



**U.S. House of Representatives**  
**Committee on Transportation and Infrastructure**

Washington, DC 20515

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**SUMMARY OF SUBJECT MATTER**

**TO:** Members of the Subcommittee on Coast Guard and Maritime Transportation  
**FROM:** Subcommittee on Coast Guard and Maritime Transportation Staff  
**SUBJECT:** Hearing on "San Francisco November 2007 Oil Spill Causes and Response"

**PURPOSE OF HEARING**

The Subcommittee on Coast Guard and Maritime Transportation will meet on Monday, November 19, at 10:00 a.m., to receive testimony on the San Francisco, California oil spill. The hearing has been called to consider both the circumstances leading to the allision of the M/V COSCO BUSAN with the San Francisco-Oakland Bay Bridge ("Bay Bridge") on Wednesday, November 7, 2007, and the response of the Coast Guard and other federal agencies to the subsequent spill of approximately 58,000 gallons of fuel oil into the waters of San Francisco Bay.

**BACKGROUND OF ACCIDENT**

According to Coast Guard reports, the M/V COSCO BUSAN hit a support under the Bay Bridge on November 7, 2007, at approximately 8:30 a.m., resulting in a release of approximately 58,000 gallons of fuel oil. Specific characteristics of the vessel are provided below:

Vessel: M/V COSCO BUSAN  
Length: 902 ft.  
Beam: 131 ft.  
Draft: 40 ft.  
65,131 gross tons  
Built: 2001  
Flag: Hong Kong  
Owner: Regal Stone  
Chartered to: Hanjin Group, South Korea

Shipowner's oil spill response contractor: O'Brien's Group who subcontracted for additional capacity with Marine Spill Response Corp.  
Electronics on board: Radar, Electronic Chart System, Voyage Data Recorder, Automatic Identification System ("AIS")

The M/V COSCO BUSAN was loaded with containers for shipment to Pusan, Korea, and had approximately one million gallons of intermediate fuel oil (IFO 380) on board. The fuel was of a type commonly called "bunker fuel" (so named because the tanks that the fuel is stored in are called "bunker tanks"). The crew of the M/V COSCO BUSAN – including its officers – were Chinese nationals. The ship was sold on October 24, 2007, and had a new management company and crew.

### Pilots and Pilotage

A pilot is an experienced mariner – usually one with an unlimited master's license – who assists the master of a vessel during transits into and out of harbors and river mouths. Many pilots are retired from positions on ocean-going vessels. Importantly, the master remains in full command of his or her vessel even when a pilot is on board; as a result, the pilot is generally not liable for his or her actions.

Under Federal law, pilots for ships on international voyages may be licensed by the State in which the pilot operates. Pilots for ships on coastwise voyages are licensed by the Coast Guard.

According to press reports, State Pilotage Commission records indicate that the pilot on the M/V COSCO BUSAN, Mr. John Cota, has been a pilot for 26 years and has been involved in four ship-handling incidents in the past 14 years. He was also reprimanded last year for errors in judgment when he ran a ship aground near Antioch, California.

According to the National Transportation Safety Board, Mr. Cota said he had concerns about the radar on the ship. According to one report, it "conked out" twice – once before departure from the port and once after the vessel was underway. Mr. Cota then relied on an electronic chart system with which he was not familiar. On Wednesday, November 14, the NTSB reported that both radars and other electronic equipment on the vessel performed "as expected", and confirmed that Mr. Cota claimed that he experienced problems with the radar just minutes before the allision.

### Vessel Traffic Service System

According to the Coast Guard, "[t]he purpose of a Vessel Traffic Service (VTS) is to provide active monitoring and navigational advice for vessels in particularly confined and busy waterways."<sup>1</sup> The VTS system in San Francisco, California, uses several land-based sensors (radar, AIS, and closed circuit television sites) that output their signals to a central location where operators monitor and manage vessel traffic movement using a wide range of techniques and capabilities aimed at preventing vessel collisions, rammings, and groundings in the harbor, harbor approach, and inland waterway phase of navigation. The system is also designed to expedite ship movements, increase transportation system efficiency, and improve all-weather operating capability.

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<sup>1</sup> For more information, see U.S. Coast Guard Navigation Center website [http://www.navcen.uscg.gov/mwv/vts/vts\\_home.htm](http://www.navcen.uscg.gov/mwv/vts/vts_home.htm)

VTS San Francisco was one of the first Vessel Traffic Service Systems established by the Coast Guard. It is responsible for the safety of vessel movements from offshore waters to the ports of Stockton and Sacramento. In 1995, Regulated Navigation Areas ("RNAs") were established in the San Francisco Bay Region. These RNAs were developed with input from the Harbor Safety Committee of the San Francisco Bay region, and are designed to improve navigation safety by organizing traffic flow patterns; reducing meeting, crossing, and overtaking situations in constricted channels; and by limiting vessels' speeds.

### History of VTS in the United States

In January 1971, the tankers ARIZONA STANDARD and OREGON STANDARD collided under the Golden Gate Bridge in San Francisco, focusing nationwide attention on vessel safety issues and resulting in enactment of two significant Congressional maritime-related safety laws: the Bridge to Bridge Radiotelephone Act (33 U.S.C. 1201) and the Ports and Waterways Safety Act of 1972 ("PWSA") (33 U.S.C. 1221). The Coast Guard draws its authority to construct, maintain, and operate VTS from the PWSA that also authorizes the Coast Guard to require the carriage of electronic devices necessary for participation in the VTS system. PWSA established order and predictability on United States waterways by implementing fundamental waterways management practices.

Using the San Francisco Harbor Advisory Radar as the operational model and the authority of PWSA, the Coast Guard began to establish VTSs in critical, congested ports. The San Francisco VTS was formally established in 1972. The Coast Guard established VTSs in other port areas throughout the 1970s and 1980s. In 1988, the VTS program was curtailed because of budget cuts. Subsequent to the EXXON VALDEZ disaster in 1989, the Oil Pollution Act of 1990 mandated the Coast Guard to make participation mandatory at existing and future VTSs.

### VTS is not Equivalent to Air Traffic Control

VTS is advisory in nature and differs in its function from an air traffic control system in that air traffic controllers have the authority to direct the movement of aircraft. VTS watch-standers obtain position reports from vessels transiting the system and provide "accurate, complete, and timely navigational safety information" to vessels using the system, and with the use of radar, closed-circuit television cameras, and computer-assisted tracking (i.e., AIS). VTS watch-standers can assist in the safe transit of vessels, but they cannot order a vessel to make changes in its operation, except in emergency situations.

### Volunteers

Hundreds of volunteers have been utilized to clean beaches in several counties. Before the volunteers are able to participate, they are required to have four hours of Hazardous Waste Operations and Emergency Response Standard ("HAZWOPER") training. The State of California Office of Spill Prevention and Response ("OSPR") and the Coast Guard Pacific Strike Team are conducting the training. Supervisors and crew leaders are city and county personnel who are required to have 40 hours of HAZWOPER training. In addition to the required 40-hour training, the supervisors and crew leaders attend the four-hour training with the volunteers. After the volunteers have been trained, they are assigned to a crew and go with the crew leaders to beaches

that have already been professionally cleaned. The volunteers clean the beaches for any additional oil.

### Chronology of the Allision<sup>2</sup>

All the facts and circumstances of the allision of the M/V COSCO BUSAN with the San Francisco Bay Bridge will not be known until the NTSB and the Coast Guard complete their reports. However, these facts are known to date:

At 6:00 a.m., on November 7, 2007, San Francisco Bay Bar Pilot John Cota boarded the M/V COSCO BUSAN at berth 55 of Oakland Inner Harbor. Because of thick fog, he elected to delay departure until the fog lifted.

At about 7:30 a.m., Cota advised Vessel Traffic Services that the fog had lifted and that he intended to depart the harbor via the Delta-Echo span of the San Francisco Bay Bridge. The vessel proceeded at a speed of 11 knots toward the span of the bridge accompanied by the tug REVOLUTION. (Escort tugs are not required for container vessels in this area; thus, the purpose of the tug is unclear.)

Shortly before 8:20 a.m., the radar failed, according to Cota. He then decided to rely on the electronic chart system on board the vessel. Being unfamiliar with the system, he asked the master to identify the center of the Delta-Echo span on the electronic chart, and gave a course and speed for that point.

At 8:20 a.m., Vessel Traffic Services advised Cota that the vessel was off course and heading parallel to the bridge. The vessel made a turn to the right just as the lookout reported the bridge tower ahead.

At 8:27 a.m., the vessel struck the Delta tower of the Bridge with a glancing blow that ripped a long gash in the port-side of the vessel and opened up two "bunker tanks".

At 8:30 a.m., Cota reported to Vessel Traffic Service System that the vessel had hit the Bridge tower. Shortly thereafter, the vessel reported that it was leaking oil. The vessel proceeded out the harbor and eventually was directed to Anchorage 7 in the vicinity of Treasure Island. The vessel had been releasing a sheen of oil while en-route to the anchorage.

According to the AIS, the tug REVOLUTION was near or alongside the M/V COSCO BUSAN until it reached the anchorage. It then immediately returned to a berth in the harbor.

### Issues raised by this casualty

Casualties are rarely caused by one event; they are usually the result of several cascading events. This incident and the subsequent major oil spill resulting from the incident raise several marine safety issues. First, the visibility at the time of departure was limited, and operation of radar

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<sup>2</sup> All of the information on the path of the vessel and the subsequent allision with the Bay Bridge are taken from available press reports, from a recording of the AIS, and from information supplied by the National Transportation Safety Board.

was questionable. Further, the pilot claims that he was not familiar with the Electronic Chart System on the vessel – a system that he ultimately relied on to attempt a transit under the Bay Bridge. In attempting to use the Electronic Chart System, he has claimed that the symbol that the master of the vessel said was the center of the span turned out to be the tower. Compounding the difficulties on the bridge that morning were language barriers that led to poor communication of vital information in a timely fashion.

As noted earlier, the NTSB is conducting an investigation into the circumstances leading up to the allision with the bridge and the Coast Guard response to the release of oil. Issues that should be addressed include:

- Should the pilot have gotten underway in limited visibility if he thought the radar was faulty and was relying on an electronic chart system with symbols with which he was unfamiliar?
- Pilots in other regions use their own electronic chart systems (on laptop computers) to assist them, particularly when they are on a vessel with an electronic chart system with which they are not familiar. This casualty raises the question of whether this is a practice that should be encouraged in other regions – and internationally?
- Did language barriers lead to poor communication and ineffective “bridge management”?
- Should or could the VTS have warned the pilot sooner and more forcefully that the vessel was on course to strike the bridge tower?
- What role did the tug played in the navigation of the vessel, and why did it leave the scene immediately after the *COSCO BUSAN* reached the anchorage?
- Beginning on August 1, 2010, the MARPOL Convention will require “Oil Fuel Tank Protection” (double hulls) around “bunker tanks” for newly built vessels engaged on international voyages. Should there be a similar requirement for existing vessels entering U.S. ports? Should there be a similar requirement for U.S.-flag vessels on coastwise (domestic) voyages?

## OVERVIEW OF RESPONSE TO THE OIL SPILL

### Laws Pertaining to Oil Spill Response

A number of federal statutes address oil spill response, including the Clean Water Act, the Comprehensive Environmental Response, Compensation and Liability Act; and the Oil Pollution Act of 1990 (P.L. 101-380) (known as “OPA ‘90”), which consolidated oil spill response and prevention regimes for vessels and oil platforms under one single program.

**Federal and State Oil Spill Response Plans and Protocols:** As amended by OPA ‘90, the Clean Water Act prohibits the discharge of oil into the navigable waters of the United States and requires the President to assume control of the efforts to respond to oil spills to ensure a single, coordinated response.

The President has three specific options in the event of an oil spill:

- Perform an immediate clean-up operation utilizing federal resources;
- Monitor the response of the party that spilled the oil; or
- Direct the spiller's clean-up efforts.

To ensure that all responsible agencies are prepared to respond to a spill, OPA '90 required the establishment of a National Contingency Plan that clarifies the roles and responsibilities of all federal agencies, including the roles and responsibilities of Coast Guard spill response strike teams. The Plan specifies that the Coast Guard is responsible for leading the response to oil spilled from vessels while the Environmental Protection Agency assumes the lead in responding to oil spilled from facilities that are not involved in transportation. The Plan also defines the notice systems that are to be used to detect oil spills and to trigger notification among the agencies participating in the Plan. Further, the Plan includes specific provisions that address the protection of wildlife and natural habitats.

At the regional level, area committees work with state and local authorities to develop coordinated Area Contingency Plans to guide and coordinate the response to oil spills within certain areas. Area Contingency Plans define the roles and responsibilities of various federal and state agencies in the event of an oil spill and spell out the notification systems among them. Area Contingency Plans can be further broken into Geographic Response Plans that address response needs in smaller geographic areas.

**Vessel Oil Spill Response Plans:** Beginning in 2004, all vessels larger than 400 gross tons (including foreign vessels) were required to create an oil spill response plan and to submit that plan to the Federal Government. The plan lays out the procedures that the vessel's operators will follow in the event that they spill oil to minimize the spill and respond to its effects, including identifying the private companies that will be employed by the responsible parties to clean the spill.

**Vessel Design Standards:** OPA '90 requires that oil tankers operating in U.S. waters have double hulls around the tanks in which they transport oil supplies by 2015 to prevent the spillage of the oil in the event of an accident. Certain design modifications to existing vessels were also required by 2010.

**Establishing Liability in Oil Spills:** A cornerstone of OPA '90 is the polluter pays principle – and OPA '90 is structured to ensure that the party responsible for the spill pays for clean up of the spill within certain liability caps. The definition of a “responsible party” can include the owner, operator, or charterer of a vessel. All vessels over 300 gross tons are required to demonstrate their ability to meet their financial obligations in the event of an oil spill. Once a vessel has made this demonstration, it receives a Certificate of Financial Responsibility from the National Pollution Funds Center.

Under OPA '90, a “responsible party” can be responsible for a wide range of spill-related costs including, but not limited to:

- Loss of personal property;
- Injury to natural resources;
- Loss of revenues resulting from the destruction of property or natural resource injuries; and
- Cost of providing public services to respond to the spill.

Responsible parties are generally covered by certain liability caps. The liability caps for vessels are generally calculated on the basis of carrying capacity and are currently set at \$1,900 per gross ton for double-hulled vessels and \$3,000 per gross ton for single-hulled vessels. The liability for off-shore oil platforms is capped at \$75 million while liability for on-shore and deepwater ports is limited to \$350 million. Liability limits do not apply if the violation of any federal safety or operating requirements caused the spill.

OPA '90 specifically states that it will not pre-empt any State from imposing additional liability requirements with respect to the discharge of oil and, thus, various state laws may apply to oil spills, although the inspection and regulation of the shipping industry is generally a federal responsibility.

**Oil Spill Liability Trust Fund:** The Oil Spill Liability Trust Fund ("OSLTF") was created by Congress in 1986 but its statutory authorization was provided by OPA '90. The OSLTF is administered by the Coast Guard's National Pollution Funds Center.

The OSLTF may be used to:

- Promptly pay for the cost of responding to oil spills;
- Pay the costs incurred by federal and state trustees of natural resources to respond to the impact of oil spills on natural resources, including the replacement of the resources when possible;
- Pay for uncompensated removal costs and uncompensated damages (such as the financial losses suffered by fishermen as the result of an oil spill);
- Pay for the net loss of government revenue or for the increased costs incurred to provide public services to respond to the spill; and
- Pay for federal administrative and operational costs, including paying \$25 million per year for the Coast Guard's operating expenses.

Funding for the OSLTF was originally generated through a five-cent-per-barrel tax on oil; however, the collection of this fee authorized in OPA '90 expired at the end of 1994 and collection of the tax did not resume until April 2006 as authorized by the Energy Policy Act of 2005. Under current law, this tax will sunset in 2014.

The OSLTF has a current balance of approximately \$637 million. The Congressional Research Service (“CRS”) reports that under current projections, the Fund is expected to accrue a balance of \$1 billion by fiscal year 2014; however, possible claims arising from the clean-up of oil spills associated with Hurricane Katrina may impact the OSLTF’s balance and their magnitude has not been reliably calculated.

The Coast Guard has warned that a major spill could use all available resources in the OSLTF. CRS notes that the EXXON VALDEZ spill resulted in \$3 billion in total clean-up and natural resource damage claims. Under current laws, if a vessel identical to the EXXON VALDEZ caused an oil spill, the total liability of the ship if it were single-hulled would be \$285 million and only \$181 million if the vessel were double-hulled.

OPA ’90 specifies that no more than \$1 billion (or the total amount of funding in the OSLTF if the balance is less than \$1 billion) may be used for all eligible costs.

**International Conventions:** The International Convention for the Prevention of Pollution from Ships (known as “MARPOL”) is the most important international convention created to prevent environmental pollution from ships (whether through accidents or through the regular operation of a ship). It is comprised of two treaties (adopted in 1973 and 1978) that have been updated by a number of amendments. Among the many issues covered in the treaty are oil and chemical pollution, garbage, sewage, hazardous materials, tanker safety, protection of Antarctica, protection of the North Sea, and mandatory uses of double-hulled vessels. Vessels that fly the flag of countries that are signatories to MARPOL are subject to its requirements at all times.

MARPOL currently includes six technical annexes, including Annex I, which provides regulations for the prevention of pollution from oil. Under Annex I, vessels are required to have shipboard oil pollution emergency plans and they are required to carry equipment that minimizes oil discharges. Importantly, the shipboard oil pollution emergency plans are intended to guide crew members on the ship on emergency procedures for responding to oil spills. Annex I was implemented by the United States through the Act to Prevent Pollution from Ships (P.L. 96-478). This Act applies only to ships registered in the United States.

The International Maritime Organization (“IMO”) will require double hulls in new vessels around the bunker tanks that power the vessels beginning August 1, 2010; however, the IMO is silent on the retrofitting of older vessels.

### **COAST GUARD RESPONSE TO THE M/V COSCO BUSAN SPILL**

Presented below is a timeline of the Coast Guard’s response on Wednesday, November 7, to the oil spill resulting from the allision of the M/V COSCO BUSAN with the Bay Bridge. This timeline was compiled from Coast Guard situation reports and Coast Guard press releases.

At 8:30 a.m. on **November 7, 2007**, the M/V COSCO BUSAN allided with the Bay Bridge. This created a tear in the vessel’s hull approximately 100 feet long and 12 feet wide, two to ten feet above the waterline. The San Francisco Bar Pilot on board the vessel, Captain John Cota, notified the Coast Guard of the allision. Shortly thereafter, he observed a sheen in the water (indicating an oil spill) and notified the Coast Guard Vessel Traffic Service.

8:33 a.m.: The California Department of Transportation was notified.

8:36 a.m.: The Coast Guard issued a Safety Marine Information Broadcast.

8:52 a.m.: Personnel on board a pilot boat noticed a substantial flow of oil coming from the M/V COSCO BUSAN going into the water.

9:03 a.m.: The Coast Guard dispatched a small boat with a Pollution Investigation Team to assess the incident.

9:20 a.m.: The Coast Guard small boat arrived on scene at the Bay Bridge with a Coast Guard Pollution Investigation Team. The small boat followed the sheen to the vessel anchored in Anchorage 7, west of Treasure Island. At that time, visibility was limited to 100-500 yards. The reported sheen was three-feet wide.

9:22 a.m.: A private Oil Spill Response Organization ("OSRO"), Marine Spill Response Corporation ("MSRC"), was contracted by the vessel's owners to respond to the spill.

9:30 a.m.: The Coast Guard initiated a 100-yard safety zone around the vessel.

9:35 a.m.: The Pollution Investigation Team was alongside the vessel and observed the vessel's damage was a tear in the hull approximately 100-feet long, 12-feet high, and two to ten feet above the waterline.

9:39 a.m.: The California Department of Transportation conducted a bridge inspection and determined the bridge was safe for automobile traffic. Although there was extensive damage to the fendering system around the support struck by the M/V COSCO BUSAN, the bridge's structural integrity was not damaged.

9:50 a.m.: The Pollution Investigation Team boarded the vessel. Marine Spill Response Corporation dispatched its first vessel to the scene.

10:30 a.m.: The Coast Guard notified the California Office of Emergency Services ("OES"), California Department of Fish and Game, and the State of California Office of Spill Prevention and Response ("OSPR").

10:29 a.m.: The bar pilot completed alcohol testing at the Bar Pilot's office. The alcohol test was negative.

10:35 a.m.: The bar pilot completed drug testing at the Bar Pilot's office. The drug test results are pending.

10:37 a.m.: The Coast Guard approved moving the vessel to Anchorage 9 due to insufficient water depth at Anchorage 7.

10:39 a.m.: Marine Spill Response Corporation vessels arrived on scene and began skimming oil with four vessels.

10:44 a.m.: The Pollution Investigation Team confirmed vessel stopped discharging oil. Pollution Investigators and a OSPR officer worked with the vessel's Chief Engineer to determine the exact amount of oil released. The Coast Guard stated that the estimates were difficult to make because a sounding of the tank (to determine how much oil was spilled) could not be obtained because the sounding tube was damaged during the allision. Extensive calculations as well as nuanced study of vessel diagrams had to be completed due to the damaged sounding tube. They also had to take into account the fuel that had already burned during the transit and a four to five degree list in the vessel. M/V COSCO BUSAN's engineers estimated 146 gallons of bunker oil was discharged.

10:56 a.m.: Coast Guard Investigating Officers and Vessel Inspectors board the vessel from a Coast Guard Marine Safety and Security Team ("MSST") small boat to take statements from the crew, conduct a vessel inspection, and investigate the incident.

11:26 a.m.: OSPR reported heavy black sheening reached San Francisco piers from the north of the Bay Bridge.

11:30 a.m.: The vessel's bridge crew and Chief Engineer were tested for alcohol. Testing at this time exceeded the requirement that they be tested within two hours of the occurrence of the accident; part of the delay resulted from the fact that the vessel sought safe anchorage. All test results were negative.

11:53 a.m.: The Coast Guard's Pollution Investigation team collected oil samples.

12:00 noon: A unified command was established. The Coast Guard is the lead agency and agencies represented on the command include the National Oceanic and Atmospheric Administration ("NOAA"), the California Department of Fish and Game, the Environmental Protection Agency, the National Park Service, the State of California Office of Spill Prevention and Response, local counties and municipalities, and the representatives of the responsible party and hired contractors.

12:00 noon: Coast Guard Shoreline Cleanup Assessment Teams ("SCAT") were dispatched to conduct shoreline assessments.

12:00 noon: Coast Guard MSSTs were dispatched to enforce the safety zone placed around the M/V COSCO BUSAN and the bridge abutments.

12:10 p.m.: A press conference was held with the Coast Guard's Federal On Scene Coordinator ("FOOSC"), California Department of Transportation, and OSPR.

12:15 p.m.: The unified command reported the oil release was 140 gallons, and determined it was too foggy to launch an aircraft to determine the spill size.

12:29 p.m.: SCAT team reported piers 28-30 are clear of oil, and the piers north of the Bay Bridge have black oil globules and a black sheen.

12:44 p.m.: SCAT team reported piers 1-2 had oiled birds and wildlife.

12:48 p.m.: The unified command set their objectives, and began coordinated response efforts.

1:05 p.m.: SCAT team reported piers one to three had oil.

1:30 p.m.: A joint press release from the unified command was issued.

1:37 p.m.: An oil boom was set up at Seals Cove.

1:48 p.m.: All aids to navigation in San Francisco's Bay were checked and all were on station and working properly.

1:48 p.m.: A conference call was held between the Coast Guard Deputy Sector Commander, the office of the San Francisco Mayor and San Francisco City and port stakeholders.

2:55 p.m.: The Coast Guard's FOSC got underway on a Coast Guard small boat to assess the damaged vessel, bridge piling fender, and pollution.

3:06 p.m.: Drug testing was completed on the ship's master by a consortium hired by the vessel's operator. The consortium did not test the entire crew as required. Due to the oversight of the consortium and the Coast Guard's Investigative Officer, the remaining crew members were tested 56 hours after the incident (rather than within the 32 hours required by law). The results are pending.

4:00 p.m.: Oil booms were set up at Aquatic Park and Fisherman's Wharf in San Francisco.

4:49 p.m.: California Office of Spill Prevention and Response personnel and the Coast Guard Pollution Investigators reported to the Unified Command that the estimated spill was 58,000 gallons.

5:00 p.m.: The Unified Command met to discuss the change in the amount released.

6:20 p.m.: Approximately 8,000 gallons of product were recovered by skimmers. Recovery operations ceased for the night.

8:00 p.m.: The Unified Command held a teleconference with the California Office of Emergency Services and county representatives regarding the revised estimate of the release amount.

9:00 p.m.: A press release was issued by the Unified Command indicating the new oil release amount.

The Coast Guard stated that all immediately deployable cleanup equipment in the local area was deployed upon the first notification of the release. The Coast Guard has indicated that the delay in reporting the second estimate of the amount of the release did not impact the timely arrival of OSPR or responsible party personnel and resources.

**November 8, 2007:** More than 200 people are involved in the response efforts. Two Coast Guard overflights were conducted to assess the damaged areas. Five skimmers worked in the Bay and three skimmers worked outside of the Golden Gate Bridge to recover oil. A skimmer is a mechanized oil recovery system, which utilizes a belt made from a material that attracts oil.

Approximately 18,000 feet of boom has been placed around the Bay Area to protect the beaches and wildlife.

**November 9, 2007:** More than 200 people from 19 federal, state and local agencies were involved in the response efforts. By 12:00 Pacific Standard Time, approximately 9,500 gallons of oil had been recovered from the water. Eleven skimmers and 13 workboats were working inside the Bay. The Unified Command prioritized the resources to focus on 10 areas inside the bay and 10 areas outside the Bay. Resource placements were prioritized by threat, value of affected natural resources, and severity of reported contamination. Approximately 18,000 feet of boom had been deployed at eight locations inside the Bay and at Bolinas Lagoon. Twelve beaches were closed.

California Governor Arnold Schwarzenegger proclaimed a State of Emergency and directed the California Office of Spill Prevention and Response to access the state-maintained, industry-supported trust fund to ensure all possible resources were being utilized to expedite the cleanup. Under the authority of the California Disaster Assistance Act, a proclamation of emergency allows the Governor's OES to deploy emergency personnel, equipment, and facilities and provide local government assistance to respond to the emergency.

**November 10, 2007:** The Coast Guard supported the U.S. Attorney in conducting a criminal investigation of the casualty. The Coast Guard's preliminary investigation had not discovered any vessel mechanical or system problems; human error was believed to be the most probable cause. The Coast Guard and the NTSB met to discuss the investigation and the Coast Guard transferred the investigation to the NTSB. The M/V COSCO BUSAN was moved from anchorage to the Port of Oakland, Berth 56. After an inspection and investigation, the vessel was detained by the Coast Guard under the International Safety Management ("ISM") Code, meaning it is not allowed to leave California until it is fully repaired and the safety deficiencies have been corrected.

The Unified Command continued containment of the oil using shore-side, boat, and helicopter surveillance patrols. Coast Guard helicopters were used to assess affected areas and determine which areas needed to be skimmed. Volunteers received HAZWOPER training from Coast Guard Pacific Strike Team personnel and then the volunteers deployed to Ocean Beach to assist in cleaning up oil. OSPR conducted wildlife recover training and certified the crews of 12 volunteer fishing vessels to participate and support boom movement and recovery operations. State of California Department of Fish and Game also organized, trained, and tasked volunteers in beach cleaning at organization and indoctrination centers in San Francisco, Marin and Contra Costa counties.

Over 30,000 feet of boom had been deployed, and 11,000 gallons of oily water mixture and 8,000 to 9,500 gallons of oil and seven cubic yards of oily solids had been recovered. More than 450 people from 40 state, federal, local and private agencies were involved in the response, including 200 trained responders who supplemented the existing response teams. Resources included 20 oil spill response vessels, 12 skimmers, 29 work boats, 340 shore cleanup responders, four wildlife assessment teams, 23 shoreline assessment personnel, 20 wildlife recovery teams, 18 commercial fishing vessels deployed booms and assisted in skimming, three helicopters, and one state fixed-wing aircraft. Twenty-two beaches were closed.

**November 11, 2007:** Coast Guard helicopters were used to assess affected areas and determine which areas needed to be skimmed. A total of 12,270 gallons of gauged oil had been collected and decanted to date (decanting is the process of separating oil from oily water collected during the skimming process). More than 900 people from 40 state, federal, local and private agencies were involved in the response. Resources included 16 skimmers, 20 wildlife recovery teams, 20 commercial fishing vessels to deploy boom, and 416 contracted personnel manually cleaning 12 impacted sites in four counties. SCAT Teams coordinated with shoreline cleanup teams to clean contaminated areas. Additional SCAT personnel joined Coast Guard MSST small boats conducting waterside assessments of impacted piers in San Francisco and on Alcatraz.

**November 12, 2007:** Approximately 4,060 gallons of oil were estimated to have evaporated by this time. More than 27,500 feet of boom had been deployed. Resources involved in the response effort included: 1,048 personnel, including 641 shoreline clean up personnel, seven SCAT teams and 20 wildlife recovery teams. Additionally, skimmers and 20 fishing vessels were still deployed. OSPR trained 225 volunteers from San Francisco and 100 from Berkley to clean the beaches in their respective areas. The M/V COSCAN BUSAN was moved from the pier to Anchorage Nine upon approval of their repair plan. Twenty-two beaches remain closed.

**November 13, 2007:** Coast Guard assets conducted overflights for Senate staff, state and county officials, media and oil assessments. More than 12,745 gallons of oil had been collected and decanted; 27,000 feet of boom had been deployed; 11 shoreline cleanup assessment teams, seven SCAT teams, and 20 fishing vessels were deployed. The U.S. Attorney's Office and Department of Justice started conducting criminal investigations.

**November 14, 2007:** The Unified Command has moved from skimming operations to beach clean up, however there are still skimmers deployed to respond to oil sightings. More than 1,500 personnel are involved in beach cleanup and 400 Coast Guard personnel involved in the overall response. Captain Gugg relieved Captain Uberti as the Incident Commander.

Coast Guard chartered an incident specific preparedness review ("ISPR"). The ISPR is intended to be a fact finding body comprised of representatives from The City of San Francisco, California OES, Pacific States-British Columbia Oil Spill Task Force, Pacific Merchant Shipping Association, National Oceanic and Atmospheric Administration, and the Coast Guard. The intent is to identify strengths and weaknesses of the area contingency plan, regional contingency plan and overall preparedness system that was in effect during the incident.

#### ISSUES TO BE CONSIDERED DURING THE HEARING

This hearing is intended to look both at how the M/V COSCO BUSAN allided with the Bay Bridge and to examine the adequacy of the response to the oil spilled from the ship following the allision.

The issues include examining the time that it took from 8:30 a.m. until 4:49 p.m. to increase the estimate of the amount of oil discharged from the COSCO BUSAN. Given the early reports from pilots and other vessel operators in the area, should the estimate of the amount of oil discharged been increased earlier in the day? Even if responders did not know the exact amount of oil discharged, what changes to the response would have been made if there had been a significant

increase in the estimate of oil discharged (or at least notification that it significantly exceeded 140 gallons)? Did the Area Contingency Plan include provisions to require enough resources to be deployed within an adequate timeframe to control a significant oil spill before it disbursed through the Bay?

The hearing will also examine the specific circumstances of this event, including whether state and local officials were notified in a timely manner of the true magnitude of this spill (as is required under the oil spill response plan). Regarding the adequacy of the response to the oil spill, we will examine such issues as whether the response by the federal agencies and the private oil spill response contractors (who were working under contract to the ship's owner) conformed with the federally approved oil spill response plan for the vessel and for the area in which it was operating. Further, we will also examine the impact of this spill on San Francisco Bay, including on commercial activities in the Bay and on the marine environment.

More broadly, the hearing will examine what can be done to ensure that the human factors that were apparently at play in this collision do not factor into future accidents. The hearing will also consider what can be done to improve the Automatic Identification System (transponders)/Electronic Charting system on vessels to improve collision avoidance features. Further, we will assess whether there are difficulties in bridge communications between foreign crew members and U.S. pilots and whether problems are frequently encountered by U.S. pilots who are trying to read an electronic chart in a foreign language that may potentially use different symbols as navigational aids.

The hearing will also provide the opportunity to continue the examination of the Coast Guard's ability to carry out its traditional missions – such as oil spill response – while taking on significantly expanded homeland security responsibilities.

WITNESSES

PANEL I

**The Honorable Gavin Newsom**  
Mayor  
City of San Francisco

Panel II

**Rear Admiral Craig E. Bone**  
Commander  
Eleventh Coast Guard District

**Ms. Deborah Hersman**  
Member  
National Transportation Safety Board

**Mr. William G. Conner, Ph.D.**  
Chief, HAZMAT Emergency Response Division  
NOAA Office of Response and Restoration

**Mr. Mike Chrisman**  
Secretary  
California Resources Agency

Panel III

**Mr. David Lewis**  
Executive Director  
Save the Bay

**Mr. Zeke Grader**  
Executive Director  
Pacific Coast Federation of Fisherman's Associations (PCFFA)

**Captain Peter McIsaac**  
Port Agent  
San Francisco Bar Pilots Association