20 minutes (at 1:30 AM). The water was too deep for the ship to drop anchor.
2002	QEII (Cunard Line)	A large sea water leak was discovered in the aft engine room, caused by the perforation (from corrosion) of a sea water inlet pipe. The leak was stopped after several efforts (over 36 hours), but not before several hundred tones of sea water had to be pumped overboard so that workers could get at the leaking pipe in the engine room (which was submerged by water from the leak).
2002	Oriana (P&O Cruises)	While crossing the North Pacific an auxiliary engine failed, causing the other three engines to stop. Ship drifted for 2 hours and proceeded at reduced speed after it was restored.
2001	Caledonia Star	Damaged by rogue wave—escorted to port by Argentinean Navy.
2001	Bremen (Hapag-Lloyd)	Hit by rogue wave—wheelhouse windows break and water enters bridge; detour to Montevideo for immediate repairs.
2001	Radiance of the Seas (Royal Caribbean International)	Hit heavy seas—balcony cabins, Seaview and Windjammer cafes flooded
2001	Norway (NCL)	Ship detained in port because of safety violations—106 leaks in fire sprinkler system.
2001	Norwegian Sky (NCL)	Autopilot malfunction causes roll –70+ injured, 16 hospitalized.
2000	Ocean Explorer	Engine failure; world cruise ended. Cruise terminated
2000	Sundream (Sun Cruises)	Failing generators; no a/c and limited power for 2 days.
2000	Gradeur of the Seas (Royal Caribbean International)	Loss of electrical power. Towed to port—delayed 12 hours.

A.5 Other Significant Events Involving Cruise Ships, 2000–2012—Continued

Year	Ship (Cruise Line)	Incident
2000	Aurora (P&O Cruises)	Hit by 40 foot wave—smashed windows in 6 cabins; 20 cabins flooded. 6 injured.
2000	Oriana (P&O Cruises)	18 hours into maiden voyage—problem with over heated propeller shaft. Cruise terminated.

APPENDIX B

ANALYSIS OF CRIME REPORTS RECEIVED BY THE FBI FROM CRUISE SHIPS

OCTOBER 1, 2007–SEPTEMBER 30, 2008

Table 1.—Crime by Cruise Ship, October 1, 2007–September 30, 2008
(based on reports to the FBI) [1]

Cruise Line/Ship	Simple Assault [2]	Assault w/SBI [3]	Theft [4]	Theft >10K [5]	Sexual contact [6]	Sexual assault [7]	Sexual harass [8]	Death [9]	Overboard [10]	Drugs [11]	Other [12]	TOTAL
Azamara												
Journey			1			1						2
Quest			1									1
TOTAL			2			1						3
Carnival											1	1
Celebration			1			1	1					3
Conquest	1	1	4	1	4	2	1	1				15
Destiny			4		1	1						6
Ecstasy	1		3		1	4						9
Elation	2		1		3	1	1					8
Fantasy		1	3		1	1			1			7
Fascination			4		2	4						10
Freedom			6		2	1		1			1	11
Glory	1	1	4		3	1		1	1			12
Holiday			1		1	1						3
Imagination		1	6		3	4						14
Inspiration	1		3		2			1				7
Legend			1			1	1				1	4
Liberty			3				1	1			1	6
Miracle			4									4
Paradise	1	1	4	1	6	3						16
Pride	1		3		2	2						8
Sensation			3		4	4						11
Spirit			1		2	2						5
Triumph	1		7		2						1	11
Valor			5		7	4					1	17
Victory			2	1	2	3			1			9
TOTAL	9	5	73	3	48	40	5	5	3		6	197
Celebrity												
Century	2			1	2							5
Constellation	1		1								1	3
Galaxy			1	1	1							3
Infinity	1				2							3
Mercury	1			1	1							3
Millennium		1										1
Summit					1							1
TOTAL	5	1	2	3	7						1	19
Costa												
Fortuna						1						1
Mediterranea									1			1
TOTAL												2
Crystal												
Serenity					1							1
Discovery												

Table 1.—Crime by Cruise Ship, October 1, 2007–September 30, 2008—Continued
(based on reports to the FBI) [1]

Cruise Line/Ship	Simple Assault [2]	Assault w/SBI [3]	Theft [4]	Theft >10K [5]	Sexual contact [6]	Sexual assault [7]	Sexual harass [8]	Death [9]	Overboard [10]	Drugs [11]	Other [12]	TOTAL
Sun									1			1
Disney [13]												
Wonder			1				1					2
Holland America [14]												
Amsterdam			1									1
Maasdam	1			1								2
Oosterdam						1						1
Ryndam				1								1
Statendam			1			1						2
Volendam						2						2
Westerdam			2	1								3
Zuiderdam						4						4
TOTAL	1		4	3		8						16
NCL [15]												
Dawn						2						2
Majesty	1				1							2
Star		1										1
TOTAL	1	1			1	2						5
NCLA												
Pride of America						1						1
Princess [16]												
Caribbean	2				2	1	1	1				7
Coral		1										1
Dawn						1						1
TOTAL	2	1			2	2	1	1				9
RCI												
Adventure	4		1		3						1	9
Brilliance	1			1								2
Empress											1	1
Enchantment	5				2			2			1	10
Explorer	4	2				2						8
Freedom	18	1	2		2	3		1				27
Grandeur	4				2							6
Jewel											1	1
Liberty	7				2	2				1		12
Majesty	6	1		2		1					2	12
Mariner	8	1			2	1						12
Monarch	14	3	1			2				2	1	23
Navigator	1					1						2
Radiance	2					2						4
Rhapsody											1	1
Serenade	1		1			1						3
Sovereign	13		1		3	1						18
Splendor	1											1
Vision	6		1		3	1						11
Voyager	1											1
TOTAL	96	8	7	3	19	17		3		3	8	164
Seabourn												
Legend						1						1
SeaEscape												
Island Adventure									1			1
Windstar												
Windstar	1								1			2

Table 1.—Crime by Cruise Ship, October 1, 2007–September 30, 2008—Continued

(based on reports to the FBI) [1]

Cruise Line/Ship	Simple Assault [2]	Assault w/SBI [3]	Theft [4]	Theft >10K [5]	Sexual contact [6]	Sexual assault [7]	Sexual harass [8]	Death [9]	Overboard [10]	Drugs [11]	Other [12]	TOTAL
GRAND TOTAL	115	16	89	12	75	75	4	9	7	3	15	421

Notes:

[1] Data was secured through a Freedom of Information request by Ken Carver/International Cruise Victims Association.

[2] Simple assault refers to incidents where there is an altercation or fight; one or both parties may experience minor injuries requiring medical attention.

[3] Assault with Serious Bodily Injury refers to incidents were there is an altercation or fight; one or both parties require medical attention for serious cuts, abrasions, concussion, or broken bones.

[4] Theft refers to incidents where items of value have been stolen or are missing from a cabin, a safe, luggage while in the care of the cruise line, or items lost onboard.

[5] Theft greater than $10,000 refers to incidents where the value of a theft exceeds $10,000.

[6] Sexual contact refers to incidents of unwanted sexually touching, unwanted kisses, and incidents where a minor has been propositioned or otherwise approached by an adult.

[7] Sexual assault refers to incidents of unwanted sexual contact with genetalia, unwanted attempts to have sexual relations, and forcible rape.

[8] Sexual harassment refers to incidents of verbal sexual abuse and/or where an employee is asked to trace sexual favors for advancement in or continuing in their job.

[9] Death refers to incidents where there is a natural death or suicide.

[10] Overboard refers to incidents where a passenger or crew member has gone missing. Three ships had media reports of passengers/crew overboard, but these were not reported to the FBI: Celebrity Constellation (non-U.S. crew)—February 18, Carnival Victory—April 22, 2008, Norwegian Dawn—May 11, 2008.

[11] Drugs refers to incidents where drugs have been found on the person or in the cabin of a passenger or crew member.

[12] Other refers to incidents otherwise unclassified, including passengers missing the ship, security breaches, fire, etc.

[13] Disney Cruises Line has one ship with no crime reports received.

[14] Holland America Line has five ships with no crime reports received.

[15] NCL has seven ships with no crime reports received.

[16] Princess has 13 ships with no crime reports received.

Table 2.—Crime by Cruise Line, October 1, 2007—September 30, 2008

(based on reports to the FBI) [1]

Cruise Line/Ship	Simple Assault [2]	Assault w/SBI [3]	Theft [4]	Theft >10K [5]	Sexual contact [6]	Sexual assault [7]	Sexual harass [8]	Death [9]	Overboard [10]	Drugs [11]	Other [12]	TOTAL
Azamara			2			1						3
Carnival	9	5	73	3	48	40	5	5	3		6	197
Celebrity	5	1	2	3	7						1	19
Costa						1			1			2
Crystal					1							1
Discovery									1			1
Disney [13]			1				1					2
Holland America [14]	1		4	3		8						16
NCL [15]	1	1			1	2						5
NCLA						1						1
Princess [16]	2	1			2	2	1	1				9
RCI	96	8	7	3	19	17		3		3	8	164
Seabourn						1						1
SeaEscape									1			1
Windstar	1								1			2
GRAND TOTAL	115	16	89	12	78	73	7	9	7	3	15	424

Notes:

[1] Data was secured through a Freedom of Information request by Ken Carver/International Cruise Victims Association

[2] Simple assault refers to incidents where there is an altercation or fight; one or both parties may experience minor injuries requiring medical attention.

[3] Assault with Serious Bodily Injury refers to incidents were there is an altercation or fight; one or both parties require medical attention for serious cuts, abrasions, concussion, or broken bones.

[4] Theft refers to incidents where items of value have been stolen or are missing from a cabin, a safe, luggage while in the care of the cruise line, or items lost onboard.

[5] Theft greater than $10,000 refers to incidents where the value of a theft exceeds $10,000.

[6] Sexual contact refers to incidents of unwanted sexually touching, unwanted kisses, and incidents where a minor has been propositioned or otherwise approached by an adult.

[7] Sexual assault refers to incidents of unwanted sexual contact with genitalia, unwanted attempts to have sexual relations, and forcible rape.

[8] Sexual harassment refers to incidents of verbal sexual abuse and/or where an employee is asked to trade sexual favors for advancement in or continuing in their job.

[9] Death refers to incidents where there is a natural death or suicide.

[10] Overboard refers to incidents where a passenger or crew member has gone missing. Three ships had media reports of passengers/crew overboard, but these were not reported to the FBI: Celebrity Constellation (non-US crew)—February 18, Carnival Victory—April 22, 2008, Norwegian Dawn—May 11, 2008.

[11] Drugs refers to incidents where drugs have been found on the person or in the cabin of a passenger or crew member.

[12] Other refers to incidents otherwise unclassified, including passengers missing the ship, security breaches, fire, etc.

[13] Disney Cruises Line has one ship with no crime reports received.

[14] Holland America Line has five ships with no crime reports received.

[15] NCL has seven ships with no crime reports received.

[16] Princess has 13 ships with no crime reports received.

Table 3.—Crimes Involving Minors, Alcohol, or Domestic Violence by Cruise Ship
(based on reports to the FBI) [1]

Cruise Line	Minors [2]			Alcohol Involved [3]			Domestic Violence [10]
	Sexual Contact [4]	Sexual Assault [5]	Sexual Harrassment [6]	Assault w/ SBI [7]	Sexual Contact/ Assault [8]	Simple Assault [9]	
Azamara							
Journey							
Quest							
TOTAL							
Carnival							
Celebration			1		1		
Conquest	1	1	1	1	2	1	1
Destiny							
Ecstasy		1			2		
Elation					4	2	
Fantasy				1	2		
Fascination					4		
Freedom					2		
Glory				1	3	1	
Holiday							
Imagination				1	5		
Inspiration	1						
Legend							
Liberty							
Miracle							
Paradise				1	3	1	
Pride	2				1		
Sensation					5		
Spirit	1				2		
Triumph					2	1	
Valor	1				4		
Victory		1			3		
TOTAL	6	3	2	5	47	6	1
Celebrity							
Century						1	
Constellation							
Galaxy							
Infinity							
Mercury							
Millennium				1			
Summit							
TOTAL				1		1	
Costa							
Fortuna			1				
Mediterranea							
Crystal							
Serenity	1						
Discovery							
Disney [11]		1					
Holland America [12]							
Amsterdam							
Maasdam							
Oosterdam							
Ryndam							
Statendam							
Volendam							
Westerdam							
Zuiderdam							
TOTAL							

Table 3.—Crimes Involving Minors, Alcohol, or Domestic Violence by Cruise Ship—Continued
(based on reports to the FBI) [1]

Cruise Line	Minors [2]			Alcohol Involved [3]			
	Sexual Contact [4]	Sexual Assault [5]	Sexual Harrassment [6]	Assault w/ SBI [7]	Sexual Contact/ Assault [8]	Simple Assault [9]	Domestic Violence [10]
NCL [13]							
Dawn		1					
Majesty	1					1	
Star							
TOTAL	1	1				1	
NCLA							
Pride of America							
Princess [14]							
Caribbean	2					1	
Coral							
Dawn							
TOTAL	2					1	
RCI							
Adventure	1					1	1
Brilliance							1
Empress							
Enchantment	1					2	3
Explorer		2		1			
Freedom				1	1	4	4
Grandeur	1				1	2	1
Jewel							
Liberty						3	2
Majesty					1	3	5
Mariner				1			5
Monarch		2		1	2	6	4
Navigator		1					
Radiance					1	1	
Rhapsody							
Serenade		1					1
Sovereign	1				1	4	8
Splendor						1	
Vision						3	1
Voyager							
TOTAL	4	6		4	7	30	36
Seabourn							
Legend							
SeaEscape							
Windstar							
Windstar						1	
GRAND TOTALS	14	11	3	10	54	40	37

Notes:
[1] Data was secured through a Freedom of Information request by Ken Carver/International Cruise Victims Association.
[2] Minor refers to passengers aged 17 or younger.
[3] Alcohol involved are incidents where the crime reports the victim of perpetrated was intoxicated.
[4] Sexual contact refers to incidents of unwanted sexually touching, unwanted kisses, and incidents where a minor has been propositioned or otherwise approached by an adult.
[5] Sexual assault refers to incidents of unwanted sexual contact with genitalia, unwanted attempts to have sexual relations, and forcible rape.
[6] Sexual harassment refers to incidents of verbal sexual abuse and/or where an employee is asked to trace sexual favors for advancement in or continuing in their job.
[7] Assault with Serious Bodily Injury refers to incidents were there is an altercation or fight; one or both parties require medical attention for serious cuts, abrasions, concussion, or broken bones.
[8] Sexual contact/assault refers to any incident of a sexual nature (*i.e.,* it combines the categories of sexual contact and sexual assault).
[9] Simple assault refers to incidents where there is an altercation or fight; one or both parties may experience minor injuries requiring medical attention.
[10] Domestic violence refers to incidents of spousal abuse or the physical abuse of a child.
[11] Disney Cruises Line has one ship with no crime reports received.
[12] Holland America Line has five ships with no crime reports received.
[13] NCL has seven ships with no crime reports received.
[14] Princess has 13 ships with no crime reports received.

Table 4.—Crimes Involving Minors, Alcohol, or Domestic Violence by Cruise Line

(based on reports to the FBI) [1]

Cruise Line	Minors [2]			Alcohol Involved [3]			
	Sexual Contact [4]	Sexual Assault [5]	Sexual Harrassment [6]	Assault w/ SBI [7]	Sexual Contact/ Assault [8]	Simple Assault [9]	Domestic Violence [10]
Azamara							
Carnival	6	3	2	5	47	6	1
Celebrity				1		1	
Costa			1				
Crystal	1						
Discovery							
Disney		1					
Holland America							
NCL	1	1				1	
NCLA							
Princess	2					1	
RCI	4	6		4	7	30	36
Seabourn							
SeaEscape							
Windstar						1	
TOTALS	14	11	3	10	54	40	37
As % of TOTAL for CRIME	18.7%	14.7%	50.0%	62.5%	36.0%	34.8%	32.2% [2]

Notes:
[1] Data was secured through a Freedom of Information request by Ken Carver/International Cruise Victims Association.
[2] Minor refers to passengers aged 17 or younger.
[3] Alcohol involved are incidents where the crime reports the victim of perpetrated was intoxicated.
[4] Sexual contact refers to incidents of unwanted sexually touching, unwanted kisses, and incidents where a minor has been propositioned or otherwise approached by an adult.
[5] Sexual assault refers to incidents of unwanted sexual contact with genitalia, unwanted attempts to have sexual relations, and forcible rape.
[6] Sexual harassment refers to incidents of verbal sexual abuse and/or where an employee is asked to trace sexual favors for advancement in or continuing in their job.
[7] Assault with Serious Bodily Injury refers to incidents were there is an altercation or fight; one or both parties require medical attention for serious cuts, abrasions, concussion, or broken bones.
[8] Sexual contact/assault refers to any incident of a sexual nature (*i.e.,* it combines the categories of sexual contact and sexual assault).
[9] Simple assault refers to incidents where there is an altercation or fight; one or both parties may experience minor injuries requiring medical attention.
[10] Domestic violence refers to incidents of spousal abuse or the physical abuse of a child.
[11] Disney Cruises Line has one ship with no crime reports received. [12] Holland America Line has five ships with no crime reports received.
[13] NCL has seven ships with no crime reports received. [14] Princess has 13 ships with no crime reports received.

Table 5.—Crimes Involving Crew Members

(based on reports to the FBI) [1]

	Crew on Crew (F victim : M victim)	Crew on Pax (F victim : M victim)	Pax on Crew (F victim : M victim)	TOTAL
Simple Assault	6 (1:5)	1 (1:0)	4 (1:3)	11 (3:8)
Assault w/SBI	3 (0:3)	—	1 (0:1)	4 (0:4)
Subtotal	9 (1:8)	1 (1:0)	5 (1:4)	15 (3:12)
% of all onboard assaults	6.9%	0.7%	3.8%	11.4%
Sexual Harass	4 (4:0)	—	—	4 (4:0)
Sexual Contact	13 (10:3)	12 (11:1)	7 (2:5)	32 (23:9)
Sexual Assault	11 (11:0)	20 (20:0)	2 (0:2)	33 (31:2)
Other	—	1 (1:0)	—	1 (1:0)
Subtotal	28 (25:3)	33 (32:1)	9 (3:6)	70 (60:10)
% of sex-related incidents	17.9%	21.1%	5.8%	44.9%
Theft [1]	20 (8:12)	—	—	20
Theft of ship property [2]	3	—	—	3
Theft >10K [3]	5	—	—	5
Subtotal	28	—	—	28
% of all onboard thefts	27.7%	—	—	27.7%
Overboard	—	—	—	4
% of all persons overboard	—	—	—	57.2%
GRAND TOTAL	65	34	14	117

Notes:
[1] Data was secured through a Freedom of Information request by Ken Carver/International Cruise Victims Association.
[2] Total value of theft of crew is $49,600 (average $2,480 per theft).
[3] Total value of theft of ship property is $8,200 (2 incidents) plus one incident of stealing mail (value unknown).
[4] Total value of theft >10K is $120,000 (average $24,000 per theft)—all were thefts against the cruise ship.

The CHAIRMAN. Thank you very much for that very interesting and good testimony.

And finally, Ms. Christine Duffy, and I apologize. Recently, the House had a hearing about women and there were all men at the table, and you're at the table but you're just barely at the table.

So I want to apologize on behalf of the Committee. You should be right there with those other guys.

Ms. DUFFY. Thank you, Mr. Chairman.

The CHAIRMAN. And you are President and CEO of Cruise Lines International Association. We welcome your testimony.

STATEMENT OF CHRISTINE DUFFY, PRESIDENT AND CEO, CRUISE LINES INTERNATIONAL ASSOCIATION

Ms. DUFFY. Thank you, Mr. Chairman.

Chairman Rockefeller, Ranking Member Hutchison and respected members of the Committee, thank you for inviting me to testify today. My name is Christine Duffy and I am President and Chief Executive Officer of Cruise Lines International Association, also known as CLIA.

Before joining CLIA last year, I was President and CEO of Maritz Travel Company, one of the largest travel companies in the world, working with a variety of corporations.

I would certainly prefer to be with you today under very different circumstances. The *Concordia* incident has had a significant impact on the entire industry and I speak for all of our cruise line members in expressing our deepest condolences to all of those that were affected by this tragedy.

As an industry, we are wholly committed to examining what happened and to identifying lessons that can be learned from this tragic incident. Due to the ongoing investigations by Italian authorities, my remarks today will not focus on speculating about the causes of the *Concordia* tragedy.

Rather, my testimony will provide a broader industry perspective on the regulation of the cruise ships, the importance we play on our commitment to protecting our passengers' safety and security and our efforts and progress to protect the environment.

We applaud the Committee's leadership and interest in reviewing cruise industry operations and we welcome the opportunity to discuss our practices and procedures.

CLIA represents 26 major cruise lines serving North America and more than 16,000 affiliated travel agents and agencies across the United States that sell and promote cruises to their customers in their communities across this country.

Last year, our member lines' 211 ships served 16.3 million passengers. That number is up from 7.2 million in the year 2000. CLIA's mission is to promote the unique benefits of cruising and also to promote the policies and practices among our members that foster a safe, secure and healthy cruise ship environment for all of our passengers and crew onboard.

As was said, safety is the cruise industry's number one priority and there is nothing more important to our business than that. Every aspect of the cruise experience is heavily regulated and monitored under both U.S. and international law for the purpose of protecting the safety of crew and passengers onboard our ships.

These regulations begin with the design and construction of ships and extend to the operation and navigation of the vessel, the training of the crew, emergency equipment onboard and evacuation protocols.

The International Maritime Organization mandates global standards for the safety and operation of all cruise ships. The most important of these standards are detailed in the International Convention for the Safety of Life at Sea, or SOLAS, which provides the uniform worldwide set of mandates regarding safety equipment, crew training, evacuation, emergency procedures and navigation safety standards.

In the United States, the U.S. Coast Guard enforces all maritime regulatory requirements through both announced and unannounced rigorous inspections. At any time, the local Coast Guard captain of a port can prevent any cruise ship from departing if a serious violation of any one of these regulations is found.

CLIA's senior staff include four retired U.S. Coast Guard officers so we are intimately familiar and work very closely with the Coast Guard and are committed to this branch of service. Because of the cruise industry's commitment to safety, along with a sound regulatory regime and vigorous enforcement mechanisms, cruising is one of the safest forms of leisure travel in the world.

In the decade prior to the grounding of the *Concordia,* there were a total of 28 fatalities on cruise ships related to an operational casualty out of 223 million guests and crew who sailed during these years. Twenty-two of those fatalities involved crew members and six were passengers.

I want to be very clear that not a single fatality is acceptable to our industry, and we will work tirelessly and continuously to prevent such an incident from occurring.

Almost immediately following the *Concordia* incident, CLIA members launched a cruise industry operational safety review, a comprehensive assessment of the critical human factors and operational procedures for maritime safety. This review continues a long tradition in our industry and within CLIA of taking action proactively by working together across all of our member lines to improve and enhance safety procedures.

I am pleased to report that the industry has already moved forward with recommendations from this review. On February 9th, CLIA members announced that we had instituted a new passenger muster policy that requires the muster drills for embarking passengers to be conducted prior to departure from port.

This new policy does exceed the existing legal requirements, which call for muster drills within 24 hours of passenger embarkation. This new muster drill policy became effective immediately and applies not only to U.S. ships but internationally as well for CLIA members.

Additionally, we worked with members of this committee to assist in developing and enacting the Cruise Vessel Security and Safety Act, which was signed into law by President Obama July 27th of 2010.

CLIA member lines are already in compliance with the effective provisions of the CVSSA, including crime reporting procedures, the

use of latch and computerized key technology and the requirement that log books include all reports of crime and thefts over $1,000.

With regard to environmental stewardship, in the 37 years since CLIA was established our industry has made significant progress in reducing our environmental impact by implementing responsible practices and investing in new technologies.

We believe it is our responsibility to protect the environment in which we operate and, certainly, our industry has been at the forefront of wastewater treatment, emissions reduction and developing innovative technologies to reduce the environmental impact of cruising.

The management of wastewater is a complex and vitally important element of cruise ship operations and our industry has adopted its own set of stringent wastewater practices that go substantially beyond the rules and regulations.

As more fuel-efficient ships have come into service, our members have been systematically reducing air emissions, including sulfur oxides, nitrogen oxides, carbon dioxide and particulate matter. In the near future, international regulations will further reduce sulfur limits, helping to reduce air emissions across all oceans to meet these standards.

The industry has also invested in new technology that manages the use of energy more effectively, such as testing the first ever cruise ship engine exhaust gas scrubbers and developing engines that run more efficiently.

Our industry does have a vested interest in protecting the environment, not only because it is the right thing to do but also the very nature of our product depends on a healthy, natural environment. That's what our cruise passengers want to see when they experience a vacation onboard a cruise line.

Clean oceans and beaches are essential to the cruise experience and we have made great strides and worked hard to become a leader in the maritime industry with responsible practices and innovations to reduce our environmental impact.

Thank you for the opportunity to provide this testimony. We do remain fully and deeply committed to continuous enhancement of the safety of our guests and crew members, and it is without question our top priority.

In addition, we have the same commitment to be a leader in the environmental stewardship in the maritime community. Thank you.

[The prepared statement of Ms. Duffy follows:]

PREPARED STATEMENT OF CHRISTINE DUFFY, PRESIDENT AND CEO, CRUISE LINES INTERNATIONAL ASSOCIATION

Chairman Rockefeller, Ranking Member Hutchison and respected members of the Committee, thank you for inviting me to testify today. My name is Christine Duffy. I'm President and CEO of the Cruise Lines International Association—widely known as CLIA. I became CLIA's President last February. Before joining CLIA, I was President and CEO of Maritz Travel and I began my career as a travel agent.

The Concordia incident has had a significant impact on our industry. I speak for all our cruise line members in expressing our deepest condolences to everyone affected by this tragedy. As an industry, we are wholly committed to examining what happened, and to identifying lessons that can be learned.

My remarks today will not focus on speculation over the causes of the *Costa Concordia* tragedy. There are ongoing investigations by Italian maritime and law enforcement authorities and we hope to have their conclusions as soon as possible.

Rather, my testimony will provide a broader industry perspective on how cruise ships are regulated and the importance we place on our commitment to safety. We applaud the Committee's interest in reviewing cruise industry operations and we welcome the opportunity to discuss our industry's practices and procedures.

The Cruise Lines International Association represents 26 major cruise lines serving North America, more than 16,000 affiliated travel agents and agencies across the United States, and 120 Executive Partners spanning a broad array of industries—from ports to food suppliers—that help make the cruise industry run efficiently and effectively. Many of CLIA's travel agent members are small businesses. The majority of cruises continue to be booked through travel agents and they are an important cruise industry partner and national economic engine. Our travel agents play a pivotal role in assuring passengers of the safety and security of their cruise vacations. They are often the first to hear passenger concerns and first to relay them important information. Their tireless work plays an important role in helping their clients understand and appreciate that cruising continues to be one of the safest of all vacation options.

In 2010, the North American cruise industry generated $37.85 billion in U.S. economic benefits including nearly 330,000 U.S. jobs. Last year, our member lines' 211 ships served 16.3 million passengers—up from 7.2 million in 2000.

CLIA's mission is to promote the policies and practices that foster a safe, secure and healthy cruise ship environment for our guests. To fulfill that mission our member lines participate in ongoing, specialized committees, working groups, task forces and other forums to develop and promote industry-wide policies, routinely meeting with regulators and enforcement officials to promote efficiency and best practices throughout the world. Through these varied groups, and aided by a professional technical staff, consultants, and maritime authorities, our members share information, review and assist in developing applicable national and international legal requirements, and identify best industry practices for all members to adopt.

Safety is the cruise industry's number one priority. Providing a safe environment begins with the industry's hiring process and policies for crewmember and guest behavior. It continues with training our crewmembers on our safety policies and enforcing them.

Of course, we are not alone in this effort. Every aspect of the cruise experience is heavily regulated and monitored under U.S. and international maritime law for the purpose of protecting the safety of cruise passengers and crews.

These regulations begin with the design and construction of the ship and extend to the operation and navigation of the vessel, the training of the crew, the emergency equipment on board, and the evacuation protocols. A United Nations agency—the International Maritime Organization (IMO), mandates global standards for the safety and operation of cruise ships. The United States Coast Guard under the supervision of the Department of State is the primary agency that represents the United States at the IMO.

The most important of these standards are covered by the International Convention for the Safety of Life at Sea or SOLAS. This treaty has been ratified by the United States, all European Union Member States and most other nations, providing a uniform worldwide set of mandates regarding safety equipment, crew training, evacuation and emergency procedures, and navigation safety standards.

One of the most vital components of SOLAS is the International Safety Management Code or ISM. This Code is the primary mechanism for assigning safety responsibilities, functions, and procedures—both among the crew onboard an individual vessel, and the cruise line as a whole. The purpose of the ISM Code—and the continuous training exercises that instill it—is to ensure that every member of the crew, from the Captain to the most entry-level hospitality staff member, understands his or her precise responsibilities, especially in an emergency.

The stringent standards embodied by the IMO, SOLAS and the ISM Code have multiple layers of enforcement. The primary responsibility rests with the flag state of the vessel. Secondarily, all ports where the vessel calls can and do take additional measures to ensure compliance.

In the United States, for example, the U.S. Coast Guard enforces all maritime regulatory requirements through both announced and unannounced inspections and a rigorous annual examination of every ship that embarks passengers in the U.S. At any time, the local Coast Guard Captain of a Port can prevent *any* cruise ship from departing if a serious violation of *any* regulation is found. CLIA's senior staff includes four retired U.S. Coast Guard officers, so we are intimately familiar with the dedication and commitment of this branch of service.

Additionally, all crewmembers receive training in emergency procedures, safety, security, and first aid. This includes but is not limited to: emergency signals and alarms; abandon ship procedures; man overboard; fire prevention and safety; and the location and donning of lifejackets. This safety training is required every 5 years, however, all crew are to receive familiarization training each time they report on board and each crew member must participate in the ship's weekly emergency drills at least once a month. This training ensures the crewmember is familiar with the emergency operations and the location of emergency equipment on that particular ship.

Certain members of the crew also will be trained in the operation of the lifeboats and other survival equipment. Masters, officers and other personnel designated to assist passengers in an emergency are also required to have completed specific training in "crowd management" and "crisis management and human behavior."

Crewmembers are also required to undergo emergency drills provided for in SOLAS, Chapter III, Regulation 19 regarding abandon ship protocols and firefighting. Instruction and training in the use of the ship's fire-extinguishing appliances, life-saving appliances, and in survival at sea must be given at the same interval as the drills. This training includes a mock search and rescue of passengers trapped in their staterooms. SOLAS also addresses record keeping for these drills and training sessions. Other crew training is specified in Chapter III, Regulation 19.4 as well. Chapter III, Regulation 37 also contains detailed requirements for the muster list and emergency instructions. All crew must be trained in the performance of their listed emergency duties.

All modern cruise ships are required by SOLAS to have an array of electronic navigational instruments that assist in properly navigating the vessel. Most cruise ships substantially exceed the regulatory requirements in this regard.

Additionally, the average CLIA ship, of approximately 97,000 gross tons carrying approximately 2,700 passengers and 800 crew, typically has five firefighting teams whose main members have advanced shipboard firefighting training, 4,000 smoke detectors, 500 fire extinguishers, 16 miles of sprinkler piping, 5,000 sprinkler heads and 6 miles of fire hose.

Because of the cruise industry's commitment to safety, supported by strict regulations and vigorous enforcement mechanisms, cruising is one of the safest forms of recreation and travel in the world.

In the decade from 2002 through 2011, prior to the grounding of the *Costa Concordia,* there were a total of 28 fatalities on cruise ships related to an operational casualty. Twenty-two of those fatalities involved crew members; six were passengers out of approximately 223 million passengers and crew who sailed during those 10 years.

Let me be clear: Not a single fatality is acceptable to our industry and our industry will continue to work to prevent such incidents. One of the reasons fatal casualties are so rare is that we treat every one of these tragedies as a profound reminder of our duty to put ourselves under a microscope so we can continuously improve our practices, procedures and performance.

Almost immediately following the Concordia incident, CLIA member cruise lines launched a Cruise Industry Operational Safety Review—a comprehensive assessment of the critical human factors and operational aspects of maritime safety. We announced this publicly on January 27, 2012 on behalf of the global cruise industry. This Review, which is well underway, is comprised of four key components:

- First, an internal review by CLIA members of their own operational safety practices and procedures covering issues of navigation, evacuation, emergency training, and related practices and procedures.
- Second, consultation on these issues with independent external experts.
- Third, the identification and sharing of industry best practices and policies, as well as possible recommendations to the IMO for substantive regulatory changes to further improve the industry's operational safety.
- Fourth, a commitment to collaborate with the IMO, governments, and regulatory bodies to implement any necessary changes—but also to act independently and voluntarily where possible to speed safety improvements.

I'm pleased to report that the industry is already moving forward with recommendations from this Review.

On February 9, 2012 CLIA members instituted a new passenger muster policy requiring mandatory muster drills for embarking passengers prior to departure from port. This new policy exceeds existing legal requirements, which call for muster drills within 24 hours of passenger embarkation. It is being undertaken voluntarily and became effective immediately. Rather than waiting until the entire Review is

completed, we will take steps to implement recommendations on industry best practices as soon as they are identified and on an ongoing basis.

The Cruise Industry Operational Safety Review continues a long tradition in our industry of taking action proactively and voluntarily to improve our safety procedures. Another recent example was CLIA's development and adoption in 2008 of a series of best practices related to guest care—specifically the need to provide passengers practical assistance and emotional support during times of significant stress or trauma.

CLIA's guidelines on guest care practices cover a broad range of services. While each situation is different, these services typically include assigning a specific care team to work with guests or their families in times of need, both on-ship and onshore; meeting transportation and logistical needs; providing immediate, complimentary communications to shore; serving as a liaison with local governments or the U.S. embassy when appropriate; and contacting a guest or family once they have returned home to determine if they need additional support.

The cruise industry also has a strong record of working with Congress to enact new laws dedicated to advancing passenger safety. In 2010, CLIA worked with many members of this Committee to assist in development and enactment of the Cruise Vessel Security and Safety Act, which was signed into law by President Obama on July 27, 2010.

This legislation brought consistency and clarity to the security and safety laws and regulations for the cruise industry in the United States. CLIA member cruise lines are already in compliance with the effective provisions of the CVSSA, including crime reporting provisions; the use of latch and computerized key technology; and the requirements that log books include all reports of crime and thefts over $1,000. To bring further transparency to the industry, the U.S. Coast Guard and the Federal Bureau of Investigation (FBI) now maintain a website with the required reporting of closed case totals by cruise line in each category.

Our members are also in compliance with new mandates that became effective on January 27, 2012 requiring 42-inch rail heights in all passenger areas and peep holes in all passenger and crew cabins. We will continue to work with the U.S. Coast Guard, the FBI and other law enforcement agencies both in the U.S. and around the world to ensure that all of the bill's provisions are fully implemented.

Quite simply Americans are extremely safe at sea today. In many ways—again, well documented by statistics and other evidence—they are even safer in the well-protected environment of a cruise ship than they are on land.

Independent surveys show that the vast majority of cruise passengers—95 percent—say they are very satisfied with their cruising experience. Nearly half say they are *extremely* satisfied. And more than half of all passengers become repeat customers—cruising for a second or third or fourth time.

I submit that this would not be the case if safety or security were perceived as a serious problem. As the Coast Guard has testified, crime aboard cruise ships is extremely rare.

Our position is that even one incident or crime of any kind is one too many.

At the same time, we have to recognize the existence and the dangers of exaggeration. Assertions are sometimes made and unofficial statistics are sometimes quoted that bear no relation to any known reality.

In contrast, detailed studies by the renowned criminologist Dr. James Alan Fox of Northeastern University confirm the safety of passengers aboard today's cruise ships.

In Dr. Fox's words—and I quote—"While virtually no place—on land or sea—is totally free of risk, the number of reported incidents of serious crime from cruise lines is extremely low, no matter what benchmark or standard is used."

Now I would like to provide information on the cruise industry's efforts to prevent the introduction and/or spread of Gastrointestinal illness (such as Norovirus) aboard cruise ships. Historic incidence rates of Gastrointestinal Illness aboard cruise ships are low and according to the U.S. Centers for Disease Control and Prevention (CDC) the vast majority of outbreaks occur in land based settings such as schools, hospitals, and nursing homes. Nevertheless, CLIA member lines regularly communicate with one another, local and state health departments, the U.S. CDC and other international public health authorities to gather epidemiological information, identify sources of infection and share best practices.

CLIA member cruise lines employ a variety of sanitation practices and each line has specific, well-established Outbreak Prevention and Response Plans, all designed to keep passengers healthy during their cruise vacations. Our members take steps designed specifically to prevent sick passengers from bringing norovirus on board a ship and in the rare instances of outbreak, CLIA lines immediately employ numerous practices to mitigate its spread and treat ill passengers and crew.

Our lines also communicate with passengers and crew, especially to increase awareness of proper hand hygiene practices. Public health is an evolving area and new research and information is ongoing, so cruise lines are always assessing and updating procedures as appropriate. In fact, outbreak prevention methods are typically developed in close collaboration with CDC officials.

Unlike land-based outbreaks, which are generally not reported, the robust reporting structure for shipboard cases of norovirus allows cruise lines to share information with local and Federal health officials. This practice enables these agencies to better identify the original source of infection and allows cruise lines to more effectively implement mitigation strategies. If at least 3 percent of a ship's passengers or crew members report a Gastrointestinal Illness (GI), including norovirus, CDC officials have the option to conduct an investigation. In addition, thorough and regular inspections by the CDC Vessel Sanitation Program (VSP) ensure that cruise ships operating from U.S. ports have exceptional food handling and sanitary practices. A former VSP Sanitation Chief has said that the CDC program standard to which cruise ships are held for sanitation is one of the very the highest in the world for public places.

Another area that I know is of interest to this committee, is our industry's commitment to environmental stewardship. In the 37 years since CLIA was established, our industry has made significant progress in reducing our environmental impact by implementing responsible practices and investing in new technologies. CLIA believes that it is our responsibility to protect the environment in which we operate. Our industry has been at the forefront of wastewater treatment, emissions reduction and developing innovative technologies to reduce the environmental impact of cruising.

The management of wastewater is a complex and vitally important element of cruise ship operations.

Blackwater—water from toilets and medical facility drain, and graywater—water from cabin sinks and showers, laundry, galleys and spas, discharge are often regulated or treated to a higher standard than most land based systems. Also, our industry adopted its own set of stringent wastewater practices that go substantially beyond the rules and regulations. For example, while international regulations permit the discharge of untreated blackwater 12 nautical miles from shore, as a policy CLIA members treat all blackwater using equipment certified to meet the standards set by the U.S. Coast Guard or using an advanced wastewater treatment system.

Cruise ships have adopted rigorous programs to tackle waste disposal in an environmentally friendly manner, including doing all we can to minimize the potential waste coming on board ships. We also take extensive measures to recycle as much waste as possible by using segregated on-board collection bins. CLIA lines recycle approximately 80,000 tons of solid waste annually, comprised largely of paper, plastic, aluminum cans and glass. Other waste, such as hazardous waste and oily bilge water receive special treatment as well.

As more fuel efficient ships have come into service, CLIA members have been systematically reducing air emissions, including sulfur oxides, nitrogen oxides, carbon dioxide and particulate matter. In the near future, international regulations will further reduce sulfur limits, helping to reduce air emissions across all oceans. To meet these standards, the industry has been investing in new technologies that manage the use of energy more effectively, such as testing the first ever cruise ship engine exhaust gas scrubbers and developing engines that run more efficiently.

Cruise lines are also working alongside ports to reduce waste and emissions. This is best demonstrated by the use of shore power, a relatively new technology in the cruise ship arena, which involves a ship connecting to shore-side power and shutting down its own engines while in port. A handful of ports on the North American west coast are now equipped with the necessary, and technically rather complex, facilities for ships to 'plug-in' when they are in port. CLIA members are involved at the international regulatory level to explore a universal approach toward shore power that would overcome current obstacles, which involve the source of shore power, the connection adapter itself, as well as electrical disparities from one country to the next.

Other innovations help ships conserve energy. Environmentally friendly hull coatings make ships' hulls smoother, and a ship's design itself can be modified into a bulbous bow, for example, that generates a bow wave slightly earlier. Both result in energy savings by reducing resistance. Other innovations include heat recovery that allows heat to be collected from one system aboard a ship and used for another, and innovative air conditioning systems that run more effectively and utilize technology that minimizes the amount of energy used to cool a room when it is not occupied. Ships are now using energy-efficient light bulbs that generate less heat. Because ships spend so much time under the bright sun, solar panels are a promising source of supplementary energy and are used on many cruise ships.

Our industry has a vested interest in protecting the environment, not only because it is the socially responsible thing to do—but because the very nature of our product depends on a healthy natural environment—clean oceans and beaches are essential to the cruise experience. CLIA has made great strides to become a leader in the maritime industry with responsible practices and innovations that are reducing environmental impact.

Thank you again for the opportunity to provide this testimony to the Committee. I hope the information is helpful in addressing the substantial oversight and accountability of cruise lines, both in the U.S. and internationally. CLIA will continue to lead the Cruise Industry Operational Safety Review and, as with the recently agreed Muster Policy, will look to apply what is learned through that process so that future incidents, however rare, can be avoided. We remain fully and deeply committed to continuous enhancement of the safety of our guests and crewmembers, as it is without question our top priority. In addition, we will continue to be a leader in environmental stewardship in the maritime community. I look forward to answering your questions. Thank you.

The CHAIRMAN. I'm going to start the questioning.

Ms. Duffy, that's sort of like everything is just working wonderfully, and I'm just thinking about those three miles beyond which you can dump anything you want, and you do.

So talk to me about the environment, and I'm willing to hear your testimony and I have to accept what you say seriously. But don't expect me to be moved by it because there's an embarrassment which works at my soul. Genuinely. I don't use those words in committee hearings. About the irresponsibility of the environmental record and the luck that you have, the so-called three miles, that beyond that you're on your own.

You do what you want. You can talk about treated sewage. You can talk about untreated sewage. You just pour it out there, and there are islands of it in various oceans around the world.

That's not, however, my question. Many Americans don't think the corporations pay their fair share of taxes, and I'm one of them. We have, actually, when you strip it down, the lowest tax rate of anybody in the industrial world. You wouldn't think so during all of this political debate. But I can't blame them.

And I read a recent report in *The New York Times* about your industry, Ms. Duffy. According to this report, the largest company in your industry, Carnival, which has a lot of percentage of the cruise market and which makes about $11.3 billion in profits over the last 5 years, on this profit the company has only paid 1.1 percent in Federal, state, local or foreign taxes. True?

Ms. DUFFY. Mr. Chairman, I can't speak to the specific tax payments or corporate structures of a specific member. What I can say is that all of our members pay taxes both in this country and internationally based on the current laws and will continue to do so.

The CHAIRMAN. Well, you should be able to say what you pay, and if you don't, that's fine. But the fact is that 1.1 percent on, you know, 5 years, $11.3 billion in profits, is absolutely unthinkable to me. According to SEC filings that my staff has reviewed, Carnival actually paid no U.S. corporate taxes at all in 2011, which I believe was last year.

Do you have a comment on that?

Ms. DUFFY. Again, I——

The CHAIRMAN. Do you think that's right?

Ms. DUFFY. Again, I can only say that——

The CHAIRMAN. You're here representing your industry.

Ms. DUFFY. I'm here represent——

The CHAIRMAN. If I'm right, do you think that that's right that that happened?

Ms. DUFFY. I think what is appropriate is that the cruise industry pays its taxes based on the current laws.

The CHAIRMAN. So if you paid no taxes there must be some current law that I'm not aware of.

Ms. DUFFY. Well, the cruise industry—many of our members are multinational corporations and are doing business around the world. We operate in many countries. We have crew from over 150 countries. We have passengers that are cruising from around the world and——

The CHAIRMAN. I understand that, Ms. Duffy. All I'm saying is if you're going to go before congressional committees, and particularly this one, you've got to be more prepared. You can't just say you're not sure and talk about your international nature.

Most industries, particularly big ones in this country, are international and then we're not very happy when they don't pay taxes. I think it's amazing.

Can you explain why a multibillion-dollar company which is headquartered in Miami and extensively uses Miami and extensively uses up to 20 Federal agencies at various points in time should not be paying any U.S. taxes?

Ms. DUFFY. I believe that our members do pay for services that we use at the ports——

The CHAIRMAN. You don't. You do not.

Ms. DUFFY.—or per passenger for Customs and Border Protection work. And, again, I can only come back to state that our members pay taxes.

The CHAIRMAN. Do you want to comment on that, Dr. Klein?

Dr. KLEIN. Yes, I would just make one comment because, really, it gets into what you were talking about because I also have in my written testimony the absence of paying taxes.

I have from a Freedom of Information request indication that a single search for a missing passenger costs the U.S. Coast Guard $813,807, which comes out of the U.S. Treasury. It's not cost recovered. And I think this is what you're getting at. That's just one missing passenger.

The CHAIRMAN. That's part of what I'm getting at. That's reimbursing for the services they've been rendered——

Dr. KLEIN. Oh, yes.

The CHAIRMAN. Or partly. But I'm talking about corporate taxes.

Dr. KLEIN. Exactly, the absence, and it's because Carnival is registered in Panama as a Panamanian corporation. Royal Caribbean Cruises Limited is a Liberian corporation. And as a result, between that and flying and using ships that have foreign flags, they find themselves exempt from most of the U.S. taxes.

The CHAIRMAN. Well, then maybe you should have your headquarters in one of those countries and that you just wouldn't have the Coast Guard to help you when you run into trouble. Don't think I'm being mean. I'm being very fair.

You are a world unto yourself up to 5,000 people in these huge ships which dominate the skylands, which makes the Virgin Islands practically disappear in terms of size. And you have your

own rules and you say you're international and you're registered not in the United States and all these things, all of which lawyers can work out to reduce your safety responsibilities and your payment of taxes and all kinds of other things.

Now, last time we had hearings on this, I believe, Senator Lautenberg, that we talked a lot about, rapes and things on boats of that size, and when you have that many people you can't sort of use the standards of an American community because the chances of something happening to somebody are so much greater simply because of the compaction of people. They're so close. So your standards have to be really, in many ways, better than others.

I'm over my time but I will just end this part of my questioning by saying there are at least 20 different Federal agencies that help the cruise industry run cruises and you're not, evidently, willing to pay for what they do. And I'm distressed by that and will continue the questioning, but the questioning now goes to Senator Begich.

Senator BEGICH. Thank you very much.

The CHAIRMAN. Senator Begich, will you accept as part of the written record that the seventh largest port in the United States is Huntington, West Virginia, on the Ohio River?

Senator BEGICH. I will consider it.

Senator LAUTENBERG. What's the draft on those ships?

The CHAIRMAN. I only——

Senator LAUTENBERG. What's the draft on those ships, Mr. Chairman?

Senator BEGICH. Yes. Twelve inches.

[Laughter.]

The CHAIRMAN. Anyway, please proceed, Senator Begich.

Senator BEGICH. I have a few questions for the Admiral first, but let me, Ms. Duffy, I want to follow up on the Chairman's questioning. I know this from our work in Alaska—the cruise ship industry—you know, it's interesting because I should be in the Budget Committee also, which is doing tax reform right now, matter of fact, but I'm here so it's interesting. I get to do both now on this committee so this is good for me. I get to do dual.

But just to give you an example, and I want to make sure I'm saying this right, I know we did a study because we have also so much cruise ship industry in our state, just in our southeast region where a lot of the cruises run. Local sales tax revenue is in the millions, in the millions that's paid.

The dockage fees, and I'll turn to the port, is in the millions and I'll just make my comments here. The income tax issue is another debate. I'm anxious to have that because I think there are a lot of industries that need to be readjusted. We have a tax reform bill. Matter of fact, Johnny Isakson, who was here earlier, and I have sponsored or have talked about issues around tax reform.

But there is a great need for it global Federal tax reform, but on the local end, I know we have passenger fees in Alaska. You drop a person off on our dock, we're charging you.

We appreciate your visit but we want a little of that cash in our economy, to be very blunt with you, but also in the sales tax generation that occurs by those additional expenditures and dock expenditures that the cruise ship industry puts into the mix.

So I want to make sure that's part of the discussion also, that for Alaska it's millions and maybe—you know, I don't know if I can hold you on that thought because I know in Miami it must be tens of millions.

But I don't know how your port operates. I know how we operate. We love the cruise ship industry but we also want a piece of the action.

Mr. JOHNSON. And it's a great piece of the action. Your ports at the local level, again, by state are generating untold tens of millions. My port alone—the reason I say this—you can look at this many different ways, Senators, but, clearly, we charge harbor fees. We charge—you know, we're charging dockage. We're charging for water. We're charging for electricity.

My port alone, you know, we're talking—on the cruise side I'm generating annually, I call it revenue, $40 million, $50 million a year just on the cruise side. So they are paying fees. It's a combination. Some of that is passed through to the cruise passenger. A lot of it is coming from the corporation, from the cruise line.

Security is a huge cost. The cruise lines themselves are providing all of the security at their cost inside the terminal. I myself, because we're top ranked in my state, one of the leaders in America in safety and security, I spend—I have a very hefty security budget to keep us in that top position because it is our highest priority.

All of these programs—safety, security, environmental at the port level—we look at it as a fee-based structure, whether it's in Alaska, California, whether it's in Florida. And so yes, to be really honest, I'm generating revenue. I have expenses.

At the end of the day when you balance the book it's a public port. I'm generating a profit. This is the direct. The indirect is, again, the multiplier, through the creation of jobs, through, you know, all of that, through the provisioning. You're into the billions and billions and billions.

So my point is, and again, I understand, you know, Mr. Chairman, what you're saying—I think it's extremely important for America, and this is just my belief, I think it's extremely important for America that these cruise lines are headquartered in America.

I would hate to lose, OK, I'd hate to lose it in Florida off my community out of Miami. I'd hate to lose—but I'd hate to lose it out of the United States. And I can tell you at the CEO level of one of the largest cruise lines in the world—it's not Carnival, but another one—I spent a year negotiating a renewal on their headquarters, which is on my port, and the alternative, quite honestly, was London, all right.

They can move these headquarters to other places. So there's a lot of ways you can look at this and analyze. But, Senator, you're absolutely right.

Senator BEGICH. Let me hold you there because I do agree on the broader suite that there should be this corporate tax reform on the general, and I can tell you industry after industry. So that's another subject. Let me ask the Admiral. I only got a few minutes left.

I know in 2000 the GAO found that, you know, more monitoring was needed in discharging for the cruise ship industry, and since

then there has been some things changed. Tell me kind of how that has progressed.

I know in Alaska we've done some incredible things regarding discharge but we also do some other things for example, they use our port power rather than running their ships, which is important for emissions, the cruise ship industry is part of that equation now. Tell me, how has it improved in the last decade on discharge in your ability?

Admiral SALERNO. Well, Senator, we do look at all of the environmental requirements as part of our regular annual and semi-annual examinations of cruise ships. In Alaska, in particular, as you point out, there are some special requirements particularly relating to discharges from the vessel.

We have worked with the cruise lines and with the state of Alaska to make sure that those requirements are reflected in our inspection procedures and that involves, for example, sewage discharges. We've——

Senator BEGICH. We have a higher standard.

Admiral SALERNO. You do, and that has been, but it's also become a Federal requirement to comply with that.

Senator BEGICH. Right.

Admiral SALERNO. So as Federal law enforcement officers, we do work with the lines. We witness the taking of samples. Those samples have to go to approved laboratories or accepted laboratories is the technical term, and we verify that whatever's going over the side meets the EPA effluence standards.

Senator BEGICH. Very good.

Admiral SALERNO. And similar, the North American emission control area that is, you know, coming into effect, which will affect the nature of emissions into the air.

Senator BEGICH. I'll stop there, Mr. Chairman. I know we're limited on time but I do have other questions. I'll probably put them for the record unless we get a second round. I'll leave it there.

The CHAIRMAN. No. Why don't you go ahead? You know, the——

Senator BEGICH. Can I go ahead?

The CHAIRMAN.—vote has been postponed until 11:30.

Senator BEGICH. Can I do one more quick question? And this is, I think, important when we look at the accident in Italy. We have requirements, and I look toward, again, the admiral. We require local mariners or marine pilots to be on the ships as they come into our waters.

Do you think that kind of standard would have made a difference? And then the reason I want to ask you is I want to then flip back to one quick question to Ms. Duffy. But do you think that standard could have had an impact on international waters, the incident in Italy?

Admiral SALERNO. Well, it's hard to tell exactly in the Italian case, sir, but that's part of why we're so interested in the facts in this case. Just looking at the chart, I'm not certain that that was pilotage waters for that area.

Senator BEGICH. Yes.

Admiral SALERNO. But, clearly, pilots are very much part of the safety system in the United States. When pilots, you know, guide

ships in and out of port they are advisors to the master. They're local experts.

Senator BEGICH. They know the waters.

Admiral SALERNO. They know the waters. In our view, indispensable component to the overall safety structure.

Senator BEGICH. Ms. Duffy, if I can ask you one last question and that is on—you said the international agreement. Is it called SOLIS?

Ms. DUFFY. SOLAS.

Senator BEGICH. SOLAS. Do you as an industry review those international requirements on a regular basis? How is that reviewed and do you take like an incident which has occurred in Italy and say as an organization, that international organization, we have to review now our standards again? How does that work? I don't know.

Ms. DUFFY. CLIA is a nongovernmental organization that represents the cruise line industry at the International Maritime Organization in London. But there are 170 member nations that are also represented——

Senator BEGICH. Are part of this agreement.

Ms. DUFFY.—in IMO. And for the United States, that's under the State Department. The U.S. Coast Guard is actually our delegates——

Senator BEGICH. OK.

Ms. DUFFY.—at the International Maritime Organization. That is the body that is setting and establishing all of these regulations, which SOLAS is one of those. They also establish and have the environmental requirements for the maritime industry as well. Here in the United States, then, the Coast Guard is the enforcement agency for those regulations and, as the vice admiral said, the port state control provides that enforcement and is obviously delivered through the——

Senator BEGICH. But those are reviewed and updated.

Ms. DUFFY. Those constantly—there are committees and meetings throughout the year. We actually have a CLIA—our environmental director, environmental public health director from CLIA, is actually at the IMO right now in London participating in an environmental committee meeting.

Senator BEGICH. Very good.

Dr. KLEIN. May I make one comment? May I?

I just wanted to say I agree Alaska has some of the most stringent regulations with regard to environmental concerns and they are really to be admired for that.

I guess I want to point out in some ways Washington State has even more stringent regulations. What's sad, however, is the majority of coastal states in the U.S. don't enjoy the same level of protection, and that's why I advocate——

Senator BEGICH. That was your point about the national.

Dr. KLEIN. Yes. Yes, because there's this real patchwork, and I think there's no reason why the people of Alaska should enjoy a cleaner environment from this industry than Georgia, Mississippi, Oregon or other places.

Senator BEGICH. We like having the best standard.

Dr. KLEIN. And I admire it, most definitely.

The CHAIRMAN. Senator Begich, thank you——

Senator BEGICH. Thank you.

The CHAIRMAN.—very much for your question. I want to go to Senator Lautenberg, who's Chairman of our Subcommittee here, to be followed by Senator Boozman.

Senator LAUTENBERG. Thanks very much. I think you heard me talk about the two constituents from New Jersey who were on the *Costa Concordia,* and they said things were chaotic and confusing and had no idea about what to do first. And they said they were not given any safety training called muster drills before the crash, making the evacuation more chaotic and more confusing. In response, the industry voluntarily changed their policy to require muster drills prior to leaving port.

Now, I ask whether Admiral Salerno or Ms. Duffy know that these muster drills are taking place and that they're effective in the familiarization for the passengers. Are they at this point?

Admiral SALERNO. Senator, the international requirement is to hold them within 24 hours. We have nothing to suggest that that's not occurring. However, we feel that it's important to strengthen that.

So we have directed our inspectors to witness those drills whenever they're onboard for a periodic examination, and the industry has also voluntarily required their members to conduct those drills prior to getting under way. So that's in excess of the international requirement and, in our view, that is an appropriate interim and first measure even though we don't have all the facts in the *Costa*——

Senator LAUTENBERG. Yes. Should we perhaps, Admiral, modify the international standards to make the muster drills mandatory?

Admiral SALERNO. Sir, I think we do need to look at that, and that is on the agenda at the International Maritime Organization for the upcoming Maritime Safety Committee, not only that particular issue but a review of cruise ship standards overall.

Senator LAUTENBERG. Yes, because it is amazing, honestly, as I look at it, and I like the income that comes from cruises. I like the enjoyment that comes with the tour and travel boat excursions now and New Jersey has a busy area and near the Hudson River the Statue of Liberty stands promptly there. And I'm an honorary member of the Pilots Association of Sandy Hook. That doesn't mean I go out there and do it—and I wouldn't want a boat that I was the pilot for. I wouldn't want to be there.

But, Ms. Duffy, I commend the industry for changing its policy to require the pre-departure muster drills. Now, how will the industry enforce the policy so that all the cruise ships do conduct these drills before leaving port?

Ms. DUFFY. Many of our members already conduct the drills prior to departure from port, and now that we have announced this policy it becomes part of the mandate and part of the ship system of procedures to ensure. And, obviously, we've made a very public announcement. I believe that our members will conduct these musters.

Passengers will be expecting that the musters will be conducted prior to departure, and as the Vice Admiral says, this is something

that the Coast Guard as part of the enforcement role that they play to ensure——

Senator LAUTENBERG. What's the penalty?

Ms. DUFFY.—inspections.

Senator LAUTENBERG. If they fail to do it?

Admiral SALERNO. Senator, the ultimate penalty is they may not be allowed to leave port, you know, so that is a very——

Senator LAUTENBERG. Are there fines if they don't?

Admiral SALERNO. There are provisions, civil penalty type provisions, which I can——

Senator LAUTENBERG. Yes.

Admiral SALERNO.—provide to you the exact amount if you'd like.

[The information requested follows:]

A civil penalty may be assessed only if a vessel fails to comply with a law or regulation for which there is a penalty provision. In this case, there is no law or regulation that states a cruise ship must perform a passenger muster before a vessel departure from port.

However, as a matter of current policy, the Coast Guard is witnessing passenger musters before or upon departure on cruise ships concurrent with each control verification examination performed under the authority of Title 46 U.S.C. 3505. If the vessel does not perform the passenger muster, the control verification examination will be deemed incomplete and the Coast Guard will not issue or endorse the vessel's Certificate of Compliance. If this were to occur, the Coast Guard may order the vessel to remain in port until the passenger muster has been performed.

Senator LAUTENBERG. The question——

Dr. KLEIN. May I make one quick——

Senator LAUTENBERG. Yes, Dr. Klein.

Dr. KLEIN. I'll make it very quick. I think it's important for us to define what we mean by a muster drill. When I used to cruise, a muster drill was—it took a half hour. You went to the muster station. The captain came by or a senior officer made sure you put your lifejacket on properly, made sure people knew the procedures, and it was a 30-minute ordeal.

Today, according to a cruise director from Carnival Cruise Lines, they gather at the muster station. A person walks by with a clicker to count the number of people there. There is not attendance taken, which it used to be, and they're finished within 5 minutes. This is according to a cruise director on his own blog.

I guess all I want to raise is I think we need to define what we mean by muster drill as opposed to leaving it kind of as this sort of, you know, a label that we're not sure what we mean.

Senator LAUTENBERG. Yes. Well, I would imagine—Captain Doherty, did you want to say something here?

Captain DOHERTY. With respect to pre-departure musters, you asked if the Coast Guard can enforce it. If you don't make it the law the Coast Guard can't enforce it.

It's laudable for the industry to say yes, we're going to do this. But there's nothing to measure the penalties against unless it's included in the amended Cruise Vessel Act and also included in the international standard—International Safety Management procedures so you can measure their safety compliance against, one, just exactly what a muster is defined as, as Dr. Klein said——

Senator LAUTENBERG. Yes.

Captain DOHERTY. And two, you know, what the penalties are under the law, not under an industry association.

Senator LAUTENBERG. We know what the intentions are, and I leave it to the industry to come up with something that passes the taste test here. But it's obvious that despite the great safety record, the huge numbers of travelers that you have, that something like this is very discouraging. It stands out despite the millions of passengers that have passed through safely.

One last thing is——

The CHAIRMAN. Senator Lautenberg, can I just add a thought? I think we're getting at it here. I think you have two lives. One is at port, and the Coast Guard, which is singing your praises here, somewhat to my amazement, what you do in port. I come from a state where there are a lot of coal mines and there's a lot of talk about safety practices and coal mines that are sort of in very remote places. They're, you know, 300, 500, 2,000 feet underground. And it's a little bit like your world. Once you're beyond the three miles, the world is yours.

Once you go into a coal mine, you can't go into a coal mine unless you're a coalminer or a safety inspector, something of that sort.

But they can talk about rules but that has nothing to do with whether the rules are carried out and whether enforcement is enforced. And how in Heaven's name is the Coast Guard going to, just on the environmental basis of dumping sewage, follow them around? Because they don't have the resources to do it or the time to do it, to follow them around to see what they're doing. We know these islands are out there.

Senator LAUTENBERG. That's a good thought, Mr. Chairman, and I think the one thing that we have to do is get past the lack of resources because if anything more happens I think it's very damaging to the industry and we don't want to do it. So I agree with you. We're on the same wavelength here.

Ms. Duffy, one of the things that's talked about somewhat is crimes aboard ship or connected with the crews in some way, and the cruise lines are required to inform the FBI about serious crime, the number of crimes supposed to be made public.

However, according to the FBI data that I obtained, the number of crimes posted online is lower than reported by industry. For example, last year cruise lines reported more than 40 sexual assaults but only 14 are posted publicly. Will the industry commit to publicly disclosing the actual number of serious crimes that happen on cruise ships?

Ms. DUFFY. Senator, all of our cruise lines and the industry overall comply today with all of the reporting requirements that were established under the cruise line—the Cruise Vessel Security and Safety Act.

The reporting of those crimes are part of what the FBI does and we're reporting everything that we are required to report to the FBI, who, I believe, is then responsible for working on——

Senator LAUTENBERG. Yes. OK. We have to make certain that not only should it be public but should be timely and I'm going to pursue this with you at another time. Thank you.

Ms. DUFFY. Thank you.

The CHAIRMAN. Colleagues, I am embarrassed to tell you—I didn't realize time was passing so quickly—that the vote has started and there are about 9 minutes left on the vote.

Senator KLOBUCHAR. Could I just get two questions or——
The CHAIRMAN. No. I mean, I want to come back.
Senator KLOBUCHAR. OK.
The CHAIRMAN. Can you do that because there's——
Senator KLOBUCHAR. No, but thank you. It's fine. All right. Thank you.
The CHAIRMAN. Well, ask the questions and then we'll recess.
Senator KLOBUCHAR. OK.
The CHAIRMAN. Take the answers. Quickly.
Senator KLOBUCHAR. OK.
[Laughter.]

STATEMENT OF HON. AMY KLOBUCHAR,
U.S. SENATOR FROM MINNESOTA

Senator KLOBUCHAR. I just want to thank you, Mr. Chairman, for holding this hearing and, as you know, the tragedy hit home in Minnesota. We lost a couple from White Bear Lake, Minnesota. And I think whenever you have a tragedy like this happen it makes you look at safety, and I'm head of the Tourism ubcommittee and care very much about this.

But I also am concerned about the legal remedies from this, and if we are out of time you can put your answers in writing later. But I understand that under the Death on the High Seas Act families who lost a loved one have limited legal remedies that they can pursue for the tremendous loss that they have suffered.

Current law prevents victims' families from recovering anything other than lost income or wages. In contrast, if a family suffers the loss of a loved one in a plane crash, they may choose to pursue non-pecuniary damages in court.

And I would ask in writing so no one has to wait, whether from all of you, what kind of impact you think this disparity in the law has on the surviving families of victims. And I will also pose a question on——

The CHAIRMAN. Senator Klobuchar, before you do that, she will ask her question. After that, we will go into recess. We will go vote. We will come back, at least I will. I hope Senator Boozman does because I haven't been fair to him. And we'll continue this hearing.

Senator KLOBUCHAR. OK. Very good.
The CHAIRMAN. OK?
Senator KLOBUCHAR. Thank you very much.
The CHAIRMAN. Our hearing is adjourned after you've asked your question.
Senator KLOBUCHAR. Thank you.
The CHAIRMAN. Recessed, not adjourned.
[Laughter.]
Senator BEGICH. Did you finish the question?
Senator KLOBUCHAR. OK. I guess I'm going to continue to ask my question. So one of the other questions that I have is the cruise industry, and you could choose to answer either of these, and these are statistics about the—as you know, millions of Americans are passengers on a cruise ship.

They deserve to know if there's transparency and accountability for ensuring their safety onboard, and so just safety record issues and whether or not the industry should be required to report these

statistics to a Federal or an international entity. Can anyone answer that question? Yes, Dr. Klein?

Dr. KLEIN. Well, what I find is that there is no comprehensive recording of incidents at sea. I've been—I started writing about the cruise industry in the late 1990s, and at that time went through the media and extracted every event I could find.

As you'll see in my written testimony, Appendix A is a reflection of what I've been able to cull from the media and from reports from cruise passengers. I get 3,000 visitors a day to my website. To my knowledge, there's nowhere else that one's going to find a comprehensive list of known accidents at sea, and I think it's just worth mentioning.

Senator KLOBUCHAR. OK. Ms. Duffy?

Ms. DUFFY. There is an authoritative report that is produced by an independent party internationally, G.P. Wild, on cruise industry casualties, and that is where the numbers came from for the 223 million crew and passengers between 2002 and through 2011 with 26 deaths due to marine casualty. We'd be happy to submit this report to the Committee.

Senator KLOBUCHAR. OK. Dr. Klein?

Dr. KLEIN. If I could just say, in no way to impugn G.P. Wild or anything else, my work is truly independent. I'm an academic.

Senator KLOBUCHAR. Yes.

Dr. KLEIN. I have no vested interest and I report on my website, CruiseJunkie.com, any information that comes to me in a dispassionate manner. So when I say information being available is not digested. It's there and——

Senator KLOBUCHAR. And there's—but there's no requirement right now to report the stats to a Federal or international entity, which is——

Dr. KLEIN. Not that I know of.

Senator KLOBUCHAR. My exact question.

Ms. DUFFY. The International Maritime Organization also maintains a database of casualty—marine casualty reports, and that is information that is reported to the IMO. I believe that Dr. Klein's numbers also include ferries and all kinds of other——

Dr. KLEIN. Not what I presented here.

Ms. DUFFY.—ships. So——

Senator KLOBUCHAR. OK. Well, we will—why don't——

Dr. KLEIN. The data I presented in Appendix A does not include ferries. It only includes cruise ships.

Senator KLOBUCHAR. OK.

Dr. KLEIN. If you want to see the ferry data then you go to my website and you'll see considerably more accidents. But I purposely extracted those.

Senator KLOBUCHAR. OK. Anyone else? And then the first question that I asked, which is more complicated, on the legal questions of the high seas, I'd appreciate answers in writing on that. Did you want to add something?

Admiral SALERNO. I would just add to the discussion——

Senator KLOBUCHAR. Vice Admiral.

Admiral SALERNO. The Coast Guard does track all reportable marine casualties for events that occur within our jurisdiction. So these are not global numbers but, you know, U.S. numbers.

Senator KLOBUCHAR. OK.

Admiral SALERNO. So if a foreign flag ship has an accident in U.S. waters we track that, and that information is publicly available.

Senator KLOBUCHAR. So we have the U.S. numbers. We're just not sure about the international numbers, although there are arguments about this study, and we'll see that. And then the other question that has come up for me before with the BP oil spill and other things with the explosion, with the people dying and what happens on the high seas. I'm curious about that with the difference with the plane crash. So we'll be asking that in writing. So very good. I really appreciate it. Thank you very much.

Senator BEGICH. We'll be back. Thank you.

Senator KLOBUCHAR. We'll be back.

[Recess.]

The CHAIRMAN. My apologies, but that was a very important vote. I seem to be by myself here so we may be here until about 7 o'clock.

[Laughter.]

The CHAIRMAN. But I doubt it.

I want to just pick up on something that Senator Klobuchar made as a question, and she asked about the Death on the High Seas Act, DOHSA, before our hearing recessed, and she wanted to know why the victims of a cruise accident don't have the same legal remedies as victims of plane crashes. And I know that she asked for a written response from the witnesses but, frankly, I'd like to hear what some of you might think about that, and Dr. Klein, you probably have some thoughts. We run into the same problem in, you know, deep water.

Dr. KLEIN. Yes. Well, I guess the thing is that cruise passengers—there was legislation that was passed to provide the rights to airline passengers to file lawsuits, and I guess—let me back up. The original Death on the High Seas Act was passed in 1920 and it does not allow non-pecuniary and punitive damages to families of someone who has died while at sea.

These limits were deemed to be unfair in the context of aviation cases and were removed but they were not changed for passenger ships. There was House Resolution 2989 introduced by Representative Doggett back in July 2007, and this was intended to correct this inconsistency. But it was not approved.

Two bills were introduced in the 111th Congress, House Resolution 5803 and Senate 3600 and 3755, and, of course, you were the sponsor of one of those, but they also didn't go beyond committee. Basically, from my perspective, it's unfair to American citizens who go on cruise ships to be treated differently than when they're traveling on an airplane to get to that cruise ship. It makes no sense.

The CHAIRMAN. A little bit like those on land and those on oil-drilling platforms at sea.

Dr. KLEIN. Precisely. Yes.

The CHAIRMAN. I'm going to bow to Senator Boozman.

STATEMENT OF HON. JOHN BOOZMAN,
U.S. SENATOR FROM ARKANSAS

Senator BOOZMAN. thank you, Mr. Chairman, and thank you for holding this hearing.

I agree with the Chairman that, certainly, we need a fairer, simpler tax code.

I would say, though, that I don't think anybody on the panel is trying to say that the cruise industry is not paying what we as Congress have agreed on what they need to pay, and we have a number of prominent individuals that feel like that they're not paying enough taxes but I don't see any of them voluntarily paying more.

So if there is blame, again, we need to work on that and get a fairer, simpler tax code. And I think the cruise industry would agree with that because that would help our economy and also be good for a number of different reasons.

The other thing is—and I appreciate Mr. Johnson and the Senator from Alaska—that the cruise industry truly is contributing many millions of dollars to the economy. Ms. Duffy, what is the size of the industry? What does it represent for the United States?

Ms. DUFFY. In 2010, Senator, the North American cruise industry generated $37.85 billion in U.S. economic benefits, including nearly 330,000 U.S. jobs.

Senator BOOZMAN. Yes. So it's a huge entity. And the other thing too is that, we need adequate rules to make sure there is safety and keeping lots of things safe.

But probably, Mr. Johnson, you know, the risk of having a significant car accident driving to the pier in Miami is greater than getting on the cruise ship and going to whatever destination. The other thing is I'm really interested in is the disease aspect of this.

That's a huge problem, and I know that the industry itself is working really hard to figure that out because it's a huge negative. We all read about those things. But it is a difficult problem.

I know that if you listed the hospitals throughout the country you're probably much more likely to go into the hospital with a minor problem and then come out with a significant infectious disease, percentage wise, than on a cruise ship. So these are things that we all need to be committed to grappling with and we would like to work with you.

Ms. Duffy, in your testimony you talked about how things in the continual process of evolving. When you run into a problem, a significant problem like an outbreak or something similar, what are the steps that the industry goes through to identify problems and put procedures in place?

Ms. DUFFY. The cruise lines currently, on the issue that you raised about public health, meet or exceed all the Federal codes and regulations and the international requirements.

Every ship undergoes regular inspections and crew training, and we are in frequent communication with the CDC directly if there is any sort of an outbreak. There are regular inspections also under the VSP, or Vessel Sanitation Program, to ensure that all of the ships operating from U.S. ports have the appropriate and exceptional food handling and sanitary practices.

Actually, one of the former VSP sanitation chiefs said that the CDC program standard to which cruise ships are held for sanitation is among the highest in the world for any public place, I think to your point about hospital outbreaks or outbreaks that we've seen in schools.

So our members are very committed, obviously, to ensure that we have a very healthy environment for our passengers and crew.

Senator BOOZMAN. We'll ask Mr. Johnson, then you, Dr. Klein, if that's OK.

Mr. JOHNSON. This is a good example, perfect example, about how a port at a local level works with the Coast Guard, works with Customs, works with the Center for Disease Control in particular on these issues of a health issue. You have, obviously, the issues of disembarking passengers. You have the issue of the queuing for embarkation for another cruise.

You have the importance of sterilizing the cruise terminal itself. This is an area, again, to the point of continual level of interaction, both at the security level—your ports are only secured because of the cooperation of all agencies, Federal, state and local, and it starts really with U.S. Coast Guard and I can't say enough good things about the Coast Guard, but Customs—Federal, state, local interaction—and your level of security, your level of safety, is only as good as that level of clear communication, clear cooperation. In the health area, that's a specific one.

We're engaged. It could be literally—and to hold a ship over, instead of departing my port at 4 p.m. as scheduled, you know, it may be a midnight, 1 p.m.—those passengers have to be properly handled, dealt with nicely. But, again, it's an important issue that we deal with.

Admiral SALERNO. If I could add, Senator, the reference to CDC is an important one. The CDC does have the lead for vessel sanitation. The Coast Guard has a very close relationship with CDC. We rely on them for advice on operational controls that are necessary to control any outbreak.

So if they feel a ship needs to be detained in port or prevented from entering port or remain at anchorage, we can apply those controls on behalf of CDC and we have protocols in place to do that.

Senator BOOZMAN. Thank you, Admiral.

Dr. Klein?

Dr. KLEIN. I just wanted to say a couple of things. First of all, I won't dispute the statements about sanitation. I think the VSP does a fine job. I also want to say that I'm sympathetic to what the cruise industry deals with. I distinguish between sanitation and norovirus, which isn't related to sanitation. It has to do with people not washing their hands when they go to the bathroom. It follows a fecal-oral route. We know that.

The industry, in 2002, in response to a major set of outbreaks, came up with the mantra passengers bring it with them. They continue to say that today. However, I know of an analysis of data from the CDC which indicates there are a fair number of incidents where, when there's a passenger outbreak, it is preceded by an elevated number of crew members reporting ill. This disputes the passengers bring it with them. Also, that there are outbreaks on successive cruises suggests passengers aren't bringing it with them.

Need to make two comments because I indicate in my written—in my oral statement that there are disincentives to reporting. Generally, I understand that crew members who report ill are kept off work for 2 days or until they're asymptomatic. Makes perfect sense.

However, one remains, one continues to shed the virus for 2 weeks. One continues to be contagious if you don't properly wash your hands for 2 weeks. But these people are back at work. As well, passengers who report ill are quarantined. Again, makes sense.

But there's a disincentive. If you're a worker and you're not working, many of them say they're not being paid. If you're a passenger, why would you report being ill if you can still go out and enjoy your holiday even if you don't feel well? So people don't have an incentive to go out of circulation in order to deal with preventing the spread of the illness.

The other thing I want to say, and this is anecdotal so I can't stand up and say it's truth, but anecdotally I have heard from crew members who say that the chemicals used for sanitation, for dealing with the illness, are so caustic that it isn't uncommon for them to replace the chemicals with water because it's so hard for them to apply.

Now, that may be happening one in a hundred times, one in a thousand. But I think there needs to be a greater attentiveness rather than, again, saying passengers bring it with them—we're the victim here. I think there can be more of a proactive dealing with the problem.

Senator BOOZMAN. And I know I'm over time, Mr. Chairman. I apologize. I guess the only thing I would say, Dr. Klein, is that I don't disagree with the problem. So much of that is just doing right. It's just hard to get somebody to wash their hands. And then the other thing too is that those who are watering it down now, it doesn't matter what regulation you put on them. They're still going to water it down. Do you see what I'm saying?

I mean, that to me is absolutely crazy because the result is that outbreak. You turn a little problem, regardless of the cost, into this huge problem, you know. So, again, it's difficult things to deal with and——

Dr. KLEIN. And I agree and I'm sympathetic to the industry. I guess my feeling, and it doesn't need to be reflected in legislation, but my feeling is they could go further than they currently go, and I'm more than happy to share with them my views and my insights.

Senator BOOZMAN. And I think that's very appropriate, and I think that that's what this is all about. It's just trying to get some information out so that we can really help each other because it is an important resource.

I've been to Ketchikan and other places. There's nothing else like it, and they really are great economic contributors, kind of a bright spot in our economy. So thank you very much.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Boozman.

I want to continue on a couple of fronts, Ms. Duffy. This business of taxation is very important, and I think all of us have seen the movie or read the book, *Too Big to Fail,* and in the last administra-

tion they did something that had to be done, which is to bail out a number of banks so that smaller banks would not start to fold and then the whole system would collapse.

But in the making of that deal with the nine major banks in the country, the idea was that there was going to be a capital injection into these banks, varied according to their size, which is odd philosophy to give successful banks the capital injection.

But the point was if you want people to spend money or you want them to be able to have credit, you've got to have the credit available, and the credit wasn't available. So they got whatever it was, $700 billion, and the American people weren't very happy about it.

I thought it was a wise thing to sort of stem what was beginning to be a general collapse in the economy until it turns out that they got all of this money and didn't spend one dime on what they were meant to spend it on, which was mortgages. That was the whole thing all the way through. They were meant to spend it on mortgages, to bail out homeowners—not them. It all went into their pockets. It was all used on compensation.

And why do I say that? Because you live in this town and you see what people with smart lawyers are able to do. You can get pretty cynical, which is why when I'm looking at you, Ms. Duffy, I'm thinking of—you know, there's inside the three-mile—that's one part of your life. Outside, that's all your life and nobody else.

You know, the Coast Guard can't follow you around and you don't pay taxes, and then you do that classic American thing that a lot of corporations use or a lot of very wealthy Americans use, I'm paying everything that I'm required to under the law.

I'm not sure that you do. In fact, I don't think you do. I can't prove it right now but I'm going to work at it. But I'm asking you just as an American citizen don't you think that as profitable as you are that it's really incumbent upon you not just to say oh, we're paying everything that we're required to under the law, but since I get the feeling that the only people that you really reimburse are private sectors like the port. Port's doing very well. Coast Guard doesn't get a dime from you.

And so I'd like your thought about how you think you could represent your industry. My follow-up question is going to be what 5 or 6 things do you think you could be doing better than you're doing outside the three-mile limit.

Senator Boozman's question about the virus is on MRSA. There are hospitals who lose their accreditation because of MRSA, and that basically comes down to little hospitals or big hospitals, busy hospitals, not well-run hospitals not cleaning up the bathrooms that Dr. Klein was talking about. And they just lose their accreditation.

Now, have they broken a law? No. But they don't get accreditation, which is, you know, a death knell to a hospital or for many hospitals would be. So it's not sometimes just a matter of doing what the law says but doing what you think is appropriate and paying your fair share. I mean, that's sort of what this country is about, paying your fair share.

We're having that argument now. Half the Senate doesn't want very wealthy people, millionaires and billionaires, to pay any more

taxes than they're paying currently, which are at a very, very low rate, and others are saying look, this country doesn't hold together, either individually or in terms of corporate behavior, unless we all do our fair share.

Do you think you're doing your fair share in terms of taxes that your industry pays?

Ms. DUFFY. Again, Mr. Chairman, I represent the industry and on behalf of the industry I can say that we pay what is appropriate for the business that we conduct. We are a——

The CHAIRMAN. What is appropriate or what is——

Ms. DUFFY. What is—what is required.

The CHAIRMAN. Well, there's a big difference between required and appropriate. Which do you mean?

Ms. DUFFY. Well, what is required of us as an industry, and the industry does pay over 100 different types of taxes and fees. As we've discussed, we provide a lot of jobs. We provide a lot of economic benefit, not just to the ports, not just to even the states and places that our ships depart from. I also represent——

The CHAIRMAN. So did Goldman Sachs.

Ms. DUFFY. I also represent 16,000 travel agents and agencies across the country.

The CHAIRMAN. And I'm thrilled about that. That wasn't my question.

Ms. DUFFY. And those travel agents and agencies rely upon the cruise industry.

The CHAIRMAN. Look, I'm going to be rude. If you're going to be effective up here, and you're new to this.

You've got to speak more truth. I'm not accusing you of not speaking truth. I'm just saying you ought to speak more credibly if you're going to have credibility with this. We take our work very seriously. Yes, we're consumer-oriented.

We assume that corporations are doing pretty well but we also do a lot to help corporations. Your corporations are doing very, very well. And so I am going to ask you outside of three miles name to me about four or five or six things that you think that you could be doing better, that you should be doing better.

Ms. DUFFY. I think as part of the operational safety review that we announced we are already beginning to explore areas where we can improve. We focus specifically on the human factors, which includes things like crew training, focus on bridge team management, the muster policy, which we talked about, continued and ongoing investment in new technology that improves the efficiency of the ships in terms of environmental impact, the recycling programs that we have onboard ships, the investment in advanced waste water treatment systems onboard the ships, new technology in scrubbers that reduce emissions, shore power and working with some of the port communities that—where we are able to use shore power. So there are things——

The CHAIRMAN. I don't understand the term "shore power."

Ms. DUFFY. Shore power is where our cruise ships can actually plug in when they're at port. So these are things that we are doing that no one is requiring us by a regulation to do that the industry is doing to continue to invest that helps passenger safety and health as well as reduce our environmental impact.

The CHAIRMAN. Did you notice what we did with automobiles? Toyota had a lot of recalls because of problems with brakes. And then it turned out that a lot of companies had problems with unintended acceleration. I've been through that myself in the car where it doesn't matter how hard you put the brakes on. The car just shoots ahead.

The automobile industry's been around for I don't know how long, 75 years, whatever, since the Model T, and they've changed enormously. They changed in terms of their environmental efficiency. They're going to have to change a lot more.

But we fined them and we went after them, even as we're thrilled that they're coming out of the recession and they're building cars better than ever. I just say that to you because I have the feeling that you're kind of a law unto yourself. I'm a fair person. I've never been considered, you know, the most liberal part of my party or the most conservative. I'm sort of in the middle.

But I'm suspicious of what you do, and you're defending the heck out of every single thing that you do and then listing all the things that you do and are doing and then say well, maybe we could do those better.

But I would actually like to see more on the tax thing. Would you be willing to do that?

Ms. DUFFY. We'll be willing to work with you, Mr. Chairman, under any——

The CHAIRMAN. So there's no work that I can do on that. The work will have to all be yours. You send in the information and then we look at it.

Ms. DUFFY. We will work with you——

The CHAIRMAN. You should say yes. You really should.

Ms. DUFFY. Yes. Yes. I'm sorry if I——

The CHAIRMAN. I don't mean to lead the witness but you really should say yes.

Ms. DUFFY. Yes, sir.

The CHAIRMAN. I just got a note here that Captain Doherty has a perspective on what the industry could do to improve itself. You're on, Captain.

Captain DOHERTY. Caught me snoozing. There's certainly——

The CHAIRMAN. You can talk.

Captain DOHERTY. There are certainly many areas where the industry can improve itself.

The CHAIRMAN. Yes.

Captain DOHERTY. And, you know, the *Costa Concordia* only brought to light, I think, the endemic issues that need to be looked at.

First off, with respect to passenger safety, that's primary. Crew safety is right up there with it. A soul at sea is a soul at sea, whether you're a passenger or a crew member. Each one of them has a right to live.

With respect to the loss of the *Concordia,* that hour that was lost between the time that ship went aground and she subsequently capsized and lifeboats couldn't be launched safely was the hour that passengers should have had a lot more empowerment to do something.

You now, a cell phone ashore to a rescue agency isn't the way to do it. Passengers should have some 911 system onboard the ship, that if they see something wrong they should be able to alert shoreside response agencies such as the Italian Coast Guard, the U.S. Coast Guard, hook it up through AMVERS, which is the Coast Guard's worldwide Automated Merchant Vessel Mutual Response System.

Let people know something's wrong. Give the ship the opportunity to confirm or credibly correct the report that there's an emergency but get the message out there. The sooner the message is out there, the sooner response capabilities can begin.

If those response capabilities aren't there, if they're not in place, if the organization and structure isn't in place whether the message is out or not, a mass casualty of, say, 6,000—some of these mega ships going up to 8,000 souls, not just passengers, but crew too—it's not going to work. You know, we're talking here literally or littorally with respect to cruise ship disasters happening along the coast of the United States where the Coast Guard has not only jurisdiction but also resources.

But we're sending passengers all over the world, U.S. citizens, and that same rescue capability should be in place. That costs money. Who's going to pay for it, as you said before?

You know, my recommendation was to take a look at the better parts of other legislation, one of them being OPA 1990, Oil Pollution Act of 1990, where basic—it says you spill it, you clean it up. And you put your money where your mouth is, and pretty much what we're going to have to do if we're going to get the contingency planning that's needed worldwide, not just here in the United States, and get the resources predisposed, you know, if that ship hits a rock and an hour later it's tipped over, it's too late for Italy to call the United States, say can you get me some help? That help's got to be in place and that's going to call for a worldwide contingency plan, some sort of money put aside, that people aren't going to be afraid to respond without getting paid.

You know, Incident Command starts with government authorities but breaks down into Unified Command when you bring in non-government entities and maximize your resources. Somewhere along the line you've got to have an organization, planning, drills and some sort of accountability that in the event of another accident like that we're going to be ready.

Another area is—you know, Ms. Duffy talked about bridge team management, which in the IMO and in the Standards of Watchkeeping is called Bridge Resource Management, and in this situation, you know, the chain of errors that happened with respect to this particular accident just are exponential. You know, was it complacency, you know, shooting from the pants, deviating from a voyage plan?

Did they have a voyage plan? That voyage plan certainly didn't bring them that close to a rock, OK, or if that's the case, you know, why?

There were so many different links in that chain of error, which is basically what Bridge Resource Management breaks—that it wasn't ignored, it just wasn't in place. You can say you're going to do something, but unless you've got some teeth, some compliance

agency that's going to verify that you're meeting not only the letter, rubberstamping your audits, but the spirit of the regulations, this stuff's going to go on.

The CHAIRMAN. I agree. I think not just with cruise ships, not just with corporations, but with human beings, you know, that we have thousands and thousands of people dying and many more being injured because of something called distracted driving, and they're using cell phones, and the average cell phone text takes about 4.6 seconds and the car can go the length of two football fields in that time. Now, in West Virginia there isn't a straight road in the state.

So, I mean, it's a guaranteed accident. So some things you just have to say you're going to be fined if you do this. And I just get the feeling that the cruise ships are sort of a law unto themselves. They have a lot of smart lawyers. They make a lot of people, including two of my kids, very happy, and I'm very happy about that.

But we don't know about the rate of turnover, for example. In the coal mines, there's not much rate of turnover so people, when they're trained to do things, if there's an explosion underground they really know what to do and but still, when we've had to toughen the laws on that to make them have—there's always emergency response teams too available within, you know, 20 minutes that can go into—if it's a small mine can go into that mine and help.

And they have very strict standards on how—if they have an oxygen problem there have to be oxygen chambers and there have to be ropes that they can guide themselves out through the explosive smoke.

In other words, this isn't just something the coal companies dreamed up. This was something that the Federal government imposed on them to get them to keep people safe. Now, coal mines are a dramatic example but, frankly, so are cruise ship lines. And so I'm going to end my questioning with saying that I respect your success. I'm happy for your success.

But I think when you have success you have an even greater obligation to make sure that you're going the extra mile to reimburse the Federal Government for what it does, pay taxes according to not just what your lawyers can tell you you can get away with but what is fair and right—that's the big fight around here now—and that you can't game the system and you can't just cruise on your success. Yes, and that'll be the end of me, and Senator Begich——

Dr. KLEIN. May I just make one quick comment?

The CHAIRMAN. Yes, please.

Dr. KLEIN. It's in my written testimony but it didn't quite fit into my oral comments, but I think it relates to what we're talking about here and that relates to the cruise industry's use of arbitration clauses for cruise worker contracts.

These clauses have dire consequences for crew members. The fact is that foreign seafarers have no rights to sue in U.S. courts. Because the cruise line can have foreign law apply, thereby circumventing the Merchant Marine Act of 1920, it has a disincentive to hire American workers.

These arbitration clauses and the opinions enforcing them are therefore job killers for Americans, OK, and I could go on describ-

ing but I'd just refer you to my written testimony, page 30, where I discuss these clauses and the implications.

The CHAIRMAN. Do you have a whistleblower system, Ms. Duffy?

Ms. DUFFY. Yes.

The CHAIRMAN. In other words, if a crew member reports something which is not working properly——

Ms. DUFFY. Yes, I believe we do.

The CHAIRMAN. You believe you do?

Ms. DUFFY. Yes.

The CHAIRMAN. OK. Well, will you let me know precisely——

Ms. DUFFY. I will confirm that——

The CHAIRMAN. Send me the language?

Ms. DUFFY.—all of our members have whistleblower policies.

The CHAIRMAN. OK.

Admiral SALERNO. Senator——

The CHAIRMAN. And I want that in writing.

[The information referred to follows:]

CRUISE LINES INTERNATIONAL ASSOCIATION, INC.
August 29, 2012

Chairman JOHN D. ROCKEFELLER IV,
Senate Committee on Commerce, Science, and Transportation,
Washington, DC.

Dear Chairman Rockefeller:

I am writing in response to your request for information regarding whistleblower protections within the cruise industry. We appreciate the opportunity to provide further clarification on this matter.

The cruise industry is subject to much the same system of laws protecting whistleblowers ashore in the United States. In some cases the protections are even greater on ships. For example, whistleblower protection under the Sarbanes-Oxley Act applies to all publicly traded companies and their subsidiaries, encompassing the majority of CLIA's members and covers violations of law or unethical practices. Additionally, under 46 U.S.C. § 2114 seamen are expressly afforded whistleblower protections for reporting violations of law or regulation to the U.S. Coast Guard, National Transportation Safety Board or other Federal agencies, or for refusing to perform dangerous work. 33 U.S.C. § 1908(a) affords protection to anyone reporting marine pollution violations, entitling whistleblowers to as much as half of any assessed fine. 33 U.S.C. § 1367 protects employees from retaliation for whistleblowing in connection with their employers' violations of the U.S. effluent limitation laws. Many states in which cruise lines transact business or maintain their headquarters have enacted strict whistleblower protection schemes, including Florida, North America's largest cruise industry port state. The Florida statute permits suit in Florida against any company based in that state for violating whistleblower protections.

In addition to these and many other U.S. Federal and state whistleblower protections, other nations have similar laws. Prospectively, the new Consolidated Maritime Labour Convention (MLC), unanimously adopted by 106 nations including the U.S. and just this past week ratified by the required 30 nations, specifically requires whistleblower protection for all seafarers for complaints affecting any labor or workplace conditions and seafarer rights. The MLC will become operative worldwide in August 2013 and has already been ratified by flag states that register and oversee our largest members.

The Cruise Lines International Association (CLIA) also maintains its own written Whistleblower Policy whose purpose is to facilitate and protect the reporting of any violations of law or CLIA policies. Individual member policies augment the legal system and CLIA's own policy and may include specific hotline instructions and procedures, including:

- Global hotline systems that allow for attributed and anonymous reporting via telephone or through an internet-based portal. Reporting through either channel is free and easily accessible to the reporter. These hotlines may be used to report various types of complaints or concerns to the company. This includes environmental, safety or security issues in addition to more traditional hotline subjects such as harassment, retaliation, financial irregularities and fraud.

- Highlighting the hotlines to crewmembers in manuals, conduct and ethics documents, training sessions, posters located in prominent locations onboard and, where applicable, on pay stubs. Also hotlines similarly advised to shoreside employees. Hotlines also are advertised to guests in materials available in or delivered to guest cabins

Finally, during the Cruise Industry Oversight hearing on March 1, 2012, Vice Admiral Salerno of the U.S. Coast Guard commented that they use information from existing whistleblower provisions to get information regarding illegal activity that takes place even beyond the three mile boundary. Examples of those existing provisions include 33 USC 1908(a) and 46 USC 2114. Vice Admiral Salerno further commented that Cruise Vessel Security and Safety Act has been a very powerful instrument for bringing incidents to the attention of the Coast Guard.

I hope the above information is responsive to your request. Again, we appreciate the opportunity to respond.

Sincerely,

CHRISTINE DUFFY,
President and CEO,
Cruise Lines International Association.

Admiral SALERNO. If I may, I know you mentioned your time is short but if there is time I'd like to comment on the whistleblower and the activities that can take place beyond three miles. If there's not time now I'd be happy tomeet with you.

The CHAIRMAN. No, go ahead. But Senator Begich can cut you off at any moment.

Admiral SALERNO. OK.

[Laughter.]

The CHAIRMAN. Because I'm 15 minutes into my question.

[Laughter.]

Admiral SALERNO. OK. So I'll make this very quick. You correctly pointed out that the bulk of our authorities reside within three miles.

However, we're not powerless beyond three miles. There are international systems in place that limit the discharge of oil, of hazardous materials and garbage, and we enforce those, certainly on U.S. flag ships anywhere in the world, but on foreign flag ships that enter our port we still have some enforcement authority.

Every year we refer to the Department of Justice about half a dozen to a dozen cases for discharges which originated on the high seas but they entered the United States with falsified documents as to how they treated those controlled materials, and they've been prosecuted.

In fact, we have been so vigorous in this that in international circles we're often accused of being overly zealous and, in fact, you may have heard the term "criminalization of seafarers."

I dispute that term. But sometimes the rest of the world looks at us, the United States, as being overly aggressive in environmental enforcement on their ships. In my view, we're not criminalizing anybody. We're holding people accountable who have conducted criminal activity. Typically, what the genesis of the court case is the falsification of official records entering the United States, and that's what DOJ uses.

So I did want to correct that. We do look at what takes place on the high seas. And as for whistleblowers, there is a whistleblower provision. Crew members are often a source of information as to illegal activity that has taken place on the high seas.

Passengers can also be whistleblowers. So Congress passed that law. I think it's been a very powerful instrument at bringing to our attention activities on the high seas where we can then take follow-up action.

The CHAIRMAN. OK. I appreciate that.

And Senator Begich, you'll be the last question.

Senator BEGICH. Thank you, Mr. Chairman. I know it's tight so I'll just—I just have one question of a technology and this'll be maybe for Captain Doherty and Vice Admiral, and then I may have one quick follow-up.

In Alaska we have a group, the Alaska Marine Exchange, helping the Coast Guard by installing automatic identifications systems, AIS systems. Very inexpensive compared to doing a major contract and trying to do this, basically keeps track of where these vessels are and moving throughout our waters. And I think it's an incredible way to track. You don't have to be out there. In some cases, in a smaller version our Coast Guard has to—when people—and I'll use Glacier Bay as an example.

When some of those boats are going a little too fast for the area, what happens now Coast Guard has to be out there with a radar gun and kind of monitor them. This you can actually do from your desk watching the activity, which we think is incredible technology. They're also tinkering with it. These guys are tinkering with it to add weather components for it.

Can you tell me—to either one, Admiral, Captain—is this a tool that we should try to see how the cruise ship industry and does the cruise ship industry use this, and I've seen the set-up and it's very impressive to me what they can do from a variety of reasons, not only monitoring speed of a ship or where they might be going but also if there's an oil spill, for example. We know where all the ships are. We can mobilize very quickly and utilize in spill response. Can you give me——

Admiral SALERNO. Yes, Senator. It is a requirement not only for cruise ships but for all commercial vessels over 300 gross tons.

Senator BEGICH. Excellent.

Admiral SALERNO. And we're actually driving the threshold down. It's enormously——

Senator BEGICH. Is there a phase-in or are they all—like today what's the——

Admiral SALERNO. Well, all cruise ships today, all ships are over 300 gross tons today. We're getting down to smaller vessels, which operate closer to shore.

Senator BEGICH. Right.

Admiral SALERNO. That is being phased in.

Senator BEGICH. Excellent.

Admiral SALERNO. But the larger vessels, certainly all international vessels, must have the AIS system. It's very useful to seeing who's out there. It was designed, quite honestly, as a collision avoidance tool——

Senator BEGICH. Correct.

Admiral SALERNO. So that ships can have awareness of each other. But it has other port management uses from a safety perspective and also from a security perspective. There's a nationwide

system whereby we receive that data. It goes into Coast Guard command centers where we actively track that.

Alaska's a little bit of a special case because of the distances, the remoteness of the ports, where we have exercised the ability to work with some private sector providers of those receiver capabilities.

Senator BEGICH. Right.

Admiral SALERNO. But it's been working very, very well in Alaska.

Senator BEGICH. And is the system currently set up or could the system be set up where a ship that might be potentially in waters that they may get grounded in or create a hazard, an alarm system can sound? I know the collision piece but can you take the technology and do one more level and say, you know, when you're hitting certain waters that you may have a capacity or you're in the area that you could get grounded that an alarm will set off or something will happen? Is there any development in this arena or could there be?

Admiral SALERNO. Not currently, although there are——

Senator BEGICH. Could there be?

Admiral SALERNO.—a number of ports around the country where we have something called the Vessel Traffic System——

Senator BEGICH. Right.

Admiral SALERNO.—where we have watchstanders who track the position and movement of ships within those systems, and if a ship is appearing to veer into areas that would be unsafe, approaching some navigational hazard, there'd be communications with that ship.

Senator BEGICH. It seems like with this technology if you can now do collision you can do potential weather tinkering and I, of course, would be biased here and say Alaska's always tinkering with this technology to figure out that maybe there's this next level to determine if you can improve this technology to the point where literally an alarm system will engage if you are in an area that you may run aground, which seems like if we can do the collision. I'm not a tech guy but I know how to use the technology but——

[Laughter.]

Admiral SALERNO. The challenge there is ships of different sizes, shapes——

Senator BEGICH. Right.

Admiral SALERNO.—drafts and so forth, having the same technology and having it applied in the right places.

Senator BEGICH. I have great faith——

Admiral SALERNO. But I would agree with you.

Senator BEGICH.—in our technology development.

Admiral SALERNO. Technology is getting better all the time so——

Senator BEGICH. OK. So it's not out of this realm.

Admiral SALERNO.—it's not out of the realm of possibility.

Senator BEGICH. OK. Great. Captain, do you have a quick comment on it? Then I apologize, Mr. Chairman. I thought this was an interesting technology that I think gets to the core of one of the concerns that you brought up and that is how do we make this in-

dustry safer, and are there things—not just the cruise ship industry but there's the shipping industry.

I know in the Bering Sea right now, Coast Guard will tell you, as you know, the volume of traffic has dramatically increased in the last 10 years. I mean, used to be, you know, three to four dozen ships.

Now, upwards to a thousand ships are moving through there in very tough waters, and we have to make sure whatever we're doing on the waters is as secure and safe as possible. So I'm just excited about technologies like this because it can do things.

Admiral SALERNO. Awareness of what's occurring in the maritime domain is very high interest to the Coast Guard. So we've been working with AIS and another technology called Long Range Information and Tracking to improve that visibility. So absolutely looking at further improvements.

Senator BEGICH. Captain?

Captain DOHERTY. Senator, the technology that that falls under is the Global Maritime Safety and Distress System, GMDSS. That's a broad-spectrum communications system, primarily satellites, VHF radio, medium-frequency radio. Every seagoing ship must have a GMDSS system aboard. That system is real time. AIS is just a part of the GMDSS——

Senator BEGICH. Piece of it, yes.

Captain DOHERTY. Piece. It's a piece of the GMDSS picture. Weather is part of it. Communications is part of it. Most importantly is distress. The EPRS, the Electronic Position Reporting System, this is all—comes under the umbrella of GMDSS. The most important element ashore is the station that receives that signal. You know, the United States Coast Guard for—I've been going to sea now—next year will be my 50th year and I still do go to sea.

[Laughter.]

Captain DOHERTY. I go to sea once a year as a professor at the Maritime Academy when they go to sea and I teach safety management systems. But, you know, the system is in place. It's whether a tree falls in the forest does anyone hear it or not.

Senator BEGICH. Right.

Captain DOHERTY. We were able to beautifully track the departure from the plan on the *Costa Concordia.* I've seen several different TV programs that show exactly what went wrong, and that was real-time information.

Senator BEGICH. Right.

Captain DOHERTY. Somebody has to be looking at it, you know.

Senator BEGICH. Right.

Captain DOHERTY. We put licensed professionals on the bridge of ship. We expect them to perform as licensed professionals. We expect them to be sober. You know, part of the Bridge Resource Management is the health issue, and health is not only physical but mental. You know, how do you maintain that health status that you're not part of the chain of errors.

One is to keep yourself physically fit. The IMO January 1st instituted two very important, very important laws came into effect January 1st, the first being the new increased requirements for rest prior to assuming duty.Crew members actually have to log the time that they have uninterrupted rest between their duty hours.

The next one, equally important and perhaps even more important in this case, was the IMO drug and alcohol mandated regulations, which, while not zero tolerance, were .05 percent blood alcohol. Again, you can have all the systems. They're here.

GMDSS is an outstanding system. When I went to—I started going to sea in 1963. When my first daughter was born I was in Vietnam. The communications at that time—my daughter was, I believe, 10 days old before I got the message on the ship that she was born. Today, in my office I can pick up the phone, hit a button, call any place in the world. You know, there was no need for that one-hour window. That's human.

Senator BEGICH. Right.

Captain DOHERTY. And all the technology in the world isn't going to solve that. What will solve it is tying a line into the GMDSS system which can't be interfered with by anyone on the ship that allows a passenger to say, "I see something wrong. Let me tell the world." We don't need new technology for that. We just need a new line into the transmitter on the GMDSS.

Senator BEGICH. Very good. Thank you, Mr. Chairman.

The CHAIRMAN. And thank you and I thank all of you for this. I think there's the beginning of a process here, and you noted my request of you.

Ms. DUFFY. Yes, I did.

The CHAIRMAN. And I thank you and respect you for what you do and for the time that you spent with us this morning. The hearing is adjourned.

[Whereupon, at 12:51 p.m., the hearing was adjourned.]

A P P E N D I X

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JOHN D. ROCKEFELLER IV TO VICE ADMIRAL BRIAN M. SALERNO

Question 1. The Coast Guard is responsible for marine sanitation device design and operation regulations and for certifying compliance with the EPA rules for MSDs. How often does the Coast Guard inspect and evaluate MSDs on cruise ships? Is this enough?

Answer. The Coast Guard will typically examine non-U.S. flagged vessels, including cruise ships, for compliance with international sewage treatment plant requirements in MARPOL Annex IV at least once per year. For cruise ships that operate in certain Alaskan waters, Coast Guard evaluation of the sewage and gray water discharges from such vessels increases in both frequency and scope in order to determine the non-U.S. vessel's compliance with the requirements with Title 33, Code of Federal Regulations Part 159, Subpart E. Under these regulations, there are additional requirements, including sampling and reporting of sewage and gray water discharges to the Coast Guard. The Coast Guard believes the current frequency of examination of cruise ships for compliance with sewage regulations for both Alaska and the remainder of the United States is sufficient.

Question 2. How reliable and consistent are MSDs in meeting the qualitative standards for sewage treatment?

Answer. The Coast Guard certifies each make and model of Marine Sanitation Device (MSD) before it can be installed on a U.S. flagged vessel. The certification verifies compliance with the design and equipment standards in 33 CFR Part 159, as well as the discharge standards set by EPA in 40 CFR 140. This certification is based on the Coast Guard's evaluation of the design and construction of the MSD, as well as comprehensive results from evaluation, inspection, and testing carried out by an independent laboratory. Accordingly, each make and model of MSD has demonstrated the ability to withstand environmental testing while providing effective sewage treatment capability prior to installation.

The Coast Guard does not subsequently collect or analyze discharges from installed MSDs; Coast Guard efforts are limited to an annual external inspection of the MSD. The inspection does not analyze the effluent; therefore, there is some uncertainty with regard to the equipment's performance over time.

The one exception applies to passenger ships that operate in certain Alaskan waters. These vessels are equipped with advanced wastewater treatment systems approved by the ship's Flag Administration (the vast majority of these vessels are foreign flagged) and are subject to continuous monitoring by the Coast Guard while operating in Alaska. However, it is not appropriate to compare these advanced wastewater systems with the MSDs that are approved to the standards of 33 CFR Part 159. There are significant differences in the treatment technology, cost, size, etc.

Question 3. When was the last time the standards for MSD discharges were updated?

Answer. The last time the standards for MSD discharges were updated by EPA was in 1976.

Question 4. In 2000 the Government Accountability Office (GAO) issued a report that was critical of the Coast Guard and other Federal agencies for their lax enforcement of cruise line environmental standards. GAO found that the government wasn't properly monitoring cruise ship discharges. GAO also found that the government wasn't adequately investigating whether the cruise industry was properly maintaining its pollution prevention equipment, documenting that is was properly disposing of garbage and oily sludge. A decade later, does the Coast Guard have adequate time and resources to conduct this oversight of the cruise ship industry?

Answer. Since the publication of the 2000 GAO report, the Coast Guard has promulgated policies for examining cruise ships for compliance with environmental standards, the foremost of which are Navigation and Vessel Inspection Circular 04–

04 and the Office of Prevention and Compliance Policy Letter 06–01. The Coast Guard currently has sufficient resources to examine vessels to these and other related policies.

Additionally, several major environmental crimes cases in the previous decade involving some major cruise lines resulted in a new awareness of the need for compliance with environmental standards by these companies. Environmental compliance by these companies, as seen through the Coast Guard's compliance program, has improved markedly since the GAO report.

Question 5. MARPOL Annex IV provides for the prevention of pollution by sewage from ships. It first entered into force in September, 2003, which means that IMO member-states representing at least 50 percent of the world's gross tonnage have ratified it. Surprisingly, the United States is not a party to Annex IV. Are there any plans for the U.S. to take action on Annex IV?

Answer. No. The United States has no active plans to take action on Annex IV. The last time it was formally considered was in 1998 when the United States informed the International Maritime Organization that it did not intend to ratify Annex IV given significant differences between the Annex and U.S. domestic law. In particular, at that time, the United States cited seven specific issues related to Annex IV:

(1) definition of sewage is broader than U.S. domestic law;

(2) applicability to smaller vessels which are not typically inspected by USCG;

(3) discharge of sewage without regard to nutrient sensitive resources, such as coral reefs;

(4) inability to designate special areas as "no discharge zones" to prevent discharges into the sea, including treated sewage;

(5) lack of adequate facilities to offload sewage ashore in ports and terminals;

(6) distance offshore for discharging untreated sewage is greater than U.S. domestic law; and

(7) discharge standards are less stringent than U.S. domestic law.

Since 1998, several of these issues have been resolved or substantially improved through a series of amendments to MARPOL Annex IV. For example, a 2004 amendment raised the tonnage threshold and resolved issue (2). A separate amendment to the annex allows for the designation of special areas and resolved issue (4). And in 2010, MARPOL Annex IV standards for discharging treated sewage into the sea are now more stringent than U.S. domestic law, thereby alleviating the concern with regard to issue (7). The discharge standards are set by EPA. There have been no changes to U.S. laws on sewage discharges since 1976.

Question 6. How does our failure so far to ratify Annex IV impact our position as a leader on marine environmental issues?

Answer. The United States continues to play an active leadership role at the International Maritime Organization (IMO) and in other international forums in deliberations over the wide range of issues related to the marine environment. The Coast Guard has taken the necessary steps to ensure that U.S. flagged vessels that sail on international voyages demonstrate voluntary compliance with MARPOL Annex IV in order to avoid being detained overseas. Furthermore, the Coast Guard has also developed port state control policies to ensure non-U.S. flagged vessels that call in U.S. ports are checked for compliance with appropriate U.S. laws. As a non-party to MARPOL Annex IV, the United States will be challenged to be able to directly influence IMO negotiations on any proposed changes to Annex IV in the future.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BARBARA BOXER TO REAR ADMIRAL BRIAN M. SALERNO

Question 1. The Cruise Line Industry of America and its members recently instituted a new policy that requires a muster drill for all passengers before departure. As you know, I believe this to be an important policy and have written to the Coast Guard asking that they change the current regulation for a muster within 24 hours of embarkation, to before a ship departs. Do you all agree that all passengers should receive muster training prior to departure, while a ship is still in a controlled environment? Recently, some cruise lines have started giving a muster briefing or virtual muster training using a video. How does this conform to the requirement to have a "muster?" Shouldn't a muster require that passengers go to their assigned evacuation point or life boat?

Answer. The Coast Guard supports changing the requirement for cruise ships to hold passenger musters on or before the vessel's departure. International Maritime Organization (IMO) members will discuss the current requirement in more detail at the next IMO Maritime Safety Committee meeting in May 2012, as well as review the potential for changing this requirement to hold passenger musters on or before vessel departure.

The Coast Guard supports the Cruise Lines International Association's (CLIA) policy to conduct the SOLAS-required passenger muster before or upon departure. Additionally, the Coast Guard is witnessing passenger musters when our inspectors are onboard and performing a certificate of compliance examination.

The International Convention for the Safety of Life at Sea currently has a requirement for conducting the passenger muster within 24 hours of passenger embarkation. This requirement has been in effect since at least 1948. Reasons for the current requirement allowing passenger musters for up to 24 hours after passenger embarkation may include: passenger fatigue (as they may have travelled all day before embarking the vessel); late departures from port (conducting the muster after sunset); and passenger sobriety.

A training video also provides an excellent means to give training to passengers who neglected to attend the passenger muster. However, a training video does not satisfy the requirement for a passenger muster. A training video may be used to supplement the passenger briefing required by SOLAS Chapter III, Regulation 19.2.3 (a requirement separate from the passenger muster requirement).

Question 2. In Ms. Duffy's testimony, it states that crew members receive safety training every 5 years, receive familiarization training every time they report on board a ship and must participate in one of the weekly emergency drills once a month. By regulation, airline flight attendants must undergo training that covers the specific aircraft type(s) they fly, their position(s) and duties once every 12 months. Additionally, flight attendants must complete emergency drills/simulations once every 24 months. And as we all know from flying, flight attendants brief passengers on emergency procedures on every flight. Isn't safety training every 5 years for cruise ship crew members too infrequent?

Answer. The Coast Guard has not conducted an evaluation of the differences between the frequency of airline flight attendant training against the frequency of cruise ship crewmember training. However, the training requirements in the STCW Convention (classroom training and familiarization training prior to being assigned duties and responsibilities on board a ship), and the drill requirements in the SOLAS Convention (abandon ship drills and fire drills) are sufficient to ensure that the personnel are competent and current in their emergency duties and responsibilities.

The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) contains emergency-related training requirements for seafarers working on board cruise ships. The International Convention on Safety of Life at Sea (SOLAS) contains requirements for emergency training and drills. These requirements apply to U.S. and foreign vessels. The STCW requirements are as follows:

- All seafarers employed or engaged in any capacity on board a cruise ship as part of the ship's complement with designated safety duties shall receive basic "safety" training that includes personal survival techniques, fire prevention and firefighting, elementary first aid and personal safety, and social responsibilities. The seafarer must show continued professional competence (refresher training) every 5 years. In addition, all persons employed on board a cruise ship, shall receive familiarization training in personal survival techniques before being assigned shipboard duties.
- Additionally, the STCW Convention includes detailed requirements for training and qualification of masters, officers, ratings, and other personnel on passenger ships based on their duties and responsibilities. These requirements include a multitude of specific topics within major areas of crowd management training; safety training for personnel providing direct service to passengers in passenger spaces; crisis management and human behavior training; and passenger safety, cargo safety, and hull integrity training. The seafarer must undertake refresher training every 5 years.
- The SOLAS Convention requires that: (1) crew members are familiar with their emergency duties before the voyage begins; (2) abandon ship drills and fire drills are conducted periodically; and (3) crew members receive on-board training and instruction on the use of life-saving and fire fighting appliances.

Question 3. Currently, only certain crew members are trained to operate a lifeboat, why is this? Shouldn't every crew member be able operate a lifeboat? All flight attendants are trained to operate emergency exit doors and slides.

Answer. Large passenger cruise ships are fitted with a mix of survival craft (motorized lifeboats and non-motorized inflatable liferafts) to accommodate all on board, plus a substantial reserve. SOLAS and Coast Guard regulations require a certificated lifeboatman or deck officer is assigned to be in charge of each lifeboat. For inflatable liferafts, "persons practiced in the handling and operation of liferafts" may be assigned in place of certificated lifeboatmen or deck officers.

A typical large cruise ship can have well over 1,000 crewmembers, but perhaps several dozen survival craft. Thus, the ratio of available personnel to the number of survival craft requiring supervision is much higher than on an aircraft, where it is typically on the order of 1:1.

Courses to obtain formal certification as a lifeboatman run from 33–36 classroom hours (*i.e.,* a week), and cost an average of $900. Thus, a requirement for all crew to be formally certificated would be quite costly and likely unnecessary since basic training for all licensed seafarers includes launching and operation of lifeboats and life rafts, as well as survival techniques to be used while waiting for rescue.

Question 4. Reports have indicated that language barriers between crew members on the *Costa Concordia* contributed to confusion and hindered the process for abandoning ship. Are there any U.S. or international regulations that require crew members to have language proficiency for basic safety terms and instructions?

Answer. Cruise ships' crews are assembled from many countries and it is not unusual for crewmembers to hail from as many as 50 different countries. Because of this, various crewmembers are able to speak many, if not all, of the languages spoken by the passengers.

Largely due to the many languages spoken on a cruise ship, a ship is expected to establish a working language, providing a common language so that all crewmembers can give orders and report back in that language (see SOLAS Chapter V, Regulation 14.3). In the case of *Costa Concordia,* the working language was Italian, as required by the Italian Administration.

Cruise ships are expected to provide passenger safety briefings in one or more languages likely to be understood by the passengers (see SOLAS Chapter II, Regulation 19.2.3).

The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended (STCW) contains a number of language proficiency requirements applicable to all personnel working on board the ship based on their duties and responsibilities. These requirements apply to U.S. and foreign vessels.

- All officers must be competent in the use of the International Maritime Organization Standard marine communication phrases and use of English in written and oral form applicable to officers to enable them to perform their functions, and communicate with the crew and shore facilities.
- All masters, officers, ratings and other personnel on board passenger ships on international voyages must complete specialized training in accordance with their capacity, duties, and responsibilities. These requirements include a multitude of specific topics within major areas of crowd management training, crisis management and human behavior training, and safety training for personnel providing direct service to passengers in passenger spaces. The requirements include the ability to communicate with the passengers during an emergency taking into account: (1) the language or languages appropriate to the principal nationalities of passengers carried on the particular route; (2) the use of elementary English vocabulary for basic instructions in order to communicate with a passenger in need of assistance; (3) the possible need to communicate during an emergency by some other means, such as by demonstration, or hand signals when oral communication is impractical; (4) the extent to which complete safety instructions have been provided to passenger in their native language or languages; and (5) the languages in which emergency announcements may be broadcasted during an emergency or drill to convey critical guidance to passengers and to facilitate crew members in assisting passengers.
- Finally, the STCW requires that companies ensure the use of effective communications on board ships in accordance with the SOLAS requirements for the use of on-board working language for safety matters, and the use of English as the working language for bridge-to-bridge, bridge-to-shore safety communications and communications with the pilot.

Question 5. Historically, lifejackets have been located in state rooms with additional lifejackets located in public areas. However, in an emergency it seems impractical to require passengers to return to their staterooms to retrieve lifejackets, and then head to their muster stations. Recently, newer ships have begun to store lifejackets at muster stations. This solves the problem of requiring passengers to return to their staterooms before going to muster stations. However, if a ship lists to one side, then the life jackets on that side of the ship will no longer be accessible.

I have heard from a passenger who was aboard the Sea Diamond in 2007 when it wrecked off the coast of Santorini that when the ship listed, access to staterooms was cutoff by the crew, and passengers were all directed to the high side of the ship, rendering the life boats and life jackets on the low side inaccessible. How do we ensure that if a ship lists there are a sufficient number of lifejackets and enough life boats for all aboard?

Answer. Neither SOLAS nor Coast Guard regulations specify where lifejackets are to be stowed, only the numbers required and that they be "readily accessible and plainly indicated." As noted in the question, some newer ships have begun stowing lifejackets at assembly stations because it better fits their particular operations. While this might appear to preclude the need for passengers to return to their staterooms before going to muster stations, invariably a large number of passengers can be expected to return to their cabins in an emergency to retrieve valuables, identification, essential medications, etc.

In general, it is not true that "if a ship lists to one side, then the life jackets on that side of the ship will no longer be accessible." Lifesaving equipment is designed so that in the event of a sinking, all such equipment on both sides of the ship should be accessible and capable of operation at angles of list of up to 20 degrees, and angles of trim of up to 10 degrees. For large modern ships with modern subdivision, in the great majority of cases, these criteria allow for ample time to successfully access and deploy the lifesaving equipment. In the great majority of casualties that can reasonably be anticipated and planned for, there are sufficient survival craft and lifejackets for all aboard regardless of the listing of the ship.

Question 6. In his testimony, Mr. Klein indicated that the design of ever larger cruise ships may hinder the ability of passengers to evacuate a ship. Currently, international regulation and U.S. law require that a ship can be abandoned within 30 minutes of the call to abandon ship. The 1994 sinking of the Estonia in 30 minutes illustrates the need for this requirement. How do the U.S. Coast Guard and the International Maritime Organization currently ensure that ships are designed to accommodate this standard? Are there drills run on ships by the Coast Guard to ensure this?

Answer. The ESTONIA was a roll-on/roll-off (ro-ro) type passenger ship (car ferry) that was subject to extremely rapid progressive flooding and capsizing because it had large bow doors opening into full length vehicle decks without the internal subdivision required of conventional cruise ships. Because of that internal subdivision, a conventional cruise ship would be expected to stay afloat for much longer than 30 minutes in a flooding casualty.

The 30-minute evacuation time specified in SOLAS regulation III/21.1.3 is for all survival craft to be loaded and launched from the time the order to abandon ship has been given, with all persons assembled with lifejackets donned. This 30-minute criterion does not begin when the passengers become aware of an emergency; it begins only after all the passengers have been assembled at the embarkation stations. It does not include the time it takes for the passengers to travel from their cabins or wherever they may be on the ship to their assigned assembly stations.

Travel time to the assembly stations is generally not evaluated with practical drills, which would be impractical and risky for a ship carrying thousands of persons. Rather, it is determined during plan review of each ship by calculating the travel times for a typical population of passengers (*i.e.,* men, women, children, young, aged, mobility impaired) to pass through the corridors and stairways on each deck. These calculations are performed in accordance with International Maritime Organization Maritime Safety Committee.1/Circ. 1238 Guidelines on evacuation analyses for new and existing passenger ships, which is intended for use by naval architects in the early stages of design to optimize the arrangement of escape routes by identifying and eliminating congestion which may develop during an abandonment, due to the normal movement of passengers and crew along escape routes. This planning takes into account the possibility that some portion of the escape routes, assembly stations, embarkation stations, or survival craft may be unavailable as a result of the casualty.

Under these guidelines, the maximum total evacuation time for a large passenger ship is 80 minutes, which includes the 30 minutes needed for loading and lowering the survival craft. The 80 minute limit begins when the passengers are notified of

an emergency, and includes time for the passengers to react to the announcement and travel to the assembly stations, board the survival craft and be lowered to the water. These calculations are quite complex and are generally done by computer software that allows ship designs to be analyzed using an iterative calculation technique. All passenger ships reviewed by the Coast Guard since approximately 2002 have been designed using such evacuation guidelines.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. AMY KLOBUCHAR TO VICE ADMIRAL BRIAN M. SALERNO

Question. I understand that under the Death on the High Seas Act, families who lost a loved one have limited legal remedies that they can pursue for the tremendous loss that they have suffered. Current law prevents victims' families from recovering anything other than lost income or wages. In contrast, if a family suffers the loss of a loved one in a plane crash on the high seas, they may choose to pursue non-pecuniary damages in court, such as loss of companionship. Can you discuss the impact this disparity in the law that has on the surviving families of victims?

Answer. The Death on the High Seas Act is not a statute the Coast Guard administers and thus, it is difficult to assess the law's impact on victims' family members.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. TOM UDALL TO VICE ADMIRAL BRIAN M. SALERNO

Question. Mr. Salerno, I am pleased to hear of the Coast Guard's progress in implementing the Cruise Vessel Security and Safety Act. What else can Congress do to help the Coast Guard's efforts to improve cruise vessel security and safety?

Answer. Enforcement of select provisions of the Act (*e.g.,* 46 U.S.C. 3507(d) (Sexual assault)) may require organic competencies beyond those of most Coast Guard personnel and, in time, may warrant further congressional deliberation. Similarly, implementation of other requirements of the Act (*i.e.,* the 46 U.S.C. 3507(g)(4) (Availability of incident date via internet)) may merit a less cumbersome arrangement and, in time, also may warrant further congressional deliberation. If so, the Administration will communicate as much in the normal course of Executive branch recommendations to Congress.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARK BEGICH TO REAR ADMIRAL BRIAN M. SALERNO

Question 1. Do cruise ships receive any special treatment under the existing regulations or laws, when compared to other types of ships?

Answer. The Coast Guard conducts very detailed examinations on all types of ships subject to examination, including cruise ships. Cruise ships, specifically, are subject to a wide variety of vessel-type international standards, as well as cruise-ship specific U.S. requirements that the Coast Guard confirms during inspections. The Coast Guard examines cruise ships at least twice each year, which is more often than any other type of ship (cargo ship or tank vessel). However, if the ship has a poor compliance record in the United States, it could be boarded multiple times, as needed for verification of compliance.

Question 2. Please describe how the U.S. Coast Guard enforces these regulations and laws on foreign flagged ships and what are the jurisdictional boundaries for that enforcement?

Answer. The Coast Guard's foreign cruise ship compliance program is based upon various statutory authorities, the chief of which are Title 46, USC sections 3301, "Vessels subject to inspection" and 3505, "Prevention of departure." Further, the Coast Guard implements these statutes though policy, as outlined in Navigation and Vessel Inspection Circulars (NVIC) 03–08, "Control Verification Examinations (CVEs) of Foreign Passenger Vessels" and NVIC 06–03, Ch–2, Coast Guard Port State Control Targeting and Examination Policy for Vessel Security and Safety.

The Coast Guard's jurisdiction to conduct foreign cruise ships examinations is restricted to U.S. internal waters and the U.S. territorial sea. The current practice of beginning initial control verification examinations overseas should not be construed to mean that the Coast Guard has jurisdictional authority overseas in this context. Instead, the Coast Guard's examinations of vessels overseas are based upon the consent of the cruise vessel owner. By doing so, the Coast Guard is allowed to begin a thorough examination of the vessel before it comes to the United States in order

to ensure compliance with safety standards and regulations while the vessel owner minimizes any potential delays to ship operating schedules.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. JOHN BOOZMAN TO VICE ADMIRAL BRIAN M. SALERNO

Question. There are concerns that a national ocean zoning process is being developed as part of the National Ocean Policy, calling it "marine spatial planning." This proposal could significantly impact sectors of the economy, including agriculture, offshore energy production, transportation, and trade. This zoning proposal has been developed at the direction of an executive order, without specific Congressional authorization or specific appropriation of funds to support its development. What has the Coast Guard's role been in the developing this multi-agency policy? How many Coast Guard staff have been involved its development? What resources have these efforts required so far? Additionally, what resources does the Coast Guard expect to spend on the development of this policy moving forward?

Answer. The National Ocean Policy (Policy) has a broad platform providing high-level focus and coordination for improving ocean, coastal and Great Lakes management. In addition, the Policy directs Federal agencies to work together to support States, regions, Tribes, and localities in their efforts to solve problems and support coastal communities. The Policy also sets common-sense goals (such as healthy, resilient, and productive waters and better science) to support national economic, environmental, and national security interests, and directs Federal agencies to work together to achieve them. The Coast Guard has been actively involved in all aspects of developing and implementing the Policy with the goal to improve marine stewardship, including coastal and marine spatial planning (marine planning).

Marine planning is a non-regulatory tool that provides transparent information about ocean use, guarantees the public and stakeholders a voice in decisions, and creates an inclusive, bottom-up, science-informed planning approach. The Policy applies existing authorities and non-regulatory measures in an economical and coordinated manner. The Policy does not involve zoning and imposes no new restrictions. Policy is based on the work of the Interagency Ocean Policy Task Force, which met and worked between June 2009 and early 2010 to develop policy objectives and other proposals to improve the Nation's stewardship of the ocean, our coasts and the Great Lakes.

The Task Force identified nine priority objectives, recommended a National Ocean Council to replace a defunct body the previous administration had created, and developed a framework for marine planning. The Commandant of the Coast Guard was an active member of the Task Force. Following approval of Executive Order 13547 on July 19, 2010, the National Ocean Council and its members moved forward to implement the Task Force's recommendations. Senior Coast Guard leaders have participated in various meetings of the National Ocean Council, and other officials have briefed Congressional staffers and participated in formal outreach events regarding marine planning. Overall, marine planning is the means to coordinate Federal action to the service of solving specific problems that States, regions, and tribes want solved. It also encourages decisionmaking at the regional and local levels by providing a process and forum for States, Tribes and regions to define what problems need addressing and what outcomes to achieve, with the support and participation of Federal agencies.

Two full-time Coast Guard employees have worked over the last 3 years (June 2009 to present) on developing and implementing the National Ocean Policy. Various Coast Guard military and civilian subject matter experts have also supported aspects of the development and implementation of the Policy by performing such duties as assessing the suitability of waterways and coastal areas for safe navigation, promoting port security, and coordinating offshore initiatives.

Overall, the Policy seeks to reduce bureaucracy, duplication of effort, and regulatory uncertainty by making Federal agencies' application and interpretation of over 100 existing laws, regulations, and policies more coherent and efficient, and foster interagency communication and collaboration, thereby resulting in greater efficiency and streamlined permitting. As a direct result of the Policy, the Coast Guard is now evaluating shipping routes and approaches to ports along the entire Atlantic coast from Maine to Florida, known as the Atlantic Coast Port Access Route Study (PARS). Previously, PARS only examined shipping routes and approaches on a regional basis thereby forgoing taking account of the movement of ships along the entire Eastern seaboard. This effort promotes comprehensive, safe and efficient maritime operations in conjunction with the development and production of renewable offshore energy.

Also of vital importance was the development of a comprehensive ocean/coastal data base, *ocean.data.gov,* to provide a resource for science-based and fact-based decisionmaking.

In 2009–2012, the Coast Guard contributed modest financial and personnel resources as part of normal operations to support the work of the Task Force, the 2011 Marine Planning Workshop, and outreach initiatives. For example, the Commandant invited several other key members of the Task Force to join him on an already-planned trip to Alaska's Arctic, and Coast Guard commands hosted activities related to several regional listening sessions. As the regional planning bodies begin to operate under the Policy, there will be additional associated expenses the Coast Guard will incur with participating in meetings, providing information and related work; these costs will be managed within base funding.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. MARCO RUBIO TO
VICE ADMIRAL BRIAN M. SALERNO

Question. In his testimony, Captain Doherty proposed the creation of a Passenger Distress Signal System that would essentially allow any passenger to contact authorities off the ship when the passenger believes there is a cause for alarm. What effect would such a system have on the Coast Guard's resources?

Answer. To require all cruise ships calling on U.S. ports to develop and implement a Passenger Distress Signal System (PDS) readily available to any individual onboard, whether activated deliberately or not, could have a substantial impact upon Coast Guard resources, especially the Search and Rescue (SAR) program. Additionally, requiring PDS aboard foreign cruise ships in international waters could potentially cause a significant increase in the number of SAR notifications that could overwhelm the current Global and National Distress System, supported by the participation of the Coast Guard as well as other U.S. emergency response agencies.

Today's cruise ships are large, complex, technically advanced vessels requiring numerous well trained crewmembers to operate the ships safely and efficiently. Allowing cruise ship passengers to activate a PDS to directly contact rescue authorities without first alerting ship's personnel would potentially lead to a major delay in the crew's otherwise prepared and effective response, thereby having detrimental effects on the outcome of the situation. It would also duplicate the pre-existing emergency response capabilities and resources that cruise ships already possess. Cruise ships maintain state-of-the-art communication capabilities. Thus, cruise ship passengers currently have the ability to contact authorities and activate the existing SAR System if needed, via global satellite phones, wireless internet, and personal cellular phones.

Finally, a PDS activated by passengers could result in an unnecessary increase in the time and effort of emergency resources, far removed from the vessel, to process these notifications, verify authenticity, and respond. There is also the potential increase in false alarm and hoax distress calls. As such, Coast Guard SAR resources responding to these 'false alarms' onboard cruise ships could potentially divert time-sensitive responses and finite resources from providing assistance to actual distress cases, thereby endangering lives and property that are truly in jeopardy.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARCO RUBIO TO
BILL JOHNSON

Question 1. In your testimony, you mention a program you have partnered with Kristi House to train personnel to identify victims of human trafficking. I have toured Kristi House and seen the wonderful work they have done first hand. Can you please speak in more detail about this training program and, in particular, the size and scope of this training?

Answer. Port*Miami* and Kristi House have partnered in a training program to train Seaport staff and affiliated companies (including cruise lines) in recognizing signs of children who may be sexually exploited. Kristi House and Port*Miami* opted to utilize the "train-the-trainer" concept. All Seaport trainers have completed training directly from the Kristi House staff and follow up training with Seaport employees is ongoing.

The training classes are approximately 45 minutes, which educates employees on child sex-trafficking, potential warning signs to identify victims, and specific methods that should be employed when responding to these situations. In addition, and in conjunction with Miami-Dade Police Department, Port*Miami* has developed internal protocols.

Currently, 75 percent of Seaport staff has completed the training; however, the goal is for 100 percent of Seaport staff to complete this training by the end of April 2012.

The Port's outreach program includes cruise line partners, private security companies, and the International Longshoreman's Association. The objective is to work with companies who have employees interacting with cruise passengers and train them to identify potential victims of child sex-trafficking.

It is important to note that the Port has also collaborated with Miami-Dade Aviation Department and Miami-Dade Police Department to have uniformity in its training program to identify children who may be sexually exploited. Kristi House has been a tremendous partner and has committed to providing continuous support in this training initiative.

Question 1a. What cruise lines and private security companies have already agreed to participate in the training?

Answer. Royal Caribbean Cruise Ltd ("RCCL") has an on-going relationship with Kristi House and has agreed to partner with Port*Miami* in its training efforts. Along with the Seaport, RCCL has completed the "train the trainer" program with Kristi House. They are committed to training their staff in the near future.

McRoberts Protective Agency, a private security firm working with several of Miami's cruise line tenants, has also committed to the program and has received training. To date, approximately 20 of McRoberts employees, serving in a leadership capacity, have completed this training. The Port is reaching out to reach out to other private security companies to recommend this training.

The International Longshoreman's Association, representing the largest union of maritime workers, has committed to the program. To date, ILA Local 1416 employees are scheduled to begin training within a few weeks.

Question 2. Although I know Kristi House specializes in sex-trafficking, will personnel also be trained on warning signs for victims of labor trafficking, which could also be present in these situations?

Answer. Although the main focus of the training session surrounds recognizing potential sex trafficking victims, indirectly, the training touches on labor trafficking. Child trafficking and labor laws are somewhat intertwined, and since updates to this training will be continuous, there has been communication to include more on labor trafficking in the training module.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BARBARA BOXER TO DR. ROSS A. KLEIN

Question 1. Muster Drills—The Cruise Line Industry of America and its members recently instituted a new policy that requires a muster drill for all passengers before departure. As you know, I believe this to be an important policy and have written to the Coast Guard asking that they change the current regulation for a muster within 24 hours of embarkation, to before a ship departs.

Do you all agree that all passengers should receive muster training prior to departure, while a ship is still in a controlled environment?

Recently, some cruise lines have started giving a muster briefing or virtual muster training using a video. How does this conform to the requirement to have a "muster?" Shouldn't a muster require that passengers go to their assigned evacuation point or life boat?

Answer. Until the *Costa Concordia* accident I, like many others, assumed it was required that a lifeboat drill be held prior to a ship leaving port. This was consistently my experience in 30 cruises taken between 1963 and 2002 (27 between 1992 and 2002), and is the experience of many who I have spoken with since the accident who have cruised more recently. It isn't just a matter of good sense that these drills be held before a ship leaves port, but it is consistent with the industry's oft-stated commitment to passenger safety. It is irresponsible to wait up to 24 hours to instruct passengers on safety procedures in case of an emergency. The only logical explanation I can come up with for why the drill would be delayed is that having a lifeboat drill will disrupt the sale of alcohol as people celebrate the start of their vacations (there are significant revenues from sale of alcohol from the time passengers board to the "sail away" parties coinciding with the ship's departure).

I have experienced a virtual lifeboat drill only once—in 1998 on a cruise from Civitavecchia (the same port from which the *Costa Concordia* departed). Even though the virtual drill may technically satisfy the requirement under SOLAS (I am not sure that it does) I found the experience unsatisfying, however having been on many cruises before I knew procedures. The same could not be said for those who were on their first cruise or who had had few cruise experiences. The virtual drill

is particularly problematic for families with children—children are not likely to fully understand the information contained in a video; they need a more hands-on and concrete experience if we have any hope that they will know what to do in an emergency, especially given that they may be separated from their parents in a true emergency.

I am a strong believer in the old style lifeboat drills where passengers assemble at their lifeboat stations wearing their lifejackets and having a demonstration of how lifeboats are lowered, how they are boarded, and are told the priority for women and children over adult men. These onsite demonstrations, where a roll call was taken to ensure all passengers were present (as would be done if there were an emergency), also instructed passengers in a concrete way where to find additional lifejackets and advised passengers about alternative lifesaving equipment such as zodiacs that could be used if a lifeboat were to be disabled. As well, the traditional lifeboat drills included a senior officer (normally the Captain) visiting each lifeboat station and inspecting whether each passenger had properly put on their lifejacket, often correcting mistakes made. It provided personal contact between the ship's senior officer and passengers, and also reinforced a sense of safety and security. This type of individual treatment is impractical with ships carrying more than 6,000 passengers.

Not all lifeboat drills today are virtual, but even those that are held at lifeboat stations are much less thorough than in previous times. Lifeboats are not lowered, instructions are sparse (as related to me by a reporter who went aboard a ship after the industry's commitments following the *Costa Concordia* disaster), and attendance is not taken. As stated by John Heald, a cruise director with Carnival Cruise Lines, "Once guests are gathered at the muster stations then the staff will walk around with clickers to count the number of guests at the muster stations . . . These numbers are then given to each muster station supervisor who will then tell the bridge." Heald said the cruise director will let guests know this is happening, it will be very obvious and should take approximately 5 minutes to accomplish as the line has multiple staff assigned to this new task. In my experience of traditional lifeboat drills, they rarely took less than 30 minutes to complete, and although they were viewed by passengers as being a nuisance and inconvenience, they were necessary.

Question 2. Crew Training—In Ms. Duffy's testimony, it states that crew members receive safety training every 5 years, receive familiarization training every time they report on board a ship and must participate in one of the weekly emergency drills once a month.

By regulation, airline flight attendants must undergo training that covers the specific aircraft type(s) they fly, their position(s) and duties once every 12 months. Additionally, flight attendants must complete emergency drills/simulations once every 24 months. And as we all know from flying, flight attendants brief passengers on emergency procedures on every flight.

Isn't safety training every 5 years for cruise ship crew members too infrequent?

Currently, only certain crew members are trained to operate a lifeboat, why is this? Shouldn't every crew member be able operate a lifeboat? All flight attendants are trained to operate emergency exit doors and slides.

Answer. I agree that all crew members need to be better trained, and more frequently re-trained in safety procedures. Once in 5 years is not enough. Even once a year is pushing it (although that should be the minimum requirement), however it is better than current practices. This is particularly important as ships have gotten larger and the passenger to crew ratio has become larger (many more passengers per crew member—the passenger crew ratio on Royal Caribbean's *Sun Viking* in 1996 was 2:1; the ratio on the company's Oasis of the Seas today is 3:1).

As we have seen in several ship disasters, including the *Costa Concordia* and *Oceanos* that sunk off South Africa in 1991, the ship's officers and crew have not always been the most active in assisting passengers evacuating the ship—in the case of the *Oceanos,* like *Costa Concordia,* the Captain and senior officer abandoned ship before passengers and in the case of the *Oceanos* the musicians played the key role in assisting passengers into lifeboats. There is obviously need for training of all staff and crew onboard a cruise ship, and that training be frequent and reinforced, including an emphasis on the crew member's and officer's "duty of care" to passengers. The reality is that in an emergency every staff person and crew member should be equally versed in safety procedures and protocols, and all should be knowledgeable about deployment of lifeboats and deployment of emergency zodiacs, as well as all other facets of safety procedures in any type of emergency. I am not confident that re-training at 5 year intervals is adequate and advocate annual re-training as a minimum.

Question 3. Reports have indicated that language barriers between crew members on the *Costa Concordia* contributed to confusion and hindered the process for abandoning ship. Are there any U.S. or international regulations that require crew members to have language proficiency for basic safety terms and instructions?

Answer. Language has been reported as a problem and has led to ships occasionally being detained by the U.S. Coast Guard because crew members could not understand or communicate in English; however, these incidents are infrequent. The problem of communication between crew and officers and among officers was perhaps less problematic in the 1960s, 1970s, and 1980s when flag states where ships were registered required most if not all crew members to be citizens of the flag state, thus having a common language. Over the years, crews have become more internationally diverse and a common onboard language less assured. I believe the U.S. could better enforce the ability for crew members to speak and understand English for ships operating out of U.S. ports. The problem is quite different for ships, such as *Costa Concordia,* operating outside of North America, especially countries where English is not the dominant language. In the case of Costa, it is an Italian cruise line catering mainly to Italian and European passengers. It may be unrealistic for U.S. passengers to assume that English will be spoken or understood onboard Costa ships, and the company should take the initiative to advise passengers of this fact. In the absence of such advice, it is fair for a passenger to assume that language will not be an issue even though it is likely to be problematic, especially in an emergency situation. This may be an area where there needs to be consumer protection legislation so passengers buying a cruise in the U.S. are fully informed of the risks they are exposed to by taking a cruise on a foreign carrier (Costa and MSC, another Italian cruise line, are both actively marketed in the U.S.).

Question 4. Lifejackets and Life Boats—Historically, lifejackets have been located in state rooms with additional lifejackets located in public areas. However, in an emergency it seems impractical to require passengers to return to their staterooms to retrieve lifejackets, and then head to their muster stations.

Recently, newer ships have begun to store lifejackets at muster stations. This solves the problem of requiring passengers to return to their staterooms before going to muster stations. However, if a ship lists to one side, then the life jackets on that side of the ship will no longer be accessible.

I have heard from a passenger who was aboard the *Sea Diamond* in 2007 when it wrecked off the coast of Santorini that when the ship listed, access to staterooms was cutoff by the crew, and passengers were all directed to the high side of the ship, rendering the life boats and life jackets on the low side inaccessible.

How do we ensure that if a ship lists there are a sufficient number of lifejackets and enough life boats for all aboard?

Answer. I was amazed when I first heard that lifejackets were no longer being placed in passenger cabins and would only be available at lifeboat or muster stations. The only possible explanation is that this is to save money at the expense of safety. It is obvious that passengers spend more time in their cabin than anywhere else on a cruise ship (this is where they sleep, and many emergency situations occur in the middle of the night) and that this is where lifejackets should be kept. At the same time, it has traditionally been a practice on cruise ships to have a full supply of lifejackets at lifeboat/muster stations given an awareness that passengers may not be able to return to their cabins in an emergency (or the need to return to the cabin would lose critical minutes that could be the difference between life and death). The simple solution to a problem that has been created by a change in practice is to return to previous practice. There should be adequate lifejackets in each passenger cabin for adults and children occupying that cabin, and there should be an adequate supply of lifejackets at all lifeboat/muster stations for the number of persons (adults and children) assigned to the station. To do otherwise might make economic sense, but it shows a disregard for the safety and security of passengers, a value that is often stated by the cruise industry as the number one priority.

Question 5. Evacuation and Ship Design—In his testimony, you indicated that the design of ever larger cruise ships may hinder the ability of passengers to evacuate a ship. Currently, international regulation and U.S. law require that a ship can be abandoned within 30 minutes of the call to abandon ship. The 1994 sinking of the *Estonia* in 30 minutes illustrates the need for this requirement.

How do the U.S. Coast Guard and the International Maritime Organization currently ensure that ships are designed to accommodate this standard? Are there drills run on ships by the Coast Guard to ensure this?

Answer. To my knowledge, there are no reliable methods to ensure that ships are designed to accommodate this standard, and I don't believe the U.S. Coast Guard

or International Maritime Organization have undertaken any concrete empirical research to determine whether new ships can comply with the thirty minute requirement. In fact, I overheard conversations among cruise industry executives in the early 2000s, as ships were ballooning in size, that they were skeptical about their ability to meet the thirty minute requirement. In contrast, *The Telegraph* reported on March 19, 2012, that Royal Caribbean's CEO, Richard Fain, whose company operates some of the world's biggest cruise ships, said: "The truth is the newer, bigger ships are as safe or safer than any comparable smaller ships." A subsequent article states that in cases of emergency these ships offer more ways to evacuate and larger lifeboats than any of the smaller ships—they have many more exits and lifeboats to accommodate each person, so cruise lines can get everyone off the boats well before the 30 minute mark. It is this type of thinking, not based on empirical fact or on reliable information, that underlies the arrogance leading to less-than-responsible practices around passenger safety and security.

That lifeboats are larger makes no difference if one cannot reach the lifeboat, and that there are more lifeboats makes no difference if half the boats are inaccessible because a ship is listing. Rather than make capricious arguments designed to reassure passengers that they are safe, the cruise industry should take visible and concrete measures to reassure passengers that evacuation of a cruise ship is possible within the 30-minute timeframe, and if it is not possible (which I believe is the case) then to retrofit ships so timely evacuation is possible. But this isn't going to happen because the company doesn't make money when space is devoted to stairwells and hallways rather than to revenue-generating passenger cabins.

As I have heard from many who have traveled on the largest ships afloat, beginning with Carnival's Destiny-class ships and Royal Caribbean's Voyager-class ships, it could take one more than thirty minutes to find their way from their cabin on a lower deck to their lifeboat station, especially in the dark and without elevators. The test of how long it takes is not the length of time one needs in a non-emergency situation with fully lighted halls and stairways that are clear, but the time it takes for someone unfamiliar with the ship to find their way in the dark from a cabin on the lowest passenger deck to their lifeboat station.

In addition, it is essential that consideration be given to the carrying capacity of hallways and stairways—how many people can pass through a stairwell at one time, how many people can pass through a hallway at one time, and what is the exponential impact as passengers from lower decks are added to passengers from decks above. According to the ship diagram for *Oasis of the Seas* and *Allure of the Seas* at the Royal Caribbean website, there is a pair of stairways forward and aft (thus, 4 total) from Deck 3 to Deck 16. The basic question is whether 6,300 passengers can funnel through these two pairs of stairwells to lifeboat stations within 30 minutes. This is an empirical question that to my knowledge has not been tested.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. AMY KLOBUCHAR TO DR. ROSS A. KLEIN

Question. I understand that under the Death on the High Seas Act, families who lost a loved one have limited legal remedies that they can pursue for the tremendous loss that they have suffered. Current law prevents victims' families from recovering anything other than lost income or wages. In contrast, if a family suffers the loss of a loved one in a plane crash on the high seas, they may choose to pursue non-pecuniary damages in court, such as loss of companionship. Can you discuss the impact this disparity in the law that has on the surviving families of victims?

Answer. As I stated in my written testimony, Cruise ship passengers are treated differently than airline passengers under the *Death on the High Seas Act* (DOHSA) The Act, originally passed in 1920, presently does not allow non-pecuniary and punitive damages to families of someone who has died while at sea. These limits were deemed to be unfair in the context of aviation cases and were removed, but they were not changed for passenger ships. House Resolution 2989, introduced by Representative Doggett July 11, 2007, intended to correct this inconsistency, but it was not approved. Two bills were introduced in the 111th Congress, H.R. 5803 (Conyers and 26 co-sponsors) and S. 3600 and S. 3755 (Rockefeller/Schumer), but they also didn't go beyond Committee. Given the obvious unfairness that American citizens on cruise ships are treated different on a cruise ship than when traveling by airplane, I hope amendments to DOHSA are revisited.

It isn't just a matter that families are prevented from recovering anything other than lost income or wages. Many cruise passengers are retired and under DOHSA their family can recover nothing other than the costs for retrieval and burial of the body. The consequence is seen in the death of Richard Liffridge who died at age 72

on a fire aboard the *Star Princess* on March 23, 2006. A subsequent investigation suggests the fire was caused by a discarded cigarette end heating combustible materials on a balcony on Deck 10, which smoldered for about 20 minutes before flames developed. Within 6 minutes the fire had spread up to decks 11 and 12 and onto stateroom balconies. The fire also spread into staterooms as the heat of the fire shattered the glass in stateroom doors but fortunately was contained by each stateroom's fixed fire smothering system and the restricted combustibility of the room's contents.

Richard and Victoria Liffridge were onboard and awoke to the short, faint sound of an alarm followed by static on the ship's intercom. Victoria opened their cabin door and observed a crewmember knocking on the door across the hall but he said nothing to her. As she began to close the door she heard a friend yelling, "The ship is on fire . . . The ship is on fire! Everyone get out!" Victoria turned to Richard and repeated the words. She says in her statement on the International Cruise Victims Association website that he sat there in shock for a few seconds. She then called to him to get up and get dressed! As they began exiting their cabin the only light shining in the hallway was from their room.

They crawled through thick, black smoke barely able to see their hands in front of them, Victoria holding Richard's shirt tail so they wouldn't become separated. But the ship suddenly shifted and she lost her grip. Victoria found her way to safety and was taken to the auditorium, which was being used as a muster station. She asked a staff person about her husband and was told forty-five minutes later that everyone had been located and they were safe in Muster Station B. Not long after she was transported to the infirmary and learned that Richard had died. Initial reports from the cruise line were that he died of a heat attack. An autopsy indicated he died from smoke inhalation. Despite the facts, the cruise line continued to report Richard's death as a heart attack.

In 2007, Richard's daughter Lynette wrote: "Five months later, we still have no answers. What we do know is that my father died needlessly from smoke inhalation trying to escape a death trap. The death trap was caused by no emergency lighting, no fire extinguishers in the corridors and no sprinklers. We do know that the fire originated on an external stateroom balcony sited on deck 10 on the vessel's port side. We know that the ship was a Bermuda registered cruise ship and was not required to have fire extinguishers, sprinklers or smoke detectors on the external areas of the ship. We also know that it took one to one-and-a-half hours to fight the fire due to the construction and partitioning of the balcony areas. We know that highly combustible materials were used on the balconies and the balcony partitions were of a polycarbonate material that produced large amounts of dense black smoke. It should be noted that we still have not received a note, phone call or sympathy card from Princess Cruise Line. It is as if this never happened."

I could cite other cases, but this single case makes the point that loss of life at sea is not taken as seriously as it should be by cruise lines. It also identifies the need for families to receive adequate compensation when a loved one parishes from an avoidable death on a cruise ship. It is ageist to discriminate against a person who is retired from gainful employment (the message is that if one doesn't work, one's life has no value), and it is patently unfair that a cruse passenger of any age be treated differently onboard a cruise ship than on the airplane they used to arrive at the ship.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JOHN D. ROCKEFELLER IV TO CHRISTINE DUFFY

Cruise Vessel Crimes

Question 1. For the purposes of this question, please query your member companies and their subsidiaries. Since the passage of the *Cruise Vessel Security and Safety Act,* how many deaths, serious injuries, sexual assaults, or cases involving missing persons have occurred either aboard your vessels or as a part of your cruise-sponsored excursions? How many of these incidents have been reported to the Federal Bureau of Investigation or state or local government law enforcement, pursuant to the requirements delineated in 46 U.S.C. 3507(g)(3)? How many of those incidents involved crew members? How many of the deaths, serious injuries, sexual assaults, and missing persons involved American citizens? What are your member companies' practices for reporting all of these incidents to American officials? Are the situations in which a serious incident involving an American citizen would not be reported to U.S. officials?

Answer. Cruise Lines International Association (CLIA) and its members lines worked closely with this Committee and the Congress to enact the Cruise Vessel Se-

curity and Safety Act (CVSSA), Public Law 111-207, which was signed into law just last Congress. Enactment of this law was a major undertaking by both industry and the government to standardize and expand the existing system of reporting crimes, deaths and serious injuries that occur on cruise ships. The law specified how and what information must be reported and to which Federal authorities, and also required the creation of a website maintained by the U.S. Coast Guard (USCG) to make relevant data available to the public. The best resources for obtaining this type of data are the public website and the Federal law enforcement authorities to whom the reports are made pursuant to 46 USC § 3507 (g)(3) (which requires reporting to the FBI of serious felonies and missing persons); 33 CFR § 120.220 (which requires reporting to the FBI and USCG, and in some instances the Dept. of Homeland Security, of felonies); and 46 CFR Part 4 (which requires reporting to the USCG of marine casualties, including death and serious injuries). Our member lines' practice is to report those incidents required by law and regulation. U.S. law and regulation requires all serious incidents involving American citizens on a voyage embarking or disembarking passengers in the U.S. be reported to the FBI, USCG, or both, regardless of where the incident took place. Furthermore, Federal law, consistent with international law, requires the reporting to the USCG of serious marine casualties, including death or serious injury of American citizens, regardless of where the incident took place.

The cruise industry takes seriously its responsibility to protect its passengers and crew and to provide for their security while at sea. There is always room for improvement and the industry will continue its efforts to improve in this area. The fact is there are very few crimes and serious injuries that occur relative to the millions of passengers that travel on cruise ships each year.

Question 2. For the purposes of this question, please query your member companies and their subsidiaries. Do you currently have any reporting requirements in terms of deaths, injuries, and missing persons for both passengers and crew?

Question 2a. What are these requirements if any?

Answer. See the answer to question 1 above.

Question 2b. To whom do you report?

Anwer. See the answer to question 1 above.

Question 2c. Do you have an objection to having a centralized database that consumers can refer to? And if you have an objection, why?

Answer. See the answer to question 1 above.

Questison 2d. What type of remedial measures do you take once you have reported such incidents?

Answer. The safety and security efforts of CLIA members is to focus on prevention, training and preparedness, as well as incident response. If an incident does occur, CLIA members consistently review the incident and seek to improve operations and procedures as the CLIA Security Committee and include in their discussions representatives of various Federal agencies including the USCG, the FBI and the CBP. These post-incident reviews have led to a number of policy and procedural changes to enhance the safety and security of our guests and crew.

Health and Safety

Question 3. What are your standard procedures for passengers and crew who require serious medical treatment during the voyage?

Anwer. Shipboard medical facilities are built, stocked and staffed to meet or exceed the guidelines established by the American College of Emergency Physicians (ACEP) and passengers and crew are provided medical care by licensed medical doctors and nurses in accordance with these guidelines which may be found at: *http://www.acep.org/Content.aspx?id=29980&terms=health%20care%20guidelines%20for%20cruise%20ships*.

Onboard medical capabilities vary among CLIA members but include automated external defibrillators (AEDs), ventilators, X-ray machines, laboratory equipment, blood transfusions, and minor surgical and orthopedic supplies.

Question 4. What are the qualifications of your medical personnel on your vessels?

Answer. The Cruise Vessel Security and Safety Act of 2010 specifically requires cruise ship medical staff to have a current physician or nursing license and at least 3 years of post-graduate or post-registration clinical practice in general and emergency medicine or board certified in emergency medicine, family practice medicine, or internal medicine. In addition, shipboard medical staff meet or exceed the requirements of the above-reference ACEP Guidelines (see Guideline 2).

Question 5. Do medical professionals receive specialized training for the treatment of victims of sexual assault? If so, please provide details of the training?

Anwer. The Cruise Vessel Security and Safety Act of 2010 specifically requires that, on all voyages to or from the U.S., the shipboard medical staff must include licensed medical providers that are able to provide assistance in the event of an alleged sexual assault, have received training in conducting forensic sexual assault examination, and are able to promptly perform such an examination upon request and provide proper medical treatment of a victim, including administration of antiretroviral medications and other medications that may prevent the transmission of the HIV virus and other sexually transmitted diseases. The new law also requires cruise ships to prepare, provide to the patient, and maintain written documentation of the findings of a sexual assault examination, and that such records be signed by the recipient. In addition shipboard medical staff must meet or exceed the requirements of the above-reference ACEP Guidelines (see Guideline 9).

Miscellaneous Legal Issues

Question 6. In light of your general insurance protections and the Limitation of Liability Act, why is it necessary to have limited remedies available for passengers who die on the high seas?

Anwer. The remedies that are available generally are in keeping with the remedies that are available in most nations of the world, including European nations. As an international industry that is carrying and sourcing passengers globally, having an internationally uniform liability regime promotes predictability and allows for a level playing field for claimants whatever their nationality. Since the high seas are, to some degree, under every nation's jurisdiction, U.S. law governing deaths on the high seas should reflect international norms. U.S. law, as presently written, is appropriately reflective of these norms in light of the remedies available in other jurisdictions.

Moreover, the U.S. Limitation of Liability Act *prohibits* a cruise line from limiting its liability for death or personal injury caused by the negligence of a ship's owner, operator, master or any employee or agent. Cruise lines are also prohibited from limiting liability for emotional distress claims in cases where a passenger was injured, at risk of being injured or when the distress was intentionally inflicted. The Limitation of Liability Act also requires cruise lines to provide passengers with at least 6 months to make a claim, 1 year to file a lawsuit to recover in the event of an injury, and up to 4 years to file a lawsuit in the case of wrongful death.

Question 7. In light of the size and financial resources of your companies—compared to the financial means and age of your passengers, why do you require passengers to resolve disputes through mandatory arbitration? *Any* U.S. passenger on *any* vessel that calls at a U.S. port is protected by Federal statute that mandates an absolute right to a court trial for personal injury or death. Arbitration is only available for non-personal injury or death claims (*e.g.,* consumer claims) for which arbitration is generally acceptable and recognized in all other industries.

Answer. *Any* U.S. passenger on *any* vessel that calls at a U.S. port is protected by Federal statute that mandates an absolute right to a court trial for personal injury or death. Arbitration is only available for non-personal injury or death claims (*e.g.*, consumer claims) for which arbitration is generally acceptable and recognized in all other industries.

Question 7a. How can a passenger reasonably expect to know and understand the requirement of mandatory binding arbitration? The requirement of choice of forum? The requirement of choice of law?

Answer. The passenger ticket is designed to clearly spell out to passengers their legal rights, including applicable laws and jurisdiction, before they ever step foot on the ship. The goal is to provide passengers with clarity and certainty over what laws apply and what courts have jurisdiction. Not only is this beneficial to passengers, it is required by law. Our goal as an industry is to provide a single document that clearly spells out a passenger's legal rights. The passenger ticket is the most appropriate document for accomplishing this goal.

U.S. laws require that these legal rights be clearly communicated to passengers and the terms are subject to strict judicial scrutiny to ensure they are fundamentally fair. Every major cruise line also posts the passenger ticket contracts on line on their websites, along with appropriate recommendations to read them.

Question 7b. How is this different than any other consumer contract where the consumer has no bargaining power?

Answer. The U.S. Supreme Court in *Carnival Cruise Lines, Inc.* v. *Shute* expressly rejected the argument that a non-negotiated forum selection clause in a ticket contract is unreasonable, and thus unenforceable, simply because it is not the subject of bargaining. Moreover, the consumer has the choice of not entering into a contract with the cruise line. That is the ultimate bargaining power.

Question 8. Would the industry support legislation that would provide that for any American who boarded a foreign flagged vessel for cruising or pleasure purposes, a U.S. District Court of would have jurisdiction of their claims, irrespective of any contract provisions? If not, why not?

Answer. No. Such legislation would be entirely unnecessary. U.S. passengers already have extensive access to U.S. courts in the event they need to file a claim. Every passenger on virtually every cruise line whose corporate base is in the United States already has access to a U.S. forum, which is expressly stated in the ticket contract, including U.S. courts in cases of personal injury and death, if they wish to file a claim. This is true regardless of the cruise's itinerary or whether it embarks or disembarks in the U.S. or a foreign port. For claims against cruise lines based in foreign nations, and that offer cruises between foreign ports that do not include the U.S., foreign laws may apply and claims may be more appropriately resolved abroad.

Taxes

Question 9. For the purposes of this question, and consistent with your answer at the hearing, please query your member companies and their subsidiaries. Over the past 5 years what Federal taxes have been paid by cruise line companies and their subsidiaries?

Answer. CLIA does not have access to the tax returns of its member companies, and CLIA cannot request tax returns from its members due to limitations on the type of information it may receive as an industry trade association.

Question 10. At the hearing, there was a discussion of the more than 20 Federal agencies that work with the cruise lines to provide for health, safety and security of passengers. At a recent conference on March 13, 2012, you commented that by 2015, 25 new ships will join the CLIA member line fleet. You also indicated that since 2000, there has been a 125 percent increase in passengers, including a record 16.3 million in 2011 and the industry has introduced 143 new ships during that time. Would your member companies be willing to shoulder more of the costs to support its Federal partners who help provide for the health, safety and security of the traveling public?

Answer. CLIA members do provide financial support to our Federal partners. For example, for every cruise passenger who is processed into the United States the industry pays over $7.00 in Customs and immigration user fees. With approximately 12 million passengers arriving annually, this equates to more than $84 million in Customs and Immigration user fees alone. In fact, in a 1999 report to the Chairman of the House Transportation Committee, the GAO determined that maritime industry pays over 124 different fees and assessments to various agencies of the Federal Government. In addition, agencies of state and local government collect user fees and assessments of various types. Maritime industry paid over $22 billion dollars in Federal assessments during Fiscal Year 1998. Given the growth of maritime industry since that time, the number today is undoubtedly much greater than 1998. Maritime industry which includes the cruise lines is paying a substantial amount of money into the Federal treasury. In addition to fees and taxes, the cruise industry either directly or indirectly provides jobs for more than 330,000 Americans. Each of these Americans pays Federal and state taxes on their income, and the industry pays the employers' share of taxes and benefits for those it employs.

Question 11. CLIA was a strong supporter of the *Travel Promotion Act,* which was primarily funded through both private sector contributions (up to $100 million) and a $10 fee on foreign travelers. Could the Congress count on CLIA's support for legislation that would impose a similar per-passenger or per-vessel fee to pay for some of the essential services provided by the Federal Government? What recommendations would you provide related to the legislation?

Answer. The industry pays fair value for services rendered to it by government and frequently renders assistance to others at sea, often at substantial cost and without reimbursement, upon the request of the government. For example, Cruise ships frequently are called upon to assist in the rescue of persons at sea. The Florida straits have a significant number of persons who attempt to illegally migrate on rickety rafts and small boats. As this is a significant cruise ship operating area, our vessels are frequently requested to render assistance.

Environmental Issues

Question 12. How many CLIA member line vessels operate in waters subject to the jurisdiction of the United States, and how many CLIA member line vessels operate worldwide?

Answer. The cruise industry is global. Vessels routinely cross international boundaries and their deployment schedules vary frequently. Vessels that are in the U.S./

Caribbean market in the winter may operate in the Baltic in the summer. CLIA member lines operate approximately 200 vessels in the global market.

With regard to the following questions (13 through 37), in general, CLIA members lines are dedicated to preserving the marine environment and, in particular, the pristine condition of the oceans and other waters 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 flag and port states, CLIA has participated in the development of 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). The international standards of MARPOL have, in turn, been adopted by the U.S. and augmented by additional Federal legislation and regulation. The U.S. has jurisdiction over both foreign and domestic vessels that operate in U.S. waters where U.S. laws, such as the Federal Water Pollution Control Act, the Act to Prevent Pollution from Ships, the Ports and Waterways Safety Act, and the Resource Conservation and Recovery Act, apply. The U.S. Coast Guard enforces both international conventions and domestic laws.

Question 13. How many CLIA member line vessels that operate in waters subject to the jurisdiction of the United States are equipped with the best available technology that will reduce the silver content in photo processing and X-ray development fluid waste discharges, consistent with CLIA Industry Waste Management Standard No. 1?

Answer. Functionally today, most member lines are using digital photo and X-ray processing which does not utilize photo processing fluid. Members that use fluid are to utilize one or both of methods of disposal identified in CLIA Waste Management Practices and Procedures-either removing all hazardous materials or treating the fluid as hazardous material and disposing through a licensed waste management company.

With regard to hazardous waste in general—photo and X-ray processing chemicals, fluorescent bulbs, dry cleaning fluids, battery chemicals, etc.—CLIA member cruise lines have defined handling and control processes for each type of waste. For example, hazardous waste products are segregated into leak-proof containers and landed to an approved shoreside disposal facility or, for permitted types of medical waste, incinerated onboard. Under no circumstance, may hazardous waste be disposed of in trash containers or systems for graywater (sinks and drains) or blackwater (toilets).

Question 14. Approximately how many gallons of photo processing and x-ray development fluid waste are discharged by CLIA member line vessels into waters subject to the jurisdiction of the United States annually?

Answer. We are aware of none.

Question 15. Approximately how many gallons of dry-cleaning fluids, sludge, contaminated filter materials, and other dry-cleaning waste products are discharged by CLIA member line vessels into waters subject to the jurisdiction of the United States annually?

Answer. We are aware of none.

Question 16. How are pharmaceuticals that are unused, outdated, or both, disposed of by CLIA member line vessels that operate in waters subject to the jurisdiction of the United States when so operating and when operating on the high seas?

Answer. Pursuant to CLIA's policy adopted by its members, they are to be disposed of in accordance with the CLIA Waste Management Practices and Procedures. CLIA 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 antifungal creams to prescription drugs such as epinephrine. Each ship stocks an inventory based on its itinerary and the demographics of its passenger base. CLIA 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.

CLIA 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.

Question 17. CLIA's Industry Waste Management Standard No. 6, dealing with fluorescent and mercury vapor lamp bulbs, states that CLIA 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."

Question 18. How does CLIA define the term "proper recycling" as that term is used in Standard No. 6?

Answer. Proper recycling means off-loading to a licensed waste management company ashore who is certified to handle such waste.

Question 19. What are the "other acceptable means of disposal" referred to in Standard No. 6?

Answer. Used fluorescent lamps can be crushed and content filtered through approved lamp crusher equipment. Filters are disposed of as hazardous material.

Question 20. Approximately how many spent lamps are disposed of by "proper recycling" by CLIA member line vessels that operate in waters subject to the jurisdiction of the United States?

Answer. CLIA does not collect or maintain records of this type and they are not in CLIA's possession, custody or control. However, in accordance with the members' stated policy and practice, we believe that our members are properly disposing of spent lamps.

Question 21. Approximately how many spent lamps are disposed of by "other acceptable means of disposal" by CLIA member line vessels that operate in waters subject to the jurisdiction of the United States?

Answer. CLIA does not collect or maintain records of this type and they are not in CLIA's possession, custody or control. . However, in accordance with the members' stated policy and practice, we believe that our members are properly disposing of spent lamps.

Question 22. Approximately how many spent batteries are prevented from being discharged into the marine environment by CLIA member line vessels annually, in conformity with CLIA Industry Waste Management Standard No. 7, and how many are discharged into the marine environment?

Answer. CLIA does not collect or maintain records of this type and they are not in CLIA's possession, custody or control. However, in accordance with the members' stated policy and practice, we believe that our members are properly disposing of spent batteries.

Question 23. Approximately how many CLIA member line vessels meet the international requirements for removing oil from bilge and wastewater prior to discharge, as agreed in CLIA Industry Waste Management Standard No. 8?

Answer. All CLIA member lines are required to meet the international and domestic requirements for disposing of bilge and wastewater. The procedures are to be included in the members' Safety Management System manuals and are subject to internal and external audit.

Question 24. How many CLIA member line vessels that operate in waters subject to the jurisdiction of the United States are equipped with back-to-back oily bilge water treatment systems?

Answer. Bilge water is a mixture of liquids, primarily fresh water, collected from machinery spaces and internal drainage systems. The bilge, located in the engine room at the lowest part of the vessel, collects water, cleansers and mechanical fluids from operational sources. These sources include evaporators, potable water treatment equipment, condensation, technical rooms, seawater cooling systems, propulsion systems, and main engines. Although CLIA does not audit or supervise the technology that member lines are using for bilge water processing, typically bilge water is collected and periodically pumped into special holding tanks where it is processed to remove contaminants of concern. The resulting water is then treated to levels that meet or exceed both U.S. and international regulations and thereafter discharged.

Question 25. Do any CLIA member line vessels that operate in waters subject to the jurisdiction of the United States discharge bilge water or wastewater containing oil in excess of 15 parts per million?

Answer. Not as far as CLIA is aware. International regulations and CLIA policy prohibit such discharges.

If so, how many vessels do so and approximately how many gallons such bilge water or wastewater are discharged annually?

Question 26. Ms. Duffy's testimony states that CLIA lines recycle approximately 80,000 tons of solid waste annually, largely comprising paper, plastic, aluminum cans, and glass.

Question 26a. Approximately how many tons of solid waste do CLIA member lines produce annually that is not recycled?

Answer. By law and regulation, the only solid waste that may be discharged at sea is that permitted by MARPOL Annex V, and that is restricted to certain areas of the ocean. MARPOL Annex V has recently been modified to further minimize the discharge of solid waste. In accordance with CLIA's Waste Management Practices and Procedures, the vast majority of solid waste is recycled or incinerated onboard. Recycled material includes glass, aluminum, plastic, cardboard, and metals. Food packing materials are generally incinerated due to restrictions on landing ashore and other practical considerations. CLIA does not collect or maintain records of this type and they are not in CLIA's possession, custody or control.

Qusetion 26b. Approximately how many tons of solid waste do CLIA member lines produce annually that is discharged into the marine environment?

Answer. See response to Question 26(a).

Question 26c. What types of solid waste typically are discharged by CLIA member lines into the marine environment?

Answer. CLIA is unaware of any, other than comminuted food waste.

Question 27. CLIA's Industry Waste Management Standard No. 9, dealing with glass, cardboard, and aluminum and steel cans, states that CLIA member lines have agreed that "no [such] 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." How does CLIA define the term "properly processed" for purposes of this standard?

Answer. "Properly processed" means, for example, food waste that has been comminuted.

Question 28. Approximately how much incinerator ash do CLIA member line vessels discharge into waters subject to the jurisdiction of the United States annually?

Answer. We are unaware of any.

Question 29. CLIA Industry Waste Management Standard No. 12, dealing with sewage, reads as follows:

> 12. *Blackwater:* CLIA members have agreed that all blackwater will be processed through a Marine Sanitation Device (MSD), certified in accordance with U.S. or international regulations, prior to discharge. For ships traveling regularly on itineraries beyond territorial coastal waters, discharge will take place only when the ship is more than 4 miles from shore and when the ship is traveling at a speed of not less than 6 knots. For vessels whose itineraries are fully within U.S. territorial waters, discharge shall comply fully with U.S. and individual state legislation and regulations.

Do any CLIA member lines have a more stringent voluntary policy on sewage discharges than Standard No. 12—for example, do any member lines have a policy that all sewage will be processed through advanced wastewater treatment systems, or that ships traveling regularly beyond territorial coastal waters will only discharge MSD-processed sewage when they are more than 12 nautical miles from shore?

Answer. Yes, please see corporate sustainability reports of our member lines for details of what they have in place.

Question 30. How many vessels do American Cruise Lines, Carnival Cruise Lines, Celebrity Cruises, Crystal Cruises, Cunard Cruises, Disney Cruise Line, Norwegian Cruise Lines, Oceania Cruises, Princess Cruises, Pearl Seas Cruises, Regent Seven Seas Cruises, Royal Caribbean International, Sea Dream Yacht Club, and Seabourn Cruise Line each operate in waters subject to the jurisdiction of the United States, and how many of each of those CLIA member lines' vessels that operate in waters subject to the jurisdiction of the United States have advanced wastewater treatment systems installed?

Answer. CLIA does not collect or maintain records on when or where vessels are operating at any given time or exactly what equipment they are utilizing to process wastewater. These documents are not in CLIA's possession, custody or control.

Question 31. Of each of those CLIA member lines' vessels that operate in waters subject to the jurisdiction of the United States and do not have advanced wastewater treatment systems installed, how many discharge treated sewage within 4 nautical miles from shore while so operating?

Answer. To CLIA's knowledge the only vessels which discharge treated wastewater within 4 miles of the coast are those which are permitted by local law to do so.

Question 32. Of each of those CLIA member lines' vessels that operate in waters subject to the jurisdiction of the United States and do not have advanced waste-

water treatment systems installed, how many discharge treated sewage within 12 nautical miles from shore while so operating?

Answer. Under CLIA's express policy adopted by its members, none are to do so. CLIA does not collect or maintain records of this nature, and they are not in CLIA's possession, custody or control.

Question 33. Of each of those CLIA member lines' vessels that operate in waters subject to the jurisdiction of the United States and do not have advanced wastewater treatment systems installed, how many discharge treated graywater within 4 nautical miles from shore while so operating?

Answer. None are to do so except as permitted by law. CLIA does not collect or maintain records of this nature, and they are not in CLIA's possession, custody or control.

Question 34. Of each of those CLIA member lines' vessels that operate in waters subject to the jurisdiction of the United States and do not have advanced wastewater treatment systems installed, how many discharge treated graywater within 12 nautical miles from shore while so operating?

Answer. CLIA does not collect or maintain records of this nature and they are not in CLIA's possession, custody or control.

Question 35. Do any of each of those CLIA member lines' vessels that operate in waters subject to the jurisdiction of the United States discharge untreated sewage or untreated graywater within 4 nautical miles from shore while so operating?

If so, how many of each line's vessels do so, and approximately how many gallons each of untreated sewage and untreated graywater does each vessel discharge?

Answer. No.

Question 36. Do any of each of those CLIA member lines' vessels that operate in waters subject to the jurisdiction of the United States discharge untreated sewage or untreated graywater within 12 nautical miles from shore while so operating? If so, how many of each line's vessels do so, and approximately how many gallons each of untreated sewage and untreated graywater does each vessel discharge?

Answer. CLIA member lines by policy do not discharge untreated sewage anywhere. Untreated graywater is to be discharged only when beyond 4 miles from the shore.

Question 37. Do any of each of those CLIA member lines' vessels that operate in waters subject to the jurisdiction of the United States discharge untreated sewage or untreated graywater beyond 12 nautical miles from shore while so operating? If so, how many of each line's vessels do so, and approximately how many gallons each of untreated sewage and untreated graywater does each vessel discharge?

Answer. CLIA does not collect or maintain records of this nature and they are not in CLIA's possession, custody or control. CLIA member lines by policy do not discharge untreated sewage anywhere.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BARBARA BOXER TO CHRISTINE DUFFY

Muster Drills

Question 1. I want to congratulate the Cruise Line Industry of America and its members for instituting a new policy that requires a muster drill for all passengers before departure. As you know, I believe this to be an important policy and have written to the Coast Guard asking that they change the current regulation for a muster within 24 hours of embarkation, to before a ship departs. Do you all agree that all passengers should receive muster training prior to departure, while a ship is still in a controlled environment?

Answer. Yes and we have announced as a policy that all member lines have agreed to incorporate into their mandatory practices.

Question 2. Recently, some cruise lines have started giving a muster briefing or virtual muster training using a video. How does this conform to the requirement to have a "muster?" Shouldn't a muster require that passengers go to their assigned evacuation point or life boat?

Answer. There is a regulatory requirement to have a muster. Passengers are required to attend. In addition there is a requirement for a safety briefing that is to be made upon departure in one or more languages likely to be understood by the passengers (including the language or languages required by the ship's flag State and in the English language). This required safety briefing is normally accomplished at the muster stations during the drill. An in room video or information cards supplement these requirements. Additionally, SOLAS Chapter III Regulation 8 requires

that illustrations and appropriate languages shall be posted in passenger cabins and at other locations to inform passengers of: their muster station, essential actions they must take in an emergency, and the method of donning lifejackets. These instructions are found on a placard on the inside of each cabin door.

Crew Training

Question 3. Ms. Duffy, in your testimony, you said that crew members receive safety training every 5 years, receive familiarization training every time they report on board a ship and must participate in one of the weekly emergency drills once a month.

By regulation, airline flight attendants must undergo training that covers the specific aircraft type(s) they fly, their position(s) and duties once every 12 months. Additionally, flight attendants must complete emergency drills/simulations once every 24 months. And as we all know from flying, flight attendants brief passengers on emergency procedures on every flight.

Isn't safety training every 5 years for cruise ship crew members too infrequent?

Answer. As indicated in my testimony and above, familiarization training is held every time a crew member reports onboard. Since contracts for employment extend from 4 to 8 months, crewmembers are effectively receiving training according to those intervals. Additional training and honing of proficiency is provided by the abandon ship and firefighting drills that take place weekly. Additionally, the boat crews are required to launch and maneuver their respective lifeboats at least once in every 3 months. Additional training is specified in SOLAS Chapter III Regulation 19.4 and required to take place at intervals of not more than 4 months.

Question 4. Currently, only certain crew members are trained to operate a lifeboat, why is this? Shouldn't every crew member be able operate a lifeboat?

Answer. All flight attendants are trained to operate emergency exit doors and slides. Operating a lifeboat requires distinct skills and there are a number of crew specifically trained to perform this function. There are more than enough crewmembers who are trained to perform this function to provide for backup if a crewmember is incapacitated in any way. Specifically SOLAS Chapter II Regulation 10 requires that a deck officer or certified person shall be placed in charge of each survival craft to be used. In some instances, the flag administration may permit an appropriately trained person to be in charge of liferafts. A second in command is to be nominated (appointed) in the case of lifeboats. The U.S. Coast Guard and other flag and port state inspection authorities regularly, during drills, specify that the primary lifeboat/liferaft crew in charge are incapacitated and require that the alternate crew demonstrate their proficiency.

Question 5. Reports have indicated that language barriers between crew members on the *Costa Concordia* contributed to confusion and hindered the process for abandoning ship. Are there any U.S. or international regulations that require crew members to have language proficiency for basic safety terms and instructions?

Answer. Each ship is required to have a designated language and all crewmembers are required to speak this language proficiently. Globally English is the predominant language for shipping. As stated previously, the safety briefings are to be provided in one or more languages likely to be understood by the passengers including the language or languages required by the ship's flag State and in the English language.

Lifejackets and Life Boats

Question 6. Historically, lifejackets have been located in state rooms with additional lifejackets located in public areas. However, in an emergency it seems impractical to require passengers to return to their staterooms to retrieve lifejackets, and then head to their muster stations.

Recently, newer ships have begun to store lifejackets at muster stations. This solves the problem of requiring passengers to return to their staterooms before going to muster stations. However, if a ship lists to one side, then the life jackets on that side of the ship will no longer be accessible.

I have heard from a passenger who was aboard the *Sea Diamond* in 2007 when it wrecked off the coast of Santorini that when the ship listed, access to staterooms was cutoff by the crew, and passengers were all directed to the high side of the ship, rendering the life boats and life jackets on the low side inaccessible.

How do we ensure that if a ship lists there are a sufficient number of lifejackets and enough life boats for all aboard?

Answer. SOLAS Chapter III Regulation 21 requires that each passenger ship carry lifesaving appliances for 100 percent of the persons onboard. Liferafts may be substituted for lifeboats for up to 25 percent of the persons carried. These liferafts

are typically for use by able bodied crew. An additional number of liferafts for 25 percent of the total persons onboard are also required to be carried.

Lifejackets are required to be carried in numbers specified by SOLAS Chapter III Regulation 7.2, for every person onboard the ship, as well as additional lifejackets for children and infants. Additional lifejackets are required for certain crew on watch. SOLAS Chapter III Regulation 22 also requires an additional 5 percent of the total number of lifejackets to be stored at muster stations and other locations. In long standing CLIA (previously ICCL) policy, CLIA members have agreed to carry an additional number of lifejackets equal to the number of passengers berthed in the most populous main vertical zone. These additional lifejackets are to be stored in public spaces, at the muster stations, on deck, or in lifeboats and in such a manner as to be readily accessible to crewmembers for distribution as may be necessary in the event of an emergency

Evacuation and Ship Design

Question 7. In his testimony, Mr. Klein indicated that the design of ever larger cruise ships may hinder the ability of passengers to evacuate a ship. Currently, international regulation and U.S. law require that a ship can be abandoned within 30 minutes of the call to abandon ship. The 1994 sinking of the *Estonia* in 30 minutes illustrates the need for this requirement. The ESTONIA was a roll on roll of passenger ferry. The cause of the accident was the massive bow doors were not properly secured allowing massive amounts of water onto the vessel in a very small period of time. This class of vessel, with its large and open vehicle spaces, has much different stability characteristics than a classic passenger vessel, and is very susceptible to rapid capsize

How do the U.S. Coast Guard and the International Maritime Organization currently ensure that ships are designed to accommodate this standard? Are there drills run on ships by the Coast Guard to ensure this?

Answer. Ships are routinely exercised and drilled to determine the length of time it takes to get passengers and crew to their muster stations. This can vary somewhat depending on the number of passengers who require assistance and the nature of the assistance. Additionally lifeboats are regularly lowered to the water to ensure the operability of the lowering mechanisms. Through these regular drills and exercises the ships demonstrate their capability to evacuate the ship within 30 minutes.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. AMY KLOBUCHAR TO CHRISTINE DUFFY

Question. I understand that under the Death on the High Seas Act, families who lost a loved one have limited legal remedies that they can pursue for the tremendous loss that they have suffered. Current law prevents victims' families from recovering anything other than lost income or wages. In contrast, if a family suffers the loss of a loved one in a plane crash on the high seas, they may choose to pursue non-pecuniary damages in court, such as loss of companionship. Can you discuss the impact this disparity in the law that has on the surviving families of victims?

Answer. Travel by air and sea is different and requires different considerations. While airline passengers may spend up to several hours on a flight, the typical commercial maritime passenger spends days, if not weeks, sailing aboard a ship. Unlike airline passengers, cruise ship passengers will visit many exotic ports and participate in a variety of shore excursions and recreational activities during the course of their travels.

Aviation Death on the High Seas (DOHSA) cases primarily involve major disasters related to the operation of the aircraft and typically involve dozens, if not hundreds, of individuals. By contrast, the maritime DOHSA cases primarily involve an individual who perishes from natural causes, non-catastrophic circumstances, and/or non-maritime hazards. The typical cases include heart attack, drowning, and shoreside incidents. It is important to remember that courts have applied DOHSA broadly to *all* loss of life on voyages outside U.S. waters, including deaths during shore excursions or in foreign waters. In 2000, Congress amended DOHSA to permit recovery of loss of care, comfort, and companionship in airline cases. Congress chose not to pass a similar reform for the maritime industry, partly because shipping has a far superior safety record and maritime deaths primarily involve an individual who perishes from a vast array of ancillary activities.

Since the high seas are, to some degree, under every nation's jurisdiction, U.S. law was crafted to reflect international norms regarding available damages. DOHSA, as presently written, reflects these international norms and provides a strong legal remedy to recover significant damages when warranted, including un-

limited economic damages. Among other things, this includes medical bills, lost wages, loss of support, loss of nurture, guidance and training for children, loss of services, inheritance and the value of future support from children.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARK BEGICH TO CHRISTINE DUFFY

Question 1. Please provide a summary of environmental innovations that the cruise industry has made in recent years?

Answer. The cruise line industry is committed to protecting the fragile natural environments in which we operate and we have a strong record of developing and implementing sound environment practices.

The cruise lines have a variety of environmentally innovative programs in place that make a difference, from switching to low energy LED lights, using recycled hot water to heat passenger cabins, to using special window tinting that keep passageways cooler and utilize less air conditioning. Below are a few examples:

Environmental stewardship videos for passengers. Many cruise lines have produced videos for their guests to watch to learn about how they can do their part while aboard. This can include information such as turning lights off and participating in towel reuse programs.

Rigorous recycling programs. The cruise line industry is wholly committed to reducing the amount of waste produced by passengers aboard ships and at ports of call as well as the waste generated through the course of operating the ships. Many lines have comprehensive programs and crew members who are specially trained and responsible for sorting, processing, storing, recycling, and the final disposal of garbage. These programs can also include special wastes such as chemicals including those from photo processing equipment, collected and disposed with licensed contractors ashore. Other recyclable items include: paper, glass, plastics, aluminum, scrap metal, fluorescent lamps, batteries, toner cartridges and cooking oil, among others.

Energy saving LED light bulbs. Halogen and incandescent light bulbs have either been replaced on many lines or are being replaced with LED and fluorescent lights, which last 25 times longer, use 80 percent less energy, and generate 50 percent less heat.

High-Efficiency Appliances. Many cruise lines are installing high-efficiency appliances onboard their ships in order to minimize their impact on the environment. Every type of appliance onboard the ships is being evaluated for efficiency, including: TV's, coffee makers, ovens and dishwashers.

One outstanding example is a new type of ice maker, which uses 65 percent less water than previous machines. By producing and pumping less water, more energy is saved. The machine infuses air into the ice cubes so the drinker gets the same feel, but there is less water in each cube. The machines themselves are higher efficiency in the way they freeze the ice, such as more conductive metals where the refrigerant contacts the water, and utilize more efficient compressors.

Ecological Hull Coatings. The industry is working with paint manufacturers to deploy innovative and environmentally safe coatings that increase the smoothness of ship hulls. By creating smoother hulls, we are reducing the amount of energy needed to travel through water. It is estimated that these smoother hull coatings will save as much as 5 percent of fuel usage for propulsion.

Propulsion and Hull Design. The industry has been working with engine and propeller manufacturers to develop a new approach to hull shapes and propulsion systems, which has resulted in significant energy savings. By bringing together optimal hull shape with advanced propeller systems helps to maximize efficiency.

Window Tinting. Cruise lines have applied window tinting designed for the marine environment, which keep the ships cooler and reduces the load on air conditioning. This feature also protects our interiors and furnishings from sun damage and help cut back on corresponding aging and subsequent waste.

The cruise line industry also works with NGO's, universities, regulators and scientists around the globe to continually improve our environmental practices.

Question 2. Please describe CLIA members' wastewater practices. Are these enforceable?

Answer. CLIA INDUSTRY STANDARD
CRUISE INDUSTRY WASTE MANAGEMENT
PRACTICES AND PROCEDURES

The members of the Cruise Lines International Association (CLIA) are dedicated to preserving the marine environment and in particular the pristine condition of the oceans and other waters 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 flag and port states, CLIA has 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). The international standards of MARPOL have in turn been adopted by the United States and augmented by additional national legislation and regulation. The U.S. has jurisdiction over both foreign and domestic vessels that operate in U.S. waters where U.S. laws, such as the Federal Water Pollution Control Act, the Act to Prevent Pollution from Ships, the Ports and Waterways Safety Act, and the Resource Conservation and Recovery Act—which applies to hazardous waste as it is landed ashore for disposal, 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.

CLIA 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 (garbage) and equivalent U.S. laws and regulations 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: CLIA 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 or 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, to the maximum extent possible, the disposal of MARPOL Annex V wastes into the marine environment. This will be achieved through improved reuse and recycling opportunities. They have further agreed 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.
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: [For ships traveling regularly on itineraries beyond the territorial waters of coastal states], 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 [1]; 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. For vessels whose itineraries are fully within U.S. territorial waters, discharge shall comply fully with U.S. and individual state legislation and regulations.
12. Blackwater: CLIA members have agreed that all blackwater will be processed through a Marine Sanitation Device (MSD), certified in accordance with U.S. or international regulations, prior to discharge. For ships traveling regularly on itineraries beyond territorial coastal waters, discharge will take place only when the ship is more than 4 miles from shore and when the ship is traveling at a speed of not less than 6 knots.1 For vessels whose itineraries are fully within U.S. territorial waters, discharge shall comply fully with U.S. and individual state legislation and regulations.

Some member cruise lines are field-testing wastewater treatment systems that utilize advanced technologies. These onboard wastewater treatment systems, which are currently being referred to as advanced wastewater purification (AWP) 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 CLIA 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 CLIA 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.

CLIA and its Environmental Committee will continue to 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

Revised: November 12, 2006

Effective for non-prior ICCL members: [July 1, 2007]

These practices and procedures have been placed into each members lines safety Management systems where they are subject to port state control inspection by the U.S. Coast Guard.

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[1] For vessels operating under sail, or a combination of sail and motor propulsion, the speed shall not be less than 4 knots.

Question 3. What are the U.S. and international regulations that govern discharges?

Answer. The International Standards for discharges from ships can be found in the International Convention for the Prevention of Pollution from ships. This Convention has six annexes:

Annex I Regulations for the Prevention of Pollution by Oil

Annex II Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk

Annex III Regulations for the Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form

Annex IV Regulations for the prevention of Pollution by Sewage from Ships

Annex V Regulations for the Prevention of Pollution by Garbage from ships

Annex VI Regulations for the Prevention of Air Pollution from ships

The U.S. has ratified all of the Annexes to this Convention except Annex IV. The Convention is incorporated into U.S. law through the Act to Prevent Pollution from Ships or APPS.

Ships that operate in U.S. waters are also regulated by the Clean Water Act and various Federal and state laws that regulate discharges into the water.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. TOM UDALL TO CHRISTINE DUFFY

Question. Thank you all for your insight on this issue. Losing so many lives on the *Costa Concordia* is devastating and unacceptable. A couple from my home state were onboard the *Costa Concordia* at the time of the tragic incident. They spoke of the chaos they experienced while trying six times to board a life boat, and once aboard, they experienced technical issues operating the life boat. Thankfully, they survived and are home safely in New Mexico. Although the incident is still under investigation, troubling reports emerged about the crew's failure to act in accordance with their safety training, leaving the passengers without any coordinated plan or instructions. How could we ensure in the future that crew members are adequately prepared for chaotic situations, such as crisis management skills?

Answer. There are a number of safety regulations in place globally that require crew to be properly trained and competent at their responsibilities including all emergency procedures. These are contained in the International Convention for the Safety of Life at Sea and the International Convention for Standards for Training Certification and Watchkeeping. In addition the International Safety Management Code requires a company to develop a safety management system which among other things requires a company to evaluate accidents that occur and corrective actions that should be taken to enhance safety. There are special requirements that are applicable to passenger ships and special duties that the officers on passenger ships must undertake.

All of these international instruments are applicable to ships operating internationally. The *Costa Concordia* accident will be the focus of a great deal of scrutiny at the International Maritime Organization, where the issue of passenger ship safety is constantly reviewed.

In the days following the *Costa Concordia* accident, Carnival Corporation, the corporate owner of *Costa Concordia* announced a corporate wide operational safety review. Shortly thereafter the members of the Cruise Lines International Association announced an industry wide operational Safety Review. The purpose of this review is as follows:

To provide coordinated recommendations for industry safety policy and procedures related to the safe operations of ships and to recommend for consideration any regulatory initiatives considered necessary.

- Provide overview and recommendations for conducting the [industry wide] operations safety review and to discuss and recommend review processes for consideration by cruise line operators' and to ensure that results from individual members safety review efforts are presented in a uniform manner.
- Provide guidance and recommendations to CLIA for response to media and other inquiries regarding the progress of the Operational Safety Review.
- Provide coordinated advice [and consent] to CLIA staff in drafting and submitting papers for consideration at the International Maritime Organization.

Scope:

- Consider human factors, training, and operational aspects of operations safety during normal operations and in an emergency including:
- Navigation
- Evacuation
- Emergency training
- Related practices and procedures (such as: SMS, damage control, and audit procedures)
- Communications (both internal and external) monitoring of vessel track line and status of ship, and implications for new build and existing ships)
- Emergency response to: Fire, flooding, collision, grounding, or other emergency scenarios.
- Recommend to the CLIA membership any studies, research or other actions which may be necessary to clarify, research or further develop any matters which may be identified or recommended for action and for which sufficient information is not available to form a well-grounded and firmly based recommendation for a policy, procedure or possible regulatory initiative.
- Consider recommendations for inclusion of other or specific matters which may be presented by CLIA, individual members, or outside sources such as: flag states, regulatory authorities, class societies, or other.

This review has been ongoing for 2 months and has already resulted in Industry wide policies on the following:

- Muster the newly embarking passengers for safety instructions prior to the ship departing port.
- Policy on voyage planning requiring the mandatory application of voyage planning guidelines.
- Policy on access to the bridge during special navigational evolutions.
- Policy on extra lifejackets to be stored at muster stations

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