
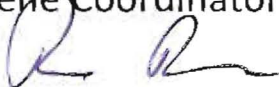
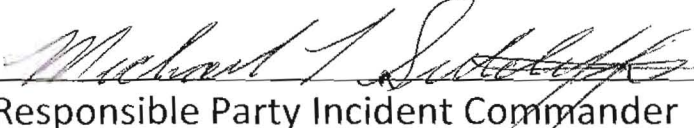


M/V COSCO BUSAN RESPONSE

Submerged Oil Screening Survey Summary Report

FINAL

31 December 2007

	1/3/08
Federal On Scene Coordinator	Date
	1/3/08
State On Scene Coordinator	Date
	1-3-08
Responsible Party Incident Commander	Date

Executive Summary

A rapid assessment for the presence or absence of submerged oil was conducted. Survey sites were selected in areas near herring spawning ground and in potential likely areas.

Two types of screening methods employed for this survey:

1. Passive anchored pom-poms deployed in six eel grass beds known to be used by herring.
2. Boat-based pom-poms towed along transects in three sites in the East Bay region that had moderate or heavy impact of shoreline oiling.

No oil was observed on any of the pom-poms in both the passive anchored method or the boat based pom-pom tow method.

BACKGROUND

The Unified Command (UC) acted quickly to provide a definitive answer to the public and stakeholders (commercial fishermen) by addressing concerns of the possibility of submerged oil. Analysis conducted by the Petroleum Chemistry Laboratory of the California Dept. of Fish and Game Office of Spill Prevention and Response (OSPR) indicates that the fresh oil from the *M/V Cosco Busan* was more buoyant than ocean or bay water. At this point in the spill there is no indication that the weathered oil will have a density greater than the water inside or outside of San Francisco Bay. However, the UC directed the Environmental Unit to design a study plan that would rapidly assess the presence or absence of submerged oil.

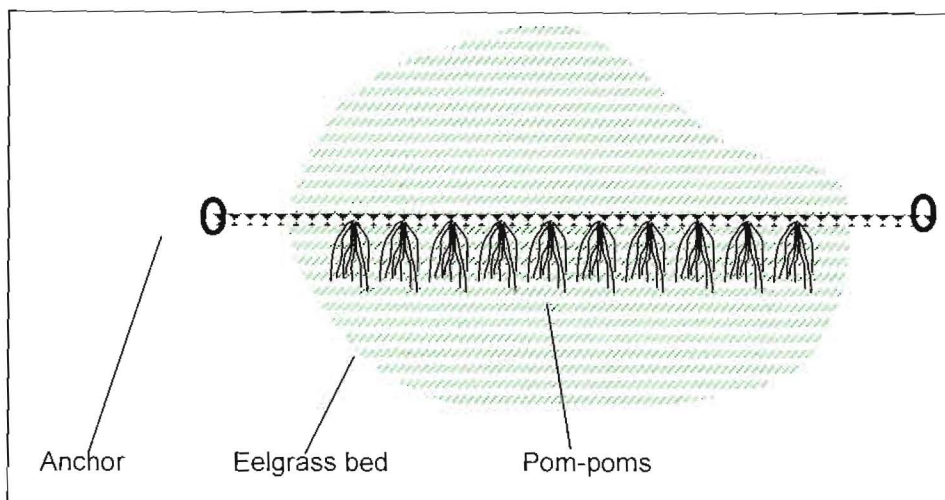
METHODS

Two types of screening methods were selected. The first method is a boat-based pom-pom towed along transects in three sites in the East Bay region that had moderate or heavy impact of shoreline oiling. This method was used successfully during the T/V Athos 1 oil spill. The second method is a passive anchored pom-pom system deployed in six eel grass beds known to be used historically as herring spawning sites.

A Vessel Submerged Oil Recovery System (V-SORS) was constructed to tow through the most likely contaminated areas. There were limitations encountered due to the tug's draft, but the crew made the passes as close to the desired areas as safely as possible. The V-SORS was pulled and inspected at regular intervals during the tracks. A picture of the apparatus is found below:



The passive anchored pom-pom were deployed with great care to minimize disturbance to the eel grass beds. The NOAA Essential Habitat Program, NOAA Office of Response and Restoration, the California Department of Fish & Game Marine Region were consulted including notification to the NOAA National Marine Fisheries prior to deployment. The design included deploying a length of pom-pom (snare boom) of approximately 200' long (actual lengths may vary depending on location) in a subtidal (below the intertidal zone) area close to shore and an eelgrass bed as possible. Anchoring was done in such a way as to maintain the pom-pom length along the bottom, while minimizing bed disturbance. Pom-pom lengths remained in place for approximately 48 hours to maximize the exposure to any possible submerged oiling, if present, and exposure to multiple tidal cycles. A diagram of the apparatus is found below:



SURVEY SITE LOCATIONS

Representative survey site locations were selected based on proximity to historical herring spawning areas and proximity to moderate/heavy shoreline oiling impacts from the M/V Cosco Busan.

Tow Survey Locations:

LOCATION	SHORELINE OIL IMPACT	LENGTH OF TOW
Brooks Island	Moderate to light	1584 ft
South of Brooks Island N37 53.175' W 122 22.950'	N/A	5007 ft
East Shore Bay Park North / Point Isabel	Very light to Heavy	2535 ft
East Shore Bay Park South	Light to heavy	1314 ft
Berkeley Marina	Moderate to very light	2677 ft

Passive Survey Locations:

LOCATIONS	SHORELINE OIL IMPACT	LAT/LON
Northeast Treasure Island Set #2	Light to very light	N 37° 49.9458' / W 122° 22.374'
East Treasure Island Set #1	Very light	N 37° 49.7076' / W 122° 21.96'
East Angel Island Set #2	Moderate to light	Not Retrievable
Southeast Angel Island Set #1	Light to heavy	N 37° 51.4122' / W 122° 25.226'
Keil Cove	Heavy to very light	N 37° 52.7076' / W 122° 26.6028'
Horseshoe Cove	Moderate to light	N 37° 50.0094' / W 122° 28.572'

Keil Cove and Horseshoe Cove were areas of particular interest to the NOAA eelgrass biologists because of observed oil at those particular locations. Field observations included product in and amongst the eelgrass and sediments at low tide.

RESULTS:

No oil was observed on any pom-poms of the towed tracks.

No oil was observed on any of the passive pom-pom site locations. Observations of workers also indicated no signs of oil on their tyvek suits. However, the pom-pom Set #3 was discovered missing at the retrieval phase of the survey. Because the sets were displayed with lighted buoys because of navigational hazards they may have been either vandalized or lost due to the heavy surf actions caused by transport ferries. No herring eggs were sited on any of the pom-poms. Very minimal disturbance of the eelgrass was observed at the East Treasure Island location. All other locations showed no impact to the eelgrass beds. No sheening was observed at any of the locations as the sets were pulled from the bottom.