

Frequently Asked Questions

Additional Condition 11 states (VGP 401 Water Quality Certification 2013):
“Propeller cleaning is allowed until the biofouling management regulations for vessels are adopted by the SLC and become effective. After the SLC biofouling management regulations become effective, propeller cleaning is allowed as specified in those regulations. All other in-water hull cleaning is prohibited unless conducted using the best available technologies economically feasible, as determined by State Water Board staff in consultation with SLC staff. This prohibition includes underwater ship husbandry discharges.”

Why is propeller cleaning allowed only until the State Lands Commission (SLC) biofouling management regulations become effective?

Section 71204.6 of the California Public Resources Code (PRC) states:

“On or before January 1, 2012, the commission, in consultation with the board,...shall develop and adopt regulations governing the management of hull fouling on vessels arriving at a California port or place...The regulations shall be based on the best available technology economically achievable and shall be designed to protect the waters of the state.”

The State Lands Commission has been delayed in adopting their biofouling management regulations. Therefore, condition 11 language is written to reflect the timing these regulation become effective.

Propeller cleaning is considered management of hull fouling for these purposes. Until the new regulations are developed and adopted by SLC, there are now no limitations on propeller cleaning in California. After the SLC biofouling management regulations become effective, propeller cleaning is allowed as specified in those regulations. All other in-water hull cleaning is prohibited, including underwater ship husbandry discharges, unless conducted using the best available technologies economically feasible, as determined by the State Water Board staff in consultation with SLC staff.

What is the recommended approach to hull cleaning?

The State Water Board concurs with Section 2.2.23 of the USEPA National Pollution Discharge Elimination System Vessel General Permit (VGP), which states: *Whenever possible, rigorous hull-cleaning activities should take place in drydock, or another land-based facility where the removal of fouling organisms or spent antifouling coatings paint can be contained. If water-pressure based systems are used to clean the hull and remove old paint, use facilities which treat the washwater prior to discharge to remove the antifouling compound(s) and fouling growth from the washwater.*

What are “best available technologies economically feasible” for in-water hull cleaning?

The State Water board staff, in consultation with SLC staff believes that the following interim technologies are allowed:

In-water cleaning for vessels with biocide-free antifouling hull coatings:

For ships with **biocide-free antifouling** hull coatings, in water cleaning is allowed using the approach described in VGP Section 2.2.23 (page 28 of VGP). Section 2.2.23 of the VGP states:

Vessel owner/operators who remove fouling organisms from hulls while the vessel is waterborne must employ methods that minimize the discharge of fouling organisms and antifouling hull coatings. These shall include:

- *Limiting use of hard brushes and surfaces to the removal of hard growth; and*
- *When available and feasible, use of vacuum or other control technologies to minimize the release or dispersion of antifouling hull coatings and fouling organisms into the water column.*

In-water cleaning for vessels with biocidal antifouling hull coatings in non-impaired waters:

In-water hull cleaning on ships with metal-based antifouling hull coatings (i.e. copper or zinc) is allowed only in waters that are not impaired for the metals included in the coating as a biocide. In addition to the above mentioned requirements for biocide-free antifouling paints, in-water hull cleaning must be performed according to VGP Section 2.2.23.

Since best available technologies economically achievable (BAT) for in-water hull cleaning have not yet been established, the San Francisco Bay Regional Water Quality Control Board considers an interim Best Management Practice (BMP) to be acceptable for in-water cleaning of vessels with biocidal antifouling hull coatings. The interim BMP 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. 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.

The San Francisco Bay Regional Water Quality Control Board interim BMP language is subject to change. Please view the following link for the most current version.

http://www.waterboards.ca.gov/sanfranciscobay/publications_forms/documents/In-water_vessel_hull_cleaning_fact_sheet.pdf

System and Discharge Monitoring:

The suction pump flow should be monitored continuously and recorded hourly to ensure that a minimum of 350 gpm (400 gpm is optimal) of process water is recovered from the scrubber unit.

Pursuant to Additional Condition 5 of the 2013 VGP WQ Cert, the State Water Board is preparing to conduct a monitoring study. The purpose of the study is to gather representative water quality data to determine the impacts of various discharges authorized by the VGP and to look at appropriate management measures or BMPs to reduce or eliminate water quality impacts. The consideration of this type of BMP and other treatment technologies capable of meeting these requirements may have the prospect for use in the monitoring study. Participants in the Monitoring Study will be required to conduct Influent and effluent sampling in accordance with the Monitoring Study's protocols.

In-water cleaning for vessels with biocidal antifouling hull coatings in impaired waters:

In-water hull cleaning on ships with **biocidal hull coatings** (e.g. copper based hull coatings) **is not allowed in impaired waters** until there is evidence that such hull cleaning will not contribute to copper or other pollutant loaded. Hull cleaning technologies able to demonstrate such compliance will be subject to BMP's determined by State Water Board staff in consultation with SLC staff. Therefore, the preferred technology in these cases is hull cleaning in drydock as described above and in Section 2.2.23 of the VGP.

What and where are impaired waters located in California?

Waterbodies are considered impaired when water quality standards are not met. In such cases, these waterbodies are placed on the Clean Water Act Section 303(d), which is at: http://www.waterboards.ca.gov/water_issues/programs/tmdl/303d_lists2006_epa.shtml

Does Additional Condition 11 prohibit washing off the sides of the hull above the water line?

Additional Condition 11 pertains only to underwater ship husbandry discharges (i.e., discharges resulting from the prevention or removal of fouling organisms from the submerged portions of ships). Therefore, any washing with fresh or potable water, or cleaning with non-toxic, biodegradable, phosphate-free detergents of the sides of the vessel above the antifouling coating boundary shall be considered equivalent to deck washdown and will not be prohibited by Condition 11 of California's 401 Certification.