

January 21, 2016

To Whom it May Concern:

As an oceanographer, I am well aware of the threat posed by the proliferation of non-native marine species introduced into harbours and ports via the release of untreated ballast water. The magnitude of this problem demands that regulating bodies implement the best evidence-based treatment solutions. The recent decision by the U. S. Coast Guard rejecting the use of the MPN Dilution-Culture Method for assessment of treatment efficacy unfortunately frustrates efforts to develop the most effective and environmentally neutral ballast water treatment solutions.

As written, the U. S. Coast Guard regulations should approve "any system which processes ballast water to kill, render harmless, or remove organisms." The recent decision does not recognize that destruction of the ability to reproduce, which is what the MPN method assays, is in fact adequate to meet the regulations, because organisms in the 10-50  $\mu\text{m}$  range that cannot reproduce are harmless to the environment. Failure to recognize the criterion of "render harmless" as sufficient is significant because it eliminates UV treatment, which destroys the reproductive ability of cells, as a viable treatment option. Elimination of this proven technology is not evidence-based, and it is not in the best interests of society, because UV treatment has no other effects on the surrounding environment.

With this letter I express my strong support for your efforts to encourage the U. S. Coast Guard to reconsider the sound scientific basis for using the MPN method to evaluate the efficacy of ballast water treatment.

Sincerely,



Dr. Paul Hill  
Professor and Chair