



U.S. House of Representatives
Committee on Transportation and Infrastructure
Washington, DC 20515

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February 24, 2012

MEMORANDUM

TO: Members, Subcommittee on Coast Guard and Maritime Transportation

FROM: Staff, Subcommittee on Coast Guard and Maritime Transportation

RE: Hearing on "A Review of Cruise Ship Safety and Lessons Learned from the COSTA CONCORDIA Accident"

PURPOSE

On February 29, 2012, at 10:00 a.m. in 2167 Rayburn House Office Building, the Subcommittee on Coast Guard and Maritime Transportation will hold a hearing to examine the COSTA CONCORDIA accident and the safety of cruise vessels operating out of U.S. ports.

BACKGROUND

The COSTA CONCORDIA Accident

The COSTA CONCORDIA is owned and operated by Costa Crociere, a company incorporated in Italy and owned by Carnival Corporation. It was built by the Fincantieri Genova Sestri Shipyard in Genoa, Italy at a cost of \$570 million and was launched in 2006. Registered under the Italian flag, it displaces 114,147 tons and measures 952 feet in length with a beam (width) of 116 feet and a draught of 27 feet (fully loaded).

At 7 p.m. local time on the evening of Friday, January 13, 2012, the COSTA CONCORDIA set sail from the port of Civitavecchia northwest of Rome, Italy. It

was on a seven day cruise bound for Savona, Italy and then Marseille, France, Barcelona, Spain and other ports of call in the western Mediterranean. It was carrying 4,252 individuals onboard (3,229 passengers and 1,023 crew members). At approximately 9:40 p.m., the vessel struck a granite reef approximately 900 feet off the coast of the Italian island of Giglio. The allision caused a 164 foot long gash in the port side of the COSTA CONCORDIA. The vessel suffered flooding, causing it to list to its port side. Eventually, it came to rest on its starboard side in 45 feet of water along the shore of Giglio near the island's port.

Though it will be some time before the official marine casualty investigations are complete, extensive press reports indicate that the Captain of the COSTA CONCORDIA, Francesco Schettino, overrode a pre-programmed, owner-approved navigation track line in order to pass close to the island of Giglio. Media reports also indicate that the Captain had done this maneuver on a previous voyage, but in this instance he ordered the vessel to turn too late causing the allision with the reef.

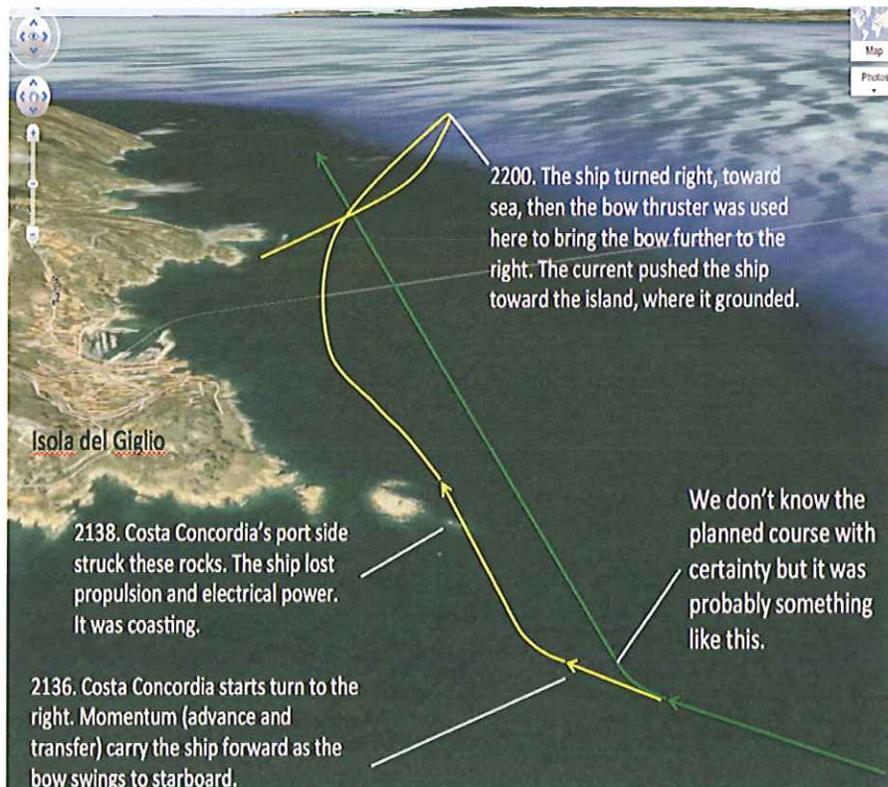


Image available at www.costaconcordiagrounding.com

Though the COSTA CONCORDIA began taking on water immediately after the allision, the call to abandon ship was neither immediate nor clear. Almost an hour elapsed before passengers were informed of the damage and ordered to evacuate. After the alarm sounded, the evacuation was reportedly chaotic and hampered by the severe listing of the vessel. Some passengers and crew jumped into the water and either swam for shore or were recovered by lifeboats. It has been reported that

Captain Schettino abandoned the ship well before most of the passengers evacuated and refused to return when ordered to do so by the Italian Coast Guard. An approximate timeline of the COSTA CONCORDIA accident is attached (Attachment A).

There are currently 21 known fatalities, and 11 people remain missing, including two Americans from Minnesota. Rescue divers searched the vessel and found three survivors two days after the incident. No more survivors were located and the search was called off. More bodies could be recovered during salvage operations, which are expected to take several months.

The COSTA CONCORDIA had approximately 2,300 tons of fuel (500,000 gallons) onboard at the time of the accident. The ship's 17 fuel tanks are double hulled and no oil has leaked yet. However, the wreck happened within the "Santuario dei Cetacei," Europe's biggest marine park and sanctuary for marine mammals. Costa Crociere has contracted with a salvage company to remove the fuel. Salvage work began on February 13, 2012.

Captain Schettino is currently being held by Italian authorities. He has been charged under Italian law with causing a shipwreck, abandoning ship, and with 34 counts of manslaughter. If convicted on all charges, he could face over 2,500 years in prison. Ciro Ambrosio, the vessel's first mate has also been charged with offenses related to the accident.

Cruise Vessel Safety Regulation

The International Convention on Safety of Life at Sea (SOLAS):

The International Convention on Safety of Life at Sea (SOLAS) sets out the international standards for vessel safety. SOLAS seeks to protect those who travel on vessels by regulating vessel construction and stability, firefighting systems, safety equipment, radio communications, safe navigation procedures, vessel management, and carriage of cargo. First adopted in 1914 in response to the TITANIC disaster, the current version was written in 1974 and went into force in 1980. It has since been updated on several occasions through amendments which are generally adopted automatically by its signatory states. The United States and Italy are parties to this convention.

Since the COSTA CONCORDIA was registered in Italy, the vessel was subject to SOLAS requirements, as well as any additional Italian domestic regulations. The vessel was built to SOLAS construction standards. Under SOLAS, vessels are required to complete annual safety inspections, as well as a full drydock inspection every five years to ensure compliance with the convention.

Although the COSTA CONCORDIA complied with SOLAS requirements, the accident may point to areas in the convention that need further discussion. For example, SOLAS requires that cruise vessels be able to launch lifeboats at up to 20 degrees of list on either side. However, the list aboard the COSTA CONCORDIA reached 35 degrees during evacuation. The crew was unable to lower the lifeboats on the high side (port) once the list passed 20 degrees, so many passengers were forced to cross the sinking vessel in search of low side (starboard) lifeboats with additional capacity.

SOLAS also requires three means of communication with passengers to instruct and reinforce emergency and vessel abandonment procedures:

1. Multilingual placards and information on lifejackets, escape routes and muster locations must be prominently displayed in the passenger's stateroom.
2. A passenger safety briefing which is given immediately before sailing or immediately after sailing which includes instructions to be followed in the event of an emergency.
3. A passenger muster drill in which passengers are required to don their lifejackets and report to their muster locations on the life boat deck.

The muster drill and safety brief must be conducted within 24 hours of sailing. If there are multiple ports of embarkation, multiple passenger briefings and passenger muster drills must take place to afford 100 percent of the passengers the opportunity to receive the required instructions. The COSTA CONCORDIA was underway for less than three hours when the allision occurred, within the 24 hour window allotted by SOLAS.

Finally, SOLAS construction standards require a cruise vessel to remain afloat and stable with as many as three water tight compartments flooded. Construction standards also require the installation of automatic-closing watertight doors between compartments. It remains unknown how many compartments flooded aboard the COSTA CONCORDIA and whether the watertight doors functioned as designed.

The International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers (STCW):

The 1978 International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers (STCW) established basic requirements on training, competence, testing, and certification of seafarers based on their duties aboard a vessel. Member states are obliged to meet or exceed these basic requirements. The convention has since been amended in 1995 and 2010. The U.S. and Italy are each a party to this convention.

STCW contains emergency-related training requirements for seafarers working on board cruise vessel:

- All persons employed on board a cruise vessel must receive familiarization training on vessel abandonment procedures and personal survival techniques.
- Personnel providing direct services to passengers in passenger spaces on board passenger ships must be able to communicate effectively with passengers during emergencies in an appropriate language or languages and demonstrate to passengers the use of personal life-saving appliances.
- Masters, officers, and other personnel designated on the muster list to assist passengers in emergency situations must complete training in crowd management.
- Masters, officers, and other persons designated on the muster list as having responsibility for the safety of passengers in emergency situations must complete training in crisis management and human behavior.

SCTW requires refresher training and recertification every five years. The vessel must maintain documents to prove that all seafarers have completed required training.

Generally, hotel and entertainment staff, which comprise the vast majority of workers employed on board foreign-flagged cruise vessels, are not required to carry a maritime credential indicating certification as a properly trained seafarer. However, both SOLAS and SCTW require hotel and entertainment staff to receive safety training and such staff designated on the muster list with responsibilities to assist passengers in an emergency are required to receive the same training as seafarers.

U.S. Port State Control Regulations:

The U.S. Coast Guard regulates all cruise vessels calling on U.S. ports, regardless of the vessel's flag state. The Coast Guard inspects each foreign-flagged cruise vessel calling on a U.S. port at least twice a year to ensure compliance with SOLAS, STCW, and several other international and U.S. regulations governing safety, security, environmental protections. During an annual inspection, a team of Coast Guard inspectors will board the foreign flag cruise vessel and check for the following safety related items:

- Paperwork
 - A documented Safety Management System, decision support system for emergency management, vessel search and rescue plan;
 - Fire fighting certificates, lifeboat and liferaft inspection reports;

- Crew merchant mariner certificates/licenses, crew medical certificates, crew training logs, drill records, SOLAS and SCTW training manuals.
- Vessel Systems
 - Lifeboat, liferaft, and life preserver numbers and condition, lifeboat equipment, lifeboat launching system functionality;
 - Fire/damage control system, sprinklers, alarms, smoke detection system, watertight doors and shutters, fire pumps;
 - Emergency generators, lights, signage, egress instructions and potential obstructions;
 - Communications equipment including radio, public address system, emergency satellite beacon, search and rescue transponders, automatic identification system, long range identification and tracking system;
 - Navigation system including radar, charts, voyage data recorder, steering and engine control systems;
 - Engineering and bilge spaces, valves, generators, engines and propulsion equipment;
 - Hospital, crew, galley, and guest spaces for sanitation and proper signage and equipment.
- Crew Competency
 - Fire drills testing crew communications, proper use of fire control systems, equipment, and procedures, whether proper instructions are given to passengers, and medical team response;
 - Passenger evacuation drills testing crew orders and communications to passengers, crew competency in assisting passenger egress and controlling muster areas;
 - Abandon ship drills testing direction from the bridge, crew competency in the use of lifeboat launching equipment and the operation of the lifeboat by witnessing the launch and recovery of a lifeboat, as well as the deployment of life rafts, and the launch and retrieval of fast rescue boats.

Safety Regulations for U.S.-Flagged Cruise Vessels:

U.S. regulations for U.S.-flagged cruise vessels comply with SOLAS and SCTW, but are more specific and in some instances more stringent. For example, all personnel employed on board U.S. cruise vessels are required to hold a Merchant Mariner Credential, except for individuals employed on board for no more than 30 days in a 12-month period as entertainers, and those with no duties (including emergency duties) related to navigation or safety of vessel.

Only one U.S.-flagged high capacity cruise vessel is currently in operation: the PRIDE OF AMERICA. The vessel is owned and operated by Norwegian Cruise lines and conducts cruises along the Hawaiian Islands.

The Cruise Vessel Safety and Security Act of 2010

The Cruise Vessel Safety and Security Act of 2010 (P.L. 111-207) was enacted on July 27, 2010. It requires the following of all cruise vessels calling on U.S. ports:

- Safety railings must be at least 42 inches above the deck.
- Cabin doors must have peepholes, latches, and time sensitive key cards.
- Vessels must maintain video surveillance and provide access for law enforcement agencies investigating an incident.
- Passengers must have access to a safety guide informing them of security and medical personnel aboard, as well as variances in laws that will occur as the ship enters different jurisdictions.
- Victims of sexual assault must have access to trained medical personnel and rape kits, and national response hotlines.
- Vessels must record all complaints and claims in an official logbook.
- Vessel owners must report all crimes to the Federal Bureau of Investigation (FBI).

Some of these provisions went into effect immediately and others were scheduled to take effect on January 27, 2012. The Coast Guard is in the process of writing regulations for those sections that require rulemaking. Attached is a chart provided by the Coast Guard summarizing its progress in implementing the Act (Attachment B).

The Act also requires the Coast Guard to work with the FBI to develop training standards for cruise vessel personnel on appropriate methods for prevention, detection, and evidence preservation of criminal activities occurring on board cruise vessels. Beginning two years after the issuance of these standards, a foreign flagged cruise vessel may not call on a U.S. port without at least one crewmember who has received training.

WITNESSES

Panel I

Vice Admiral Brian M. Salerno
Deputy Commandant for Operations
United States Coast Guard

Panel II

Mr. and Mrs. Sameer and Divya Sharma
COSTA CONCORDIA Survivors

Panel III

Ms. Christine Duffy
President and CEO
Cruise Lines International Association

Accompanied by:

Michael Crye
Executive Vice President Technical and Regulatory
Cruise Lines International Association

Mr. George Wright
Senior Vice President Marine Operations
Princess Cruises

Accompanied by:

Ms. Vicky Rey
Vice President Guest Service and Support
Carnival Cruise Lines

Captain Evans Hoyt
Master of NORWEGIAN SPIRIT and PRIDE OF AMERICA
Norwegian Cruise Lines

Mr. Brian W. Schoeneman
Legislative Director
Seafarers International Union

ATTACHMENT A

Approximate Timeline of COSTA CONCORDIA Disaster

Based on Various Press Accounts

- 7:00 p.m.**—COSTA CONCORDIA departs Port of Civitavecchia, near Rome, with 4,229 passengers and crew members on board for a seven-day cruise.
- 9:16 p.m.**—COSTA CONCORDIA deviates from charted course and makes a left turn to get a closer view of the Tuscan Island of Giglio. The detour is approximately five miles off course.
- 9:40 p.m.**—Vessel strikes a rocky outcrop on its port side roughly 300 meters off Giglio.
- 9:45 p.m.**—Electricity is lost.
- 9:55 p.m.**—First alarm is sounded to inform crew of a problem.
- 9:57 p.m.**—Vessel's captain, Francesco Schettino, first contacts vessel operator, Costa Crociere, and reports having lost electrical power and flooding in one compartment.
- 10:00 p.m.**—COSTA CONCORDIA begins listing to port.
- 10:06 p.m.**—Captain Schettino makes second call to Costa Crociere and reports flooding in second compartment.
- 10:08 p.m.**—Captain Schettino attempts to maneuver vessel towards the shore of Giglio by using bow thruster to turn bow to the right. Reports indicate the vessel began listing to starboard at this point.
- 10:14 p.m.**—Italian Coast Guard contacts COSTA CONCORDIA after passengers contact police on land to inform them of problems with the vessel. Concordia crew tells Coast Guard they are experiencing a blackout.
- 10:16 p.m.**—Third call is made from bridge of COSTA CONCORDIA to Costa Crociere to discuss size of the breach. Schettino gives assurances that situation is "under control."
- 10:33 p.m.**—Captain Schettino makes fourth call to inform Costa officials that ship was listing and he was in contact with Italian authorities.
- 10:35 p.m.**—Captain Schettino makes final call to tell Costa officials he planned to abandon vessel.

10:58 p.m.—Abandon ship signal is given and crew begins deploying lifeboats.

11:15 p.m.—First lifeboat reaches shore of Giglio.

12:42 a.m. (Jan. 14)—Coast Guard contacts Captain Schettino while on a lifeboat and orders him back onboard the Concordia.

1:46 a.m.—Coast Guard again calls Schettino and orders him back on board to give an inventory of passengers.

January 31—Search for missing passengers inside vessel is called off due to increasingly dangerous underwater conditions.

February 13—Crews begin pumping out the nearly 2,400 tons of fuel remaining in the COSTA CONCORDIA's storage tanks.

ATTACHMENT B

Coast Guard Efforts to Implement the Cruise Vessel Safety and Security Act of 2010

1.	Identified and engaged DOJ/FBI and DOT/MARAD Subject Matter Experts to address issues that the USCG does not typically regulate to support policy and regulatory development.
2.	Initiated regulatory development; project request approved by Marine Safety and Security Council.
3.	Published a Federal Register Notice seeking information on technologies to detect persons who have gone overboard and video recording systems to inform rulemaking.
4.	Issued Policy Letter 11-09 which established guidelines for Coast Guard Marine Inspectors examining cruise vessels for compliance.
5.	Inter-agency workgroup (DHS/USCG, DOJ/FBI, DOT/MARAD) completed development of crime scene preservation standards and curricula. Issued Policy Letter 11-10 providing Coast Guard Marine Inspectors with guidance for enforcing requirement to have one crewmember onboard trained.
6.	Commenced modification to current reporting procedures for cruise ships to verify at least one person onboard is trained in crime scene preservation.
7.	Established internet based portal (NCC@uscg.mil) to facilitate electronic submission reports. Disseminated information to industry.
8.	Posts statistical compilation of incidents no longer under investigation by the FBI at http://www.uscg.mil/hq/cg2/cgis Developed an explanation of the statistics (cases closed by the FBI) that will be posted on the website to address possible misrepresentations. Recommended verbiage is being reviewed by FBI General Counsel.
9.	Submitted proposal to IMO recommending creation of a new work programme item to develop international guidelines to protect passengers and crewmembers on board passenger ships.
10.	Regulatory development team participated in familiarization tour to garner insight on cruise ship operational environment.
11.	Met with victim advocacy groups and cruise industry. Addressed concerns and provided overview of implementation and enforcement strategy.