

## To Whom it May Concern

Dec 30, 2015

I would like to address my concern below.

The use of cultivation-based techniques has been well accepted in assessing the viability of microorganisms. Methods to determine viability, such as the MPN Dilution-Culture Method, are scientifically reasonable and substantially better than staining to evaluate disinfection efficacy in water treatment. It should be reminded that some technologies, such as UV treatment, can deprive activity of microorganisms without killing them. That's why the action by UV is called "inactivation" instead of killing. As such, inactivation, or destruction of reproductive capacity, can be equivalent to killing potentially invasive organisms in the context of protecting marine water environment. If a ballast water management system is defined as "any system which processes ballast water to kill, render harmless, or remove organisms" (33 CFR § 151.1504), UV-based treatment which unquestionably renders harmless need to be evaluated by a method that can properly detect inactivation.

I deeply appreciate your consideration based on scientific evidence and knowledge.

Sincerely yours,

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