Advocates for Wild, Healthy Oceans

175315

Pacific Regional Office
116 New Montgomery St.
Suite 810
San Francisco, CA 94105

415.979.0900 Telephone
415.979.0901 Facsimile
www.oceanconservancy.org

Formerly the Center for Marine Conservation

The Ocean Conservancy

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Docket Management Facility
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U.S. Department of Transportation, Room PL-401
400 Seventh Street SW
Washington D.C. 20590-0001

VIA FACSIMILE, 202-493-2251, AND U.S. MAIL

Re: Request for Public Comments, "Advance Notice of Proposed Rulemaking: Standards for Living Organisms in Ship's Ballast Water Discharged in U.S. Waters," 67 Fed. Reg. 9632 (March 4, 2002)

To Whom It May Concern:

On behalf of The Ocean Conservancy, WaterKeepers Northern California, and Northwest Environmental Advocates, we welcome the opportunity to provide comments on the above-described Federal Register notice. Our organizations have been active on the issue of ballast water management nationwide and are represented on several local and national tasks forces addressing this important problem.

The Coast Guard is seeking comments on the development of a ballast water treatment goal and an interim ballast water treatment standard. This request comes one year after the Coast Guard's Request for Comments on approaches to setting standards for ballast water treatment.[1] We had been told at the Coast Guard's public meetings last August that a proposed ballast water standard would be released imminently. We are extremely disappointed that the long-delayed release is little more than a request for even more comments on approaches to setting ballast standards. This continued delay is inexcusable in light of the significant and growing impacts caused by ballast water introductions of invasive species.

At a recent Congressional hearing before the Subcommittees on Water Resources and the Environment and Coast Guard and Marine Transportation, at which The Ocean Conservancy testified, a bipartisan chorus of subcommittee members lambasted the delays

[1] 66 Fed. Reg. 21807 (May 1, 2001).

to date in developing a ballast water treatment standard and explored developing an interim standard through emergency rulemaking over the next several months.

We urge the Coast Guard to set an interim standard in place within the next six months, and begin immediately a process for developing longer-term standards for existing and new sources, as described in our comment letter to the Coast Guard dated June 15, 2001. This process should be in partnership with EPA, who has 30 years of experience with standard-setting and who already works in partnership with the Coast Guard under Section 312 of the Clean Water Act. In order to effectively protect our aquatic ecosystems and maximize national consistency of standards, we recommend that the goal of this exercise be zero discharge of invasive species, and the interim standard be at least a 95% reduction in the discharge of invasive species in ships' ballast water. Further details on our responses to the questions raised in the Federal Register notice are provided below.

PROGRAM GOAL

We agree for the most part with Goal 1. As the Federal Register notice states, the program should move towards eliminating ships' ballast water discharge as a source of invasive species. The Aquatic Nuisance Species Task Force similarly concluded in January 2001 that "[e]very effort should thus always be focused at a 100% target level in order to achieve the minimum number of exotic species invasions and thus to secure the maximum protection to human health, economic stability, and natural resources."[2] This also comports with NISA's current mandate to prevent releases to the "maximum extent practicable." However, we believe that if bacteria standards are used, they should be more stringent. The levels listed are national marine water contact/recreational standards; numerous states have more stringent standards than those listed.[3] Moreover, the goal for discharge of total coliforms (including E. coli) should be zero, which is the goal that corresponds to drinking water requirements.[4]

With respect to Goal 2, it may be that the treatment required to meet drinking water standards is sufficient in the shorter term. However, this level of treatment does not necessarily equal "zero discharge," which should be our ultimate goal in all cases.

We disagree with Goal 3. "Direct comparison with ballast water exchange" has proven to be nearly impossible to do in practice, and is the reason that the Coast Guard is still talking about ballast water treatment rather than approving it. We need to move past justifying treatment by comparing it with ballast water exchange. Moreover, this is not a program "goal," as it does not state the objective of the program's actions, which are to eliminate ballast water as a source of invasive species.

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[2] Aquatic Nuisance Species Task Force, "Ballast Water Program Effectiveness and Adequacy Criteria Committee," *Final Report* (Jan. 29, 2001).

[3] *See, e.g.*, http://www.epa.gov/OST/beaches/local/sumtable.html.

[4] The Maximum Contaminant Level Goal (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health; the MCLG for total coliforms and E. coli is zero. *See* 40 CFR 141.52; http://www.epa.gov/safewater/mcl.html#micro.

STANDARDS

A. Interim Standards Should Be Put in Place within the Next Several Months

While the Coast Guard's intent to create an interim ballast water treatment standard is laudable, more effort is needed immediately to set in place both an interim standard and a process for developing longer-term standards for new and existing sources. Proposed processes for setting standards are discussed in the EPA Report[5] and the California Report.[6] For example, the San Francisco Regional Water Quality Control Board has proposed dealing with the serious invasion problems in the Bay and Delta by simultaneously: (a) setting up a stakeholder panel to develop and implement an interim standard that reflects the "best practicable technology" for ballast water treatment as soon as possible, and (b) initiating a longer process to develop discharge standards based on the "best achievable technology." The interim standard, which the agency found could be put in place within six months, would remain in place until the longer-term discharge standards were completed, thereby avoiding several more years of relative inaction.[7]

The interim standard should allow for continued ballast water exchange for those vessels where treatment is currently infeasible, and should provide a heightened standard for treatment that pushes the development of new technologies on which the final standard can be based. An interim treatment standard should be established as soon as possible based on the fairly extensive information already available on treatment systems, including ultraviolet treatment, filtration, deoxygenation, onshore treatment, and ozonation.

The Federal Register notice states in the same breath that Congress intended that approved alternatives "not be less effective than BWE," which "sometimes may remove as few as 39% of the possible harmful organisms from the ballast tank."[8] This appears to suggest that the Coast Guard would consider alternative treatments that remove only 39% ore more of the harmful organisms from the ballast tanks. We would strongly oppose this position.

We recommend instead that the Coast Guard consider no less than 95% removal as the interim standard, which better reflects Congressional intent to move towards zero discharge. Indeed, this is certainly feasible given that the maximum effectiveness of BWE to date is up to 99.9%.[9] Again, this would be a short-term standard that would be put in place

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[5] EPA, "Aquatic Nuisance Species in Ballast Water Discharges: Issues and Options," pp. 31-37 (Sept. 10, 2001) ("EPA Report").

[6] California Regional Water Quality Control Board, San Francisco Bay Region, "Prevention of Exotic Species Introductions to the San Francisco Bay Estuary: A Total Maximum Daily Load Report to U.S. EPA," pp. 84-94 (May 8, 2000) ("California Report"), found at www.swrcb.ca.gov/rwqcb2/download/Tmdl.pdf.

[7] *Id.* at 90.

[8] 67 Fed. Reg. 9632, 9634 (March 4, 2002).

[9] *Id.*

as soon as possible (within several months under emergency rulemaking) while a process for longer-term standards was ongoing.

B. A Process to Develop Longer-Term Standards for Existing and New Sources Must Be Established Immediately

The interim standard chosen as a result of this rulemaking will not be the final standard. Indeed, as technology changes, the standards for ballast water discharge should be regularly reviewed and updated as appropriate in order to work towards the "zero discharge" goal. Accordingly, the Coast Guard should set up a process for developing and reviewing longer-term standards immediately, to ensure that we move towards this goal expeditiously.

Depending upon the status of feasibly-available technology, the longer-term standard is either the "Goal" or a major step towards that Goal. This standard should be either zero discharge or as close to zero as technology can feasibly reach. One way to get there is to follow the Clean Water Act model, as described in our June 15, 2001 comment letter to the Coast Guard. Under this process, EPA sets baseline effluent guidelines based on the "best available technology economically achievable" for the category and class of discharger at issue (BAT).[10] EPA generally does not require use of a particular technology; rather, it sets baseline effluent guidelines based on BAT, and dischargers are free to comply in any environmentally sound manner that is feasible for them. Effluent guidelines can require the elimination of discharges of a pollutant if elimination is "technologically and economically achievable for a category or a class of point sources."[11] Because, according to the Federal Register notice, BWE can achieve up to a 99.9% reduction in the discharge of invasive species, the initial BAT should reflect at least this level of treatment. This recommendation is supported by the Clean Water Act BAT process, under which EPA generally establishes BAT by studying the "cleanest" firms in the industry and basing its conclusions on the maximum pollutant reductions that can be achieved by those firms.[12]

There does not need to be one set of standards for the entire industry. Different treatment requirements may be appropriate for different subcategories of the industry. For example, container and general cargo vessels usually carry less ballast water and have slower pumping rates than bulk carriers and tankers.[13] It is possible that a program could be designed that considers these differences.

BAT is an industry baseline and does not take into account the characteristics of the receiving waters. It thus can be insufficient to protect the different uses and habitat values of a particular ecosystem. In those cases, the Clean Water Act model requires that effluent guidelines be made more stringent to protect those local uses. These "water quality-based

[10] 33 U.S.C. Sec. 1311(b)(2)(A).
[11] *Id.*
[12] *See* Houck, Oliver A., "Of Bats, Birds and B-A-T: The Convergent Evolution of Environmental Law," *63 Miss. L.J.* 403, 451 (1994).
[13] *See, e.g.*, California Report at 64.

standards" act as a backstop to the technology-based standards.[14] They are essential for discharges of invasive species because, unlike most other pollutants, invasive species are capable of reproducing and thereby increasing their abundance and range. Thus, the discharge of even a small amount of invasive species may be enough to threaten existing uses in certain waters. While technology-based standards are often consistent across the country, water quality-based standards can vary by state. However, if the BAT is set to achieve zero discharge or close to it, there will be little if any variability among the states.

Best available technology is the industry baseline for existing point sources; EPA expects all dischargers in the category to at least comply with effluent guidelines based on that standard. However, new dischargers commencing construction after regulations are proposed can more cost-effectively incorporate more stringent treatment technologies than existing vessels, and so should take advantage of that opportunity. Under the Clean Water Act, for example, new sources are subject to "new source performance standards" that are based on "state of the art" technology. These standards are generally more stringent than standards for existing sources.[15] They require the greatest degree of effluent reduction for an individual class, and protect the investment of dischargers in these improved treatments for a fixed period. The system ensures that over time dischargers will incorporate more sophisticated technologies, and provides incentives for innovators to continue to develop better treatments.

Standards for both new and existing sources should be reviewed periodically to incorporate new technologies and move toward the ultimate goal, stated by the ANSTF and supported by Congress, of "no discharge" of invasive species. Reviewing and updating discharge standards to incorporate more effective technology also meets NISA's current mandate to prevent releases to the "maximum extent practicable." We recommend that a review of discharge standards should occur at least every five years.

Finally, in light of EPA's extensive experience managing biological and chemical pollution, and in light of the Coast Guard's experience with shipping and maritime safety, we believe that a formal partnership between these two agencies would greatly improve the likelihood of success of a ballast water management program.

COST/ BENEFIT ANALYSIS FOR STANDARDS

A. Analysis Process Varies with the Type of Standard at Issue

One of the reasons that there has been virtually no action on a regulatory program to date is because of the concern that it could entail high costs.[16] However, the known costs of not regulating are much higher, in the order of billions of dollars to date – and the public, not the dischargers, is paying those costs. On top of these known costs are the "the

[14] 33 U.S.C. Sec. 1312(a).
[15] 33 U.S.C. Sec. 1316(a)(1)-(2).
[16] *See, e.g.*, EPA Report at 35.

incalculable cost of loss of biodiversity"[17] that aquatic invasive species have caused and continue to cause in the absence of an effective control program. The costs of developing and enforcing the program are no reason for any agency to fail to act decisively, as has been the case to date.

With respect to costs, the Coast Guard and partner agencies should be careful to differentiate among interim standards and longer-term and standards for existing and new sources, as the cost assessment exercise should vary depending on the standard at issue. For example, the San Francisco Regional Water Quality Control Board has suggested that the interim standard could be based on "best practicable technology" (BPT), which generally reflects the average of the best existing performances by sources of various sizes, ages and processes within each industrial category or subcategory.[18] Clean Water Act Section 304(b)(1)(B) requires a "cost reasonableness" assessment for BPT limitations, and EPA must consider treatment costs against effluent benefits. However, this inquiry does not limit EPA's ability to adopt BPT limitations that are achievable with existing technology unless the additional reductions are "wholly out of proportion to the costs of achieving such marginal level of reduction." Moreover, the inquiry does not require EPA to quantify the benefits of the requirements in monetary terms.

With respect to BAT, which should be the basis for longer-term standards for existing sources, EPA generally studies the "cleanest" firms in the industry and bases its conclusions on the maximum pollutant reductions that can be achieved by those firms.[19] This process supports the "intention of Congress to use the latest scientific research and technology in setting effluent limits, pushing industries toward the goal of zero discharge as quickly as possible."[20] In setting the BAT limitation EPA must consider the cost of achieving the BAT.[21] However, the EPA is not required to balance the cost of BAT attainment against the benefit of effluent reductions.[22] Instead, it need only develop a "rough idea of the costs the industry would incur"[23] and reasonably conclude that the limitations are economically achievable.[24] In other words, BAT does not require the most economical technology, but instead the best available technology "economically achievable."

As noted above, Section 306 of the Clean Water Act states that new sources, which can comply with stringent technology-based requirements more efficiently than existing sources, must comply with standards that reflect the "greatest degree of effluent reduction achievable" through application of the "best available demonstrated control technologies."

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[17] California Report at 101.

[18] *See* U.S. EPA, *NPDES Permit Writers' Manual* (Dec. 1996). In industrial categories where practices are uniformly inadequate, however, EPA may determine that BPT requires higher levels of control than any currently in place if the technology to achieve those levels can be practicably applied.

[19] *See* Houck, Oliver A., *supra* note 12.

[20] *Kennecott v. United States EPA*, 780 F.2d 445, 448 (4th Cir. 1985).

[21] 33 U.S.C. § 1314 (b)(2)(A).

[22] U.S. EPA, *supra* n. 18, at 51.

[23] *Natural Resources Defense Council v. EPA*, 863 F.2d 1240, 1426 (9th Cir. 1988).

[24] *Reynolds Metals Co. v. EPA*, 760 F.2d 549, 565 (4th Cir. 1985).

With respect to costs, EPA is directed to take into account the costs of achieving the reduction and any non-water quality environmental impacts.

Finally, an adequate cost analysis of treatment technologies should, at a minimum, examine a range of cost comparisons in order to get a better sense of whether treatment costs are reasonable or affordable by the industry. Examples of potential elements of a complete cost analysis include:

- ballast water treatment costs as a percentage of all other shipping industry operating costs, or of the total cost of the delivered goods, or of shipping industry revenues, or of shipping industry profits;
- ballast water treatment costs compared to other costs incurred by the shipping industry for wastewater treatment or other environmental compliance;
- the ratio of ballast water treatment costs to shipping industry revenues compared to the ratio of wastewater treatment costs to revenues in other industries; and/or
- ballast water treatment costs for a port or region compared to the benefits to the industry from recent, government-approved (and often government-funded) port or navigation projects in the port or region.

B. Assessment of Onshore Treatment Costs Is Inflated

Table 1 in the Federal Register notice contains cost estimates for onshore treatment that do not reflect actual costs for some onshore systems, which can be much lower. For example, reference 16 is a study funded by EPA but written by the potentially regulated community.[25] In our comments on the report, we raised a number of concerns regarding the facts and analysis used.[26] For example, we questioned the report's conclusion that the "potential for . . . . [treatment in] POTWs is limited because large volumes of salt water would be incompatible with fresh water bacteria used in POTWs and because of water conservation water quality [sic] objectives,"[27] as it ignores the fact that not all ballast water is saline. Moreover, the issue of whether the level of salt will be high enough to cause problems depends on a number of factors, including: (a) the salinity of the ballast water (which may vary considerably from ship to ship, and possibly from shipping route to shipping route), (b) the relative volumes of ballast water being discharged and of POTW influent, (c) the POTW's operational and output requirements, and (d) the ballast treatment application (will all of the ships' ballast water be treated; will only ballast from overseas be treated; will onshore treatment be used only as a back-up when weather or other factors prevent mid-ocean exchange; will only freshwater ballast be treated; will only ballast discharges into impaired waters be treated; etc.). The San Francisco Estuary Institute and the City and County of San Francisco are currently engaged in experiments to assess the impacts of salt inputs on POTW operations.

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[25] Dames and Moore, *Feasibility of Onshore Ballast Water Treatment at California Ports; Draft Report*, prepared for the California Association of Port Authorities (July 2000) ("CAPA Report").
[26] Letter to Jody Zaitlin, Port of Oakland, from Linda Sheehan, Center for Marine Conservation (Aug. 7, 2000).
[27] CAPA Report at ES-2, 8-9.

In addition, engineers at the East Bay Municipal Utility District (EBMUD) in Oakland believe that their facility could potentially treat all the ballast water from the Port of Oakland, the country's fourth largest container port, and are interested in exploring that opportunity further. Municipal wastewater treatment plants provide a battery of harmful or lethal treatments or conditions that is likely to be more effective at killing or removing organisms in ballast water than the one-stage, or sometimes two-stage, treatments that are typically suggested for ship-board treatment. To the extent that existing POTWs (such as EBMUD) or industrial wastewater treatment plants can be used, the need for purposely-built onshore plants, and their associated costs, would decrease.

ENVIRONMENTAL SOUNDNESS

We appreciate the question in the Federal Register notice regarding environmental soundness. Some of the treatment options that we have investigated have potentially serious environmental side effects. Both the program goal and all standards should incorporate a requirement that approved treatments need to meet all applicable state and federal discharge requirements, including Clean Water Act requirements.

CONCLUSIONS

We are disappointed that the Coast Guard views this notice as merely a "starting point for discussion."[28] Interim standards should have been in place already; the recent Congressional hearing on this issue demonstrated that both Republican and Democrat legislators are interested in establishing interim standards as soon as possible, and ideally within a few months. This schedule does not permit the luxury of "starting" a conversation about interim standards. There is sufficient information to put short-term standards in place now in order to get environmentally sound treatment technologies on board vessels. The discussion the Coast Guard should be "starting" now should be on the first set of long-term standards for both new and existing vessels, not on interim standards. These longer-term standards should be in place by a set date, and certainly within three years.

EPA acknowledges in its Draft Report on ballast water discharges that it promulgated its regulatory exemption for ballast water because it believed at the time that "[t]his type of discharge generally causes little pollution."[29] However, it is now well-accepted that aquatic invasive species introductions "are a serious problem,"[30] that "the number of species successfully invading new habitats is increasing at an increasingly higher rate,"[31] and that the damage caused by aquatic invasives is in the billions of dollars and climbing.[32] Moreover, "unlike chemical or conventional pollutants, waters . . . do not have the capacity to 'assimilate' them without changing the species abundance and diversity of the

[28] 67 Fed.Reg at 9635.
[29] EPA Report at 33.
[30] *Id.* at 39.
[31] *Id.* at 4.
[32] *Id.* at 9.

waters, which is a change to the biological integrity of the system."[33] The time to act to prevent further invasions is now.

We appreciate the opportunity to provide these comments. If you have any questions, please do not hesitate to call.

Sincerely,

Linda M. Sheehan
Director, Pacific Region Office
The Ocean Conservancy
116 New Montgomery St., Suite 810
San Francisco, CA 94105

Jonathan Kaplan
San Francisco BayKeeper
WaterKeepers Northern California
Presidio Building 1004
P.O. Box 29921
San Francisco, CA 94129-0921

Nina Bell
Director
Northwest Environmental Advocates
133 SW Second Ave., Suite 302
Portland, OR 97204-3526

cc: Diane Regas, Deputy Assistant Administrator, Office of Water, U.S. EPA

[33] California Report at 7.