



WORLD SHIPPING COUNCIL
PARTNERS IN TRADE

Comments of the

World Shipping Council

Submitted to the

**United States Coast Guard
Department of Homeland Security**

In the matter of

Notice of Proposed Rulemaking

**Standards for Living Organisms in Ships' Ballast Water
Discharged in U.S. Waters**

Docket Number:
USCG-2001-10486
RIN 1625-AA32

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I. Introduction

The World Shipping Council (“WSC” or the “Council”) submits these comments in response to the United States Coast Guard’s (USCG) Notice of Proposed Rule Making (NPRM) published on August 28, 2009 (74 Fed. Reg. 44632). The Council, a non-profit trade association of twenty-nine international liner shipping ocean carriers¹, was established to address public policy issues of interest and importance to the international liner shipping industry. WSC Members include the leading ocean liner companies from around the world -- carriers providing efficient, reliable, and low-cost ocean transportation for America’s international trade². The Members of the World Shipping Council are major participants in an industry that has invested over \$400 billion in the vessels, equipment, and marine terminals that are in worldwide operation today. The Council’s Member lines include the full spectrum of carriers from large global lines to niche carriers, offering container, roll on-roll off, and car carrier service as well as a broad array of logistics services.

The World Shipping Council and its member companies commend the U.S. government for taking steps to establish a national ballast water treatment standard. We support the NPRM’s objective to establish an environmentally protective, federal ballast water treatment standard consistent with technological, commercial, and economic practicalities. We also support the NPRM’s plan to subject such a standard to a comprehensive practicability review, which will determine whether technologies to meet and verify compliance with the standard can be practicably implemented, are commercially available, and pose no additional risk to the safety of the vessel and its crew or to the environment.

The Council, and its partner associations in the Shipping Industry Ballast Water Coalition (the “Coalition”), have long argued that the U.S. government should establish a uniform, protective national standard for ballast water discharges from ships calling U.S. ports. It is simply unreasonable for ships to be expected to comply with different ballast water treatment standards in the various U.S. states they call. Ballast water treatment technologies are complex engineering systems that cannot be swapped out or modified as a ship moves from port to port. These systems are costly to procure and typically must be installed when a ship is taken out of service or placed in dry-dock.

¹ “Liner shipping” involves vessels engaged in regularly scheduled service to and from U.S. ports (e.g., ships leaving particular foreign ports for particular U.S. ports on a weekly schedule) in contrast to cargo vessels that call on U.S. ports for a particular voyage when hired (e.g., tanker and bulk shipping).

² A list of the World Shipping Council’s Member companies is available at www.worldshipping.org. WSC Member companies carry over 90% of the United States’ international containerized ocean cargo.

We have also consistently argued that vessel owners and operators should not be required to install treatment systems in a given ship more than once. We note that the proposed rule, as drafted, would explicitly require a significant percentage of the fleet -- namely new vessels delivered after January 1, 2012 and before January 1, 2016 -- to install treatment systems at least twice. Such an approach is not reasonable.

Finally, we believe it is critical that the Administration make clear to the regulated community that this rulemaking is the process the federal government will use to set the ballast water treatment technology standards for oceangoing vessels and the time frame for their installation. This NPRM would simply make no sense if the U.S. Environmental Protection Agency were to take an inconsistent approach under its authority pursuant to the Clean Water Act.

II. Comments

A. Background

In the “Background and Purpose” section of the preamble to the proposed rule (page 64 Fed. Reg. 44634), the NPRM states: “We have concluded that, as an alternative to using BWE [ballast water exchange] as the benchmark, establishing a standard for the concentration of living organisms that can be discharged in ballast water would advance the protective intent of NISA [National Invasive Species Act] and simplify the process for Coast Guard approval of ballast water management systems (BWMS).” The NPRM continues, “...setting a discharge standard would promote the development of innovative technologies, be used for enforcement of the BWM regulations, and assist in evaluating the effectiveness of the BWM program.”

The most logical and efficient way to accomplish these objectives is to establish a single environmentally protective, federal ballast water treatment standard; however, the NRPM proposes to accomplish the above objectives using a two-phased approach.

The NPRM’s proposed phase-one ballast water treatment standard is the same as that contained in the International Convention for the Control and Management of Ships Ballast Water and Sediments (BWM Convention), which was adopted by the International Maritime Organization (IMO) in 2004; however, that Convention is far from entering into force, and the

Executive Branch of the U.S. government has not submitted the convention to the Senate for its advice and consent³.

The NPRM's phase-two standard is 1,000 times more stringent than the phase-one standard and contains standards for very small viruses and bacteria cells. Vessels would be required to comply with the phase-one and phase-two standards as follows:

- New vessels delivered on or after January 1, 2012 and before January 1, 2016 would be required to comply with the phase-one standard. These vessels would then be required to install treatment systems to comply with the phase-two standard 5 years after they began compliance with the phase-one standard. (*Note: This means new vessels delivered from 2012 through 2015 would be required to install treatment technologies to comply with two very different discharge standards over a 5-year period*).
- New vessels delivered on or after January 1, 2016 would be required to comply with the phase-two standard.
- Existing vessels (with >5000 cubic meters of ballast water capacity) would be required to comply with the phase-two standards as of the first drydocking after January 1, 2016⁴.

The NPRM includes a "practicability review" of the phase-two standard that the USCG would complete and publish in early 2013 and every two-years thereafter until the phase- two standard (or a modified phase-two standard) is implemented. The practicability review would "determine whether the technology to achieve and verify compliance with the phase-two performance standard can practicably be implemented, in whole or in part, by the applicable compliance dates" and "consider, among other things, whether testing protocols are available to verify that treatment technologies can be expected to comply with the phase-two performance standard." The NPRM requests comments on the appropriate scope of the review, how costs should be considered, and if the review should consider scientific factors beyond technology, such as the relationship between the concentration-based standard and the risk of invasion.

³ As of August 31, 2009, eighteen IMO member states representing 15.36% of the world's tonnage have ratified the Convention. The Convention will enter into force twelve months after at least thirty states representing 35% of the world's tonnage have ratified it.

⁴ This is the same deadline for existing vessels to comply with the phase-one standard. According to the proposed rule, vessels complying with the phase-two standard would, by definition, be in compliance with the phase-one standard.

B. Need for Federal Regulatory Clarity and Consistency

The NPRM proposes a known, international standard that can be met by equipment that is currently commercially available for its “phase one”, but then takes the position that “phase-one” is not the desired environmental objective and establishes the 1000X “phase-two” standard to be installed after a practicability review.

We note that the NPRM does not provide a discussion of what analysis led to the specific “phase-two” 1000X IMO standard proposed through the NPRM. It would appear that the 1000X standard was added during the Administration’s pre-publication internal review process of the proposed rule, and this action presumably reflects the input of the Administration’s inter-agency review process in the rulemaking, including the views of the White House Council on Environmental Quality, the Office of Management and Budget, the U.S. Environmental Protection Agency, and various States that have sought to establish higher standards than the current IMO standard.

However, in light of the potentially dysfunctional current U.S. ballast water regulatory structure (including two different federal statutes and various state approaches) and the lack of clear science about what standard is practical and sufficiently protective of the environment, we believe there is merit in the Administration’s proposal in this NPRM to subject the most stringent standard that has been proposed to an appropriate review process, and then to implement the highest standard that the review determines is feasible to implement (i.e. commercially available and safe to operate) and enforceable.

The Background and Purpose section of the NPRM states: “Nothing in today’s proposal is intended to affect in any way action EPA may take in the future with respect to regulation of ballast water discharges in the vessel general permit under its Clean Water Act authorities.” (74 Fed. Reg. 44634). We recognize that this NPRM, as a matter of law, cannot amend the Clean Water Act. It is apparent, however, that the Coast Guard has engaged in extensive discussion and coordination with EPA and the Administration on this issue, and that this NPRM constitutes the proposal from the Executive Branch of the United States government regarding what vessels calling at U.S. ports will need to do to address the issue of ballast water treatment. It is critical that the U.S. Administration develop a clear national standard in consultation with the states, and other stakeholders to ensure development of a standard that is environmentally protective, but also uniform in its application since differing standards are unworkable for mobile sources that operate across state and national boundaries. It is therefore essential that the Executive Branch of the U.S. government make it explicitly clear when it issues a final rule on this matter, that as a policy matter the standards finalized in this docket are the standards

that will be established by the U.S. government. If the Executive Branch cannot do that, and if multiple federal agencies will address the issue of what technology ships must install in different ways, then we respectfully recommend that this proceeding should be suspended.

C. Recommended Approach

The NPRM asks on page 44642: "Would an approach that bypassed phase-one and went directly to the phase-two standards be practicable and provide greater protection to the aquatic environment?" We believe such an approach would be practicable and would be environmentally and economically superior to the proposed two-phased approach.

Before we discuss our recommended approach, it is important to note that there are a limited number of vessel operators that have already installed ballast water treatment technologies meeting the IMO standard. They have done so on their own initiative, in a good faith effort to address this issue, and not pursuant to any regulatory requirements. These early adopters have made substantial investments in time and money to advance the development and use of biologically effective ballast water treatment systems. We strongly recommend that this limited number of vessel operators not be required to re-install treatment technologies pursuant to this rule and should be allowed to operate their installed systems for the remaining life of the system or life of the vessel, whichever comes first. Requiring these early technology adopters to reinstall treatment technologies would penalize parties that voluntarily acted to treat ballast water discharges before it was mandated and would create a strong disincentive for future environmental innovation by vessel owners and operators.

The World Shipping Council recommends that the Administration dispense with the two-phased option in the NPRM and focus the government and industry on the discharge standard that meets the NPRM's stated objective, namely the phase-two standard (1000X the IMO standard). We recommend that the final regulation drop the phase-one IMO standard and immediately undertake a practicability review of the proposed phase-two standard. In this practicability review, the USCG should determine if the phase-two standard is practicable, and if so, establish a reasonable timeline for industry to install approved technologies, and initiate the process for Coast Guard approval of technologies that meet the standard.

If the practicability review were to determine that the phase-two standard is not practicable, the review process should allow the Administration to adopt a standard that is determined to be the most biologically effective standard that is practicable. The specific year that the phase-two or modified phase-two standard would be adopted would rest with the results of the practicability review and the state of current technology development.

This recommended approach would be more environmentally protective and much less costly than the NPRM's two-tiered approach, which would require ships to spend considerable time and money to procure and install treatment technologies to comply with a standard the NPRM does not today believe is sufficiently protective to be the final standard. The environmental goal presumably is to get the maximum number of vessels to the highest standard as quickly as possible. Requiring vessels to install phase-one technologies before moving to phase-two (or modified phase-two) compliant systems would slow the deployment of potentially more protective technologies on a significant percentage of the fleet, and would require investment of billions of dollars in technology that one can reasonably project will be superseded upon conclusion of a practicability review. In short, we believe going straight to phase-two is likely to both enhance biological protection and save money as vessels would face one technology installation instead of two to arrive at a potentially more protective standard.

The benefits of this approach are that it would:

- 1) expedite adoption of the more environmentally protective phase-two or modified phase-two ballast water treatment standard;
- 2) focus technology developers and the regulated community on one standard -- the phase-two or modified phase-two standard -- rather than dividing their attention between production and installation of phase-one treatment technologies and performing research and development of more stringent treatment technologies;
- 3) eliminate the requirement that vessels install costly treatment technologies to comply with a standard (i.e. phase-one) that the federal government knows today is not its intended final standard;
- 4) avoid the need to use grandfathering provisions for vessels installing treatment technologies to meet the phase-one standard;
- 5) focus on review and attainment of a standard that no state could argue is inadequate; and
- 6) be consistent with comments from environmental interest groups who support the phase-two standard, but not the phase-one standard.
- 7) peg the installation of treatment technology on ships to the NPRM's practicability review process.

In the alternative, if the Administration insists on pursuing the less environmentally protective and more costly two-tiered approach, then vessels that are required to install treatment systems to meet the phase-one IMO standard must have those substantial investments protected by a "grandfathering" provision, namely that the investments in the installed technology should be valid for the remaining life of the vessel or life of the treatment

system (whichever occurs first). This is necessary to prevent a given ship from having to procure and install costly ballast water treatment systems more than once.

Ballast water treatment technologies are major shipboard engineering systems that are very costly⁵ to procure and install and have been designed to operate for the normal service life of a large commercial vessel, which is 20-25 years. We expect that the cost to the industry of these systems is likely to exceed \$7 billion in order to promote an environmental objective that is understandable, but almost impossible to quantitatively assess from a benefit perspective. These are systems that require “life of the vessel/life of the system” grandfathering once installed. It would be unreasonable for the Administration to, on one hand, select a two-tiered approach, which by design would delay installation of potentially more environmentally protective treatment technologies on ships, and then argue on the other hand that it could not grant “life of the vessel/life of the system” grandfathering for environmental protectiveness reasons.

In summary, the preferred approach of moving directly to the phase-two standard would produce a better environmental result, faster, without subjecting the industry to the unacceptable burden of having to install multiple technologies in a given ship. As noted in Part II. B. of our comments above, our support for this approach and this rulemaking are based on the premise, however, that this NPRM is in fact the way that the Administration will address ballast water treatment requirements on ships. There are billions of dollars of capital investment riding on the assumption that the U.S. government will be speaking with a consolidated and consistent view to the global shipping industry on this issue through this rulemaking.

D. Comments on the Practicability Review

1) Comments on the Scope of the Practicability Review

The NPRM proposes completing a federal practicability review in early 2013 -- at least three years prior to the first compliance date set by the proposed rule. The USCG would then update the practicability review at least every two years until the phase-two performance standard is fully implemented. As noted earlier in these comments, we recommend that the USCG not wait to perform its first practicability review, but instead commence its review of the proposed phase-two standard immediately. The review would then establish a reasonable timeline for industry to install approved technologies, and initiate the process for Coast Guard approval of technologies that meet the standard. Our proposed approach would thus make

⁵ We discuss the costs to procure, install and operate and maintain ballast water treatment technologies in Section II. E. below.

the practicability review the key determinant regarding when vessel operators should be required to install treatment technologies to comply with the phase-two standard or a modified standard, if the phase-two standard is found not to be practicable

We support the NPRM's stated objectives for the practicability review, which are to 1) determine whether technology to achieve the performance standard can practicably be implemented and 2) determine whether testing protocols that can assure accurate compliance measurement can be implemented. We believe it is logical that part of the practicability review would be to determine whether technologies to achieve the standard are commercially available, affordable, and pose no risk to the safety of the vessel and its crew or to the environment.

To the extent possible, the review must consider shipboard testing of treatment technologies to determine what standard each technology can achieve in an at-sea operating environment.

We do not believe treatment technologies can be "practicably implemented" until they can be scaled and manufactured in sufficient numbers to meet the needs of the regulated community. The NPRM estimates that over 7,500 U.S. and foreign-flagged ships will need to install technology to meet the treatment standards. While not all of these ships will install the technology at the same time, approved technology vendors must be able to produce, deliver and install sufficient quantities of these approved systems to permit installation in accordance with the installation timeline.

2) Comments on the Review of the First Established Standard

As a matter of general principle, we accept the NPRM's assessment that a numeric (i.e. concentration-based) ballast water treatment standard is more effective than mid-ocean ballast water exchange, which can be highly variable based on the vessel, voyage, exchange method, ballast system configuration, and other factors. The NPRM acknowledges that "the scientific understanding of the quantitative relationships between the frequency and magnitude of introductions and the probability of successful establishment is not well understood for aquatic species" and argues that moving to a numeric standard would "assist in evaluating the effectiveness of the BWM program."

We agree with the NPRM's conclusion that using numeric discharge standards should enable the government to better assess the effectiveness of the BWM program. We advocate above that the Administration undertake an immediate practicability review of the proposed

phase-two standard, and then establish a standard that is determined to be the most biologically effective standard that is practicable. We do not think it would be reasonable to expect the Administration to try to assess in advance the biological effectiveness of this “first established standard” because there would be no other numeric standard to compare to this standard. We do agree, however, with the suggestion at page 44635 of the NPRM that the question of the relationship between the frequency and magnitude of introductions and the probability of successful establishment should be a priority for future research. Without that basic “dose response” baseline, there can be no scientifically defensible future adjustments to discharge standards. In short, treating a lack of current science as meeting the “best available science” requirement of NISA may be a practical necessity in order to adopt an environmentally protective and economically rational standard in the near future through this rulemaking. Substituting guesswork and political compromise for science cannot, however, be the long-term strategy.

We strongly believe that if the Administration later modifies the standard that is established after the practicability review of the 1000X IMO standard, such a revised standard should apply only to new vessels. We urge this approach because a significant percentage of the world’s fleet will have already installed treatment technologies to comply with the most stringent, practicable standard that the Administration has set based on the practicability review of the phase-two 1000X IMO standard. As discussed later in our comments, the cost of installing phase-one IMO treatment technology would probably exceed \$7 billion. The cost to install technology on ships that complies with the standard that emerges from the practicability review of the 1000X IMO standard would almost certainly be at least as much again if not significantly more than that. It would be wholly unreasonable to strand the huge capital investment that much of the global fleet will have made to comply with the U.S. regulations.

E. State Ballast Water Requirements and Technology Reviews

Ships in the global fleet need to know with confidence the technology that a ship will need to have installed. We have noted above that liner shipping vessels may call in ports in many U.S. States on a single voyage to the United States. A vessel deployed in foreign-to-foreign commerce today may need to be deployed in U.S. commerce tomorrow.

Under the current regulatory regime, different U.S. States have taken different approaches to ballast water treatment technology standards. A ship can be reasonably expected to comply with one standard. Treatment systems are not going to be swapped out or modified to satisfy differing requirements from U.S. states. If a protective national ballast water treatment standard that is accepted in every U.S. state is to be established, it is

important that the Administration carry out this rulemaking with consideration of the interested States' input. We therefore recommend that the USCG, acting on behalf of the Administration, reach out to the various U.S. States that have expressed a desire to establish ballast water treatment standards to solicit their comments on the NPRM.

The States of California and New York and others have established their own ballast water discharge treatment standards through State legislation or as part of their Clean Water Act Section 401 Certifications. Although neither California nor New York has committed to approving technologies that comply with their respective standards, the California State Lands Commission (SLC), pursuant to State legislation, conducted technology reviews of ballast water treatment technologies in 2007 and 2009. On October 15, 2009, the SLC released an update to its 2009 review. This review found that "at least seven ballast water treatment systems...have demonstrated the capability to comply with California's performance standards for the discharge of ballast water." The review went on to state that "all seven systems are commercially available at this time." Since SLC's January 2009 review found that only two systems had demonstrated the capability to comply with California's performance standards, the October update seems to suggest that technologies are progressing rapidly and are commercially available to meet the 1,000 times IMO standard.

While we appreciate the SLC's efforts to monitor the development of treatment technologies, our direct discussions with most of the promising technology vendors identified in SLC's October update have led us to a different conclusion. None of the technology vendors with whom we spoke would provide assurances that their technologies could reliably meet the 1,000 IMO standard or any standard other than the IMO standard. Although the technology vendors were pleased to have been identified in SLC's reports, none could explain how the SLC could make such determinations given the scope of independent testing that had been done on their treatment systems. One vendor stated that it would be impossible to measure any treatment system's compliance with the 1,000 times IMO standard because no current 1,000 times IMO testing protocol exists and one would need to test a massive volume of water to generate a scientifically credible result.

We provide this information to help illuminate the findings of the SLC reports and to stress the need for the federal government to perform its own careful and credible analysis when it subjects the phase-two standard to a practicability review. Even though the National Invasive Species Act (NISA) does not give the USCG express authority to affirmatively preempt State ballast water regulations as a matter of law, a rigorous and credible technology review process should produce a standard that will be respected by all in practice.

F. Applicability of the Rule

We wish to confirm that the proposed rule would only require the installation of treatment technology if a vessel discharges ballast water in U.S. waters. If a vessel does not discharge ballast water in U.S. waters, even if it has ballast tanks, it does not need to install treatment technology. Furthermore, in lieu of installing onboard treatment technologies, vessels must have the option to discharge their ballast water to shore or barge-based ballast water reception facilities.

G. Comments on Costs

The NPRM and the draft Programmatic Environmental Impact Statement fail to provide an accurate or credible cost analysis of the proposed rule. Even though the proposed rule clearly would apply to foreign vessels, the NPRM inexplicably states: “we consider the costs of this rulemaking to involve U.S. vessels,” (74 Fed. Reg. 44643). The NPRM notes that, of the 7,575 vessels that would be required to install ballast water treatment systems to comply with this rule, 4,959 would be foreign flagged vessels, yet it considers the costs only to the U.S. flag vessels, or roughly one-third of the regulated vessels as recognized in the NPRM’s own data. However, even this understates the number of vessels that will be impacted by this regulation. As noted earlier, vessels’ deployments are frequently changed to address the demands of commerce. A vessel that is engaged in foreign-to-foreign commerce today may be switched to serving U.S. commerce tomorrow. As a result, simply counting the number of vessels currently calling U.S. ports understates the number of vessels that are affected by this rulemaking, because vessel operators will need to consider installing technology meeting the resulting standards even on vessels not currently engaged in U.S. commerce, so that such vessels would be available for operations in U.S. commerce should the need arise.

The NPRM might be able to argue that the cost analysis should only include U.S. flag vessels if it were implementing an international Convention that was coming into force and being applied by maritime nations around the world. But that is not the case here. The IMO BWM Convention, which the U.S. has not ratified and has not suggested it will ratify, has not entered force, is not likely to enter force anytime in the foreseeable future, and is not applicable to this proposed rulemaking. This rulemaking is solely the regulatory act of the U.S. government, and all its compliance costs for all parties covered by the rule must be considered.

Installing ballast water treatment technologies pursuant to the NPRM will be an extremely expensive undertaking that warrants properly constructed cost analyses. As we will discuss later in this section, our review indicates that procuring, installing, and maintaining a

single ballast water treatment technology installation per vessel is likely to cost \$1 million or more per vessel. Compliance with this rule would appear likely to cost the regulated community substantially in excess of \$7.5 billion. While we agree with the Administration that addressing aquatic invasive species in ballast water discharges through this NPRM is appropriate, it is illogical and incorrect to ignore the cost that this rule would impose, as a matter of unilateral U.S. regulation, on the foreign-flag vessels calling at U.S. ports – which happen to be the substantial majority of the regulated entities covered by this regulation as the government’s own statistics show. This rulemaking requires an analysis of the costs for both U.S. and foreign vessels to comply with the two proposed discharge standards.

The California SLC 2009 survey contained cost estimates for 14 ballast water treatment systems. These estimates ranged from \$150,000 to \$2.3 million per system, with the average cost of a treatment system being \$895,000. These estimates do not include the costs of taking the ship out of service, costs of making necessary ship modifications, or the operating and maintenance costs once the system is operational.

A Danish Shipowners’ Association (DSA) study completed in June 2009 provided detailed cost estimates for five ballast water treatment technologies on vessels with ballast tank capacity and pump characteristics similar to those of an average containership in U.S. trades. Purchase costs ranged from \$640,000 to \$1.67 million, with the average purchase cost for a treatment system being \$1.08 million. Further, the average installation cost for a system was \$134,000, and the average annual cost of operations and maintenance was \$21,000 per system.

The above studies indicate that the average per vessel cost to procure and install a ballast water treatment system is likely to exceed \$1 million and the highest cost systems exceed \$2 million dollars. Those costs could be higher depending on what the practicability review determines is the appropriate standard.

We further note that the NPRM’s two-phased approach would only exacerbate the cost under-reporting in this proceeding. The NPRM would require new vessels delivered between January 1, 2012 and January 1, 2016 to comply with the phase-one standard and then comply with the phase-two standard five years thereafter. This would mean that each of these vessels would be required to perform two system installations over five years. To calculate the additional cost of this duplicative installation, we multiplied the average cost to procure and install a treatment system according to the DSA study (\$1.21 million) times the estimated number of new liner vessels that will enter U.S. service between 2012 and the end of 2015 (520 ships). This would equate to an additional cost of \$630 million and total compliance costs over five years exceeding \$1.2 billion for just these liner shipping vessels if the current NPRM two-

phase proposal were adopted. We do not know what the added cost would be to the other sectors of the maritime industry from this duplicative technology installation requirement.

H. Responses to Additional Technical Questions Posed by the NPRM

1) Are there technology systems that can be scalable or modified to meet multiple stringency standards after being installed?

Our discussions with treatment technology vendors indicate that the answer to this question is highly dependent on the initial and subsequent stringency standards. No vendor with whom we spoke could commit to upgrading its phase-one system to the phase-two standard. Vendors generally noted that they really only know how their technologies perform with respect to the IMO/phase-one standard, because there is a standard testing protocol for that standard. No such protocol exists for the proposed phase-two standard or any other discharge standard. Consequently, a vessel owner could not today select a technology with any confidence that the technology could be upgraded to meet the phase-two or modified phase-two standard.

2) What are the additional costs for vessels compliant with the phase-one standard to go to the phase-two standard?

Treatment technology vendors with whom we spoke could not provide cost estimates for any standard other than the IMO/USCG phase-one standard. As noted above, technology vendors could not commit to upgrading their systems beyond the phase-one standard. Consequently, cost estimates for upgrading treatment systems were not available. Technology vendors we spoke with stated that complete re-installation would be necessary if the installed treatment system was not capable of meeting the phase-two standard.

III. Conclusion

The World Shipping Council and its member companies commend the Administration for taking steps to establish a national standard for ballast water discharges from ships calling U.S. ports. We support the NPRM's objective to establish an environmentally protective, federal ballast water treatment standard at the earliest date possible consistent with technological, commercial, and economic constraints. We recognize that numerous factors must be considered when proposing and implementing a ballast water treatment standard. We believe that bypassing the interim phase-one standard and moving directly to the phase-two

standard offers a more biologically protective solution that would also prevent vessels from having to install treatment technologies more than once.