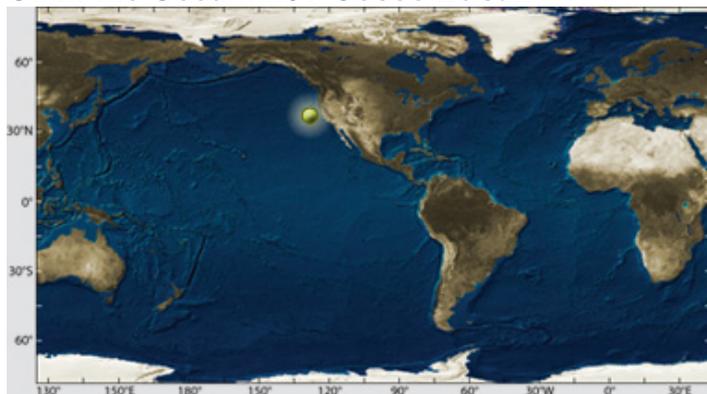


Oil in the Ocean: M/V *Cosco Busan*



Location: San Francisco Bay

Date: November 7, 2007

Lat./Long.: 37°48'29.30"N, 122°23'8.06"W

Material spilled: Bunker fuel

Amount spilled: approx. 53,500 gallons

Spill extent: 150 sq. miles; 26 miles of shoreline

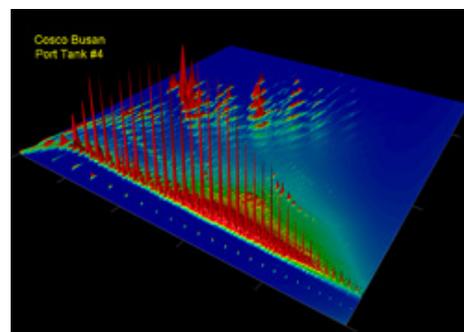
On November 7, 2007, the container ship M/V *Cosco Busan* struck the San Francisco-Oakland Bay Bridge, opening a roughly 100-foot gash in the hull that ruptured rupturing three tanks: two containing fuel for transport and one ballast tank. Approximately 53,500 gallons of heavy fuel oil (HFO), or bunker oil, leaked into San Francisco Bay, impacting nearly 120 miles of coastline.

Heavy fuel oils are widely used to power marine vessels there have only been a few well-studied HFO spills. These fuels are different from other fuels (e.g., diesel and gasoline) in that they are made from the residue left behind after the distillation of crude oil distillation by adding cutting oils to decrease viscosity. Because both crude oils and cutting oils vary, there is no standard composition for HFOs and understanding how this variability in composition affects weathering is crucial to predicting impacts of future spills.



[Enlarge Image](#)

In November 2007, the 900-foot-long M/V *Cosco Busan* struck the San Francisco-Oakland Bay Bridge. The collision tore a 200-foot hole in its hull and spilling 58,000 gallons of heavy fuel oil into San Francisco Bay.



[Enlarge Image](#)

The material represented in this GCxGC chromatogram was collected from Port Tank #4 of the *Cosco Busan* by the United States Coast Guard. Port Tank #4 was damaged when the ship hit the bridge and this is the material that spilled into San Francisco Bay. Each peak in the chromatogram represents a different molecular compound. (Courtesy Robert K. Nelson, Woods Hole Oceanographic Institution)

Publications

Lemkau KL, Peacock EE, Nelson RK, et al., "[The M/V *Cosco Busan* spill: Source identification and short-term fate](#)," *Marine Pollution Bulletin* 60(2010): 2123-2129.

From *Oceanus* Magazine



May 28, 2008

[Popular Way to Assess Oil Spills Can Be Misused](#)

The technique offers a rapid, low-cost way to locate large areas where oil has sunk to the bottom of rivers and oceans. But that doesn't mean it can also effectively identify lesser levels of oil that can have harmful impacts on ecosystems and public health.

Source: Oceanus Magazine

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