

In-Water Vessel Hull Cleaning



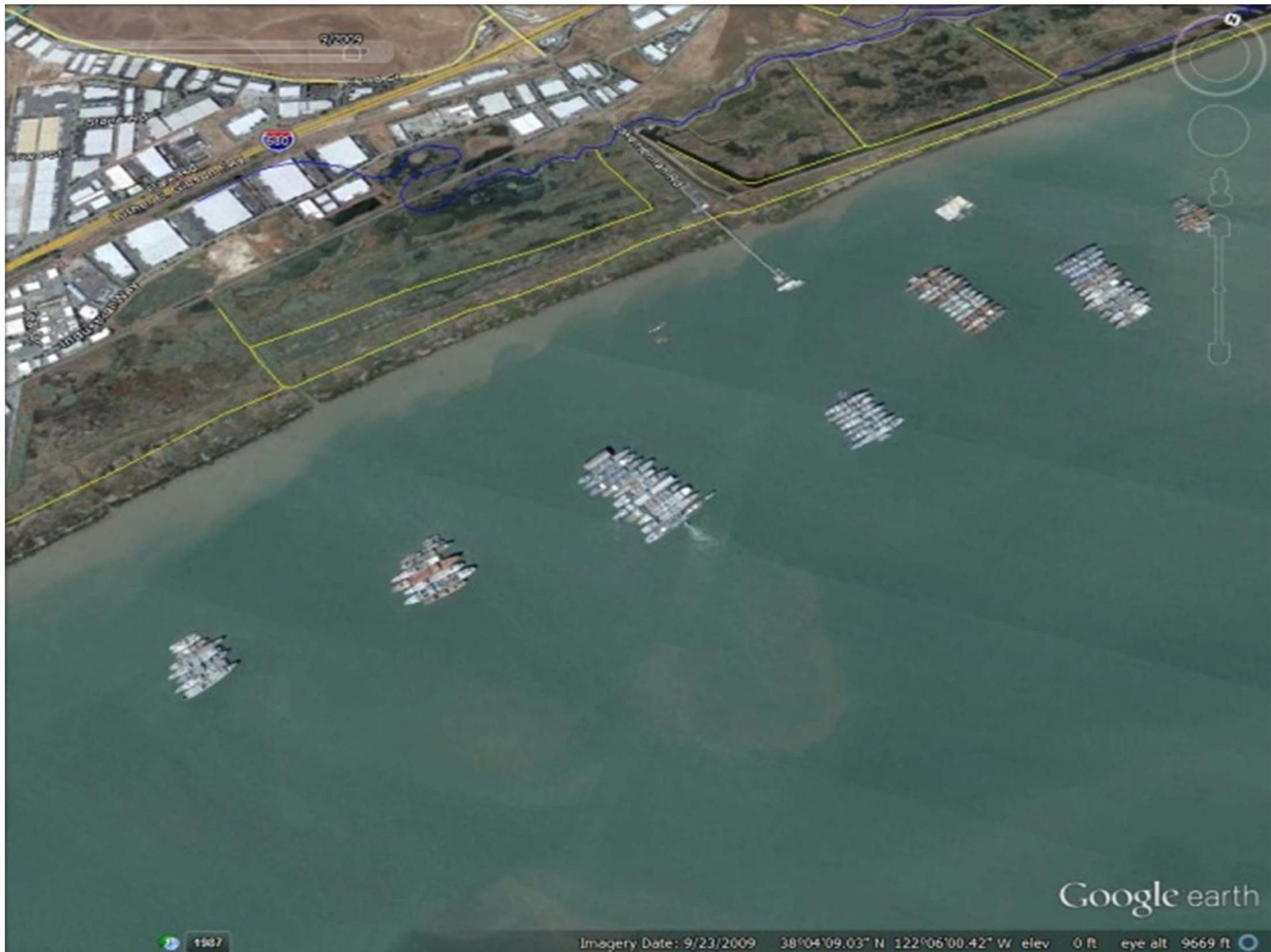
REGULATORY STATUS REPORT

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Google earth

Imagery Date: 9/23/2009 38°04'09.03" N 122°06'00.42" W elev 0 ft eye alt 9669 ft

1987









IN-WATER VESSEL HULL CLEANING

Best Management Practice

Fact Sheet – July 2013



Vessel hull cleaning in dry dock is the preferred hull cleaning method to minimize the impact of hull cleaning to surface waters, when technically and economically feasible. The U.S. Environmental Protection Agency's 2008 and 2013 Vessel General Permits prohibit in-water hull cleaning in California unless conducted using Best Available Technology (BAT) as determined by California State Water Resources Control Board staff. Since they have not yet determined BAT for in-water hull cleaning, San Francisco Bay Regional Water Quality Control Board staff have prepared the following interim best management practice (BMP) for in-water hull cleaning. Until the State Water Board determines BAT for in-water hull cleaning, dischargers are encouraged to employ the following interim BMP, or a more environmentally protective practice. Failure to do so may result in unauthorized discharges of pollutants into waters of the United States and Regional Water Board enforcement.

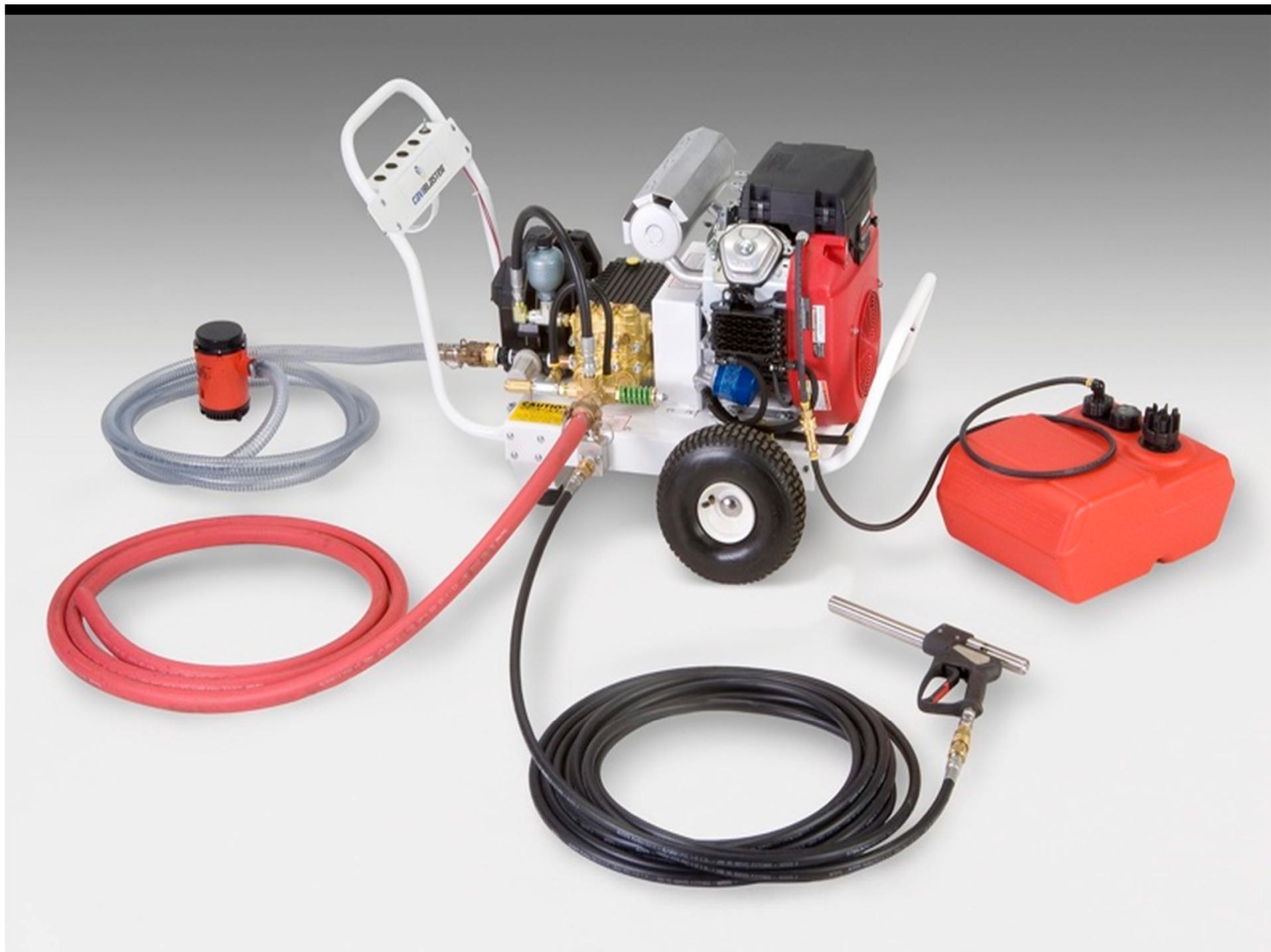
INTERIM BMP

The interim BMP for in-water hull cleaning consists of a containment and collection system capable of collecting all process water generated during in-water hull cleaning and directing it to a treatment system (Figure 1). This interim BMP is not a mandatory treatment system. A different collection and treatment system capable of achieving the same or greater pollutant capture and removal is acceptable.

The interim BMP employs a scrubber unit with rotating plastic brushes to remove attached biological material from a vessel's hull. The scrubber unit is held against the hull with approximately 1,000-pounds of pressure per square foot by a self-contained propeller and an approximately 400-gallon-per-minute (gpm) pump on a pier or barge.

A suction line attached to the discharge outlet from the scrubber unit collects and directs the process water to the pier or barge, where it is filtered by a 100-micron stainless steel mesh screen, followed by two 10-micron filter cartridges in parallel, followed by four 5-micron filter cartridges in parallel, and lastly conveyed through four pressure vessels arranged in parallel, each containing 3,000 pounds of organo-clay. If necessary, additional pressure vessels can be used in series or in parallel to fully accommodate the flow rate and maximize pollutant removal. The discharge point into the receiving water should be a minimum of 10-feet below the water surface. If large liquid storage containers are available, process water can be treated and discharged in batches.













IN-WATER VESSEL HULL CLEANING

Best Management Practice

Fact Sheet – May 2015



Vessel hull cleaning in dry dock is the preferred hull cleaning method to minimize the impact of biocides and fouling organisms to surface waters, when technically and economically feasible, regardless of the vessel hull's coating system.

The U.S. Environmental Protection Agency's 2008 and 2013 Vessel General Permits prohibit in-water vessel hull cleaning in California unless conducted using Best Available Technology (BAT) as determined by California State Water Resources Control Board staff. Since the State Water Board has not yet determined BAT for in-water hull cleaning, San Francisco Bay Regional Water Quality Control Board staff have prepared the following interim best management practice (BMP) for in-water hull cleaning. Until the State Water Board determines BAT for in-water hull cleaning, dischargers are encouraged to employ the following interim BMP, or a more environmentally protective practice. Failure to do so may result in unauthorized discharges of pollutants into waters of the United States and Regional Water Board enforcement.

This BMP should be employed when completing in-water hull cleaning on vessels with biocide-based coatings (to reduce the release of fouling organisms and biocides) and on vessels with biocide-free coatings (to reduce the release of fouling organisms). However, following this BMP is not required when cleaning vessels that utilize a biocide-free coating system and have not operated outside of the Golden Gate since their most recent dry docking.

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