WORLD SHIPPING COUNCIL

May 3, 2007

Via Fax and Electronic Mail (Original by Mail)

Susan E. Dudley, Administrator
Office of Information and Regulatory Affairs
Office of Management and Budget
725 17th St., N.W.
Washington, D.C. 20503
Facsimile: (202) 395-6566/7285

Re: National Oceanic and Atmospheric Administration/National Marine Fisheries Service Notice of Proposed Rulemaking on North Atlantic Right Whales; RIN 0648-AS36

Dear Administrator Dudley:

The World Shipping Council is a Washington, D.C.-based trade association that represents all of the major liner shipping companies that serve the United States foreign trade. In October of 2006, the Council filed comments in response to a regulation proposed by the National Marine Fisheries Service (NMFS) of the National Oceanic and Atmospheric Administration (NOAA). That regulation, the stated purpose of which is to protect North American Right Whales, would require that commercial vessels operating within 30 nautical miles of mid-Atlantic ports during specified seasons reduce their speed to a maximum of 10 knots. *Proposed Rule to Implement Speed Restrictions to Reduce the Threat of Ship Collisions with North Atlantic Right Whales*, RIN 0648-AS36, 71 Fed. Reg. 36299 (June 26, 2006). I write to reiterate the concerns that we raised in our earlier comments. I attach a copy for your convenience.

The proposed regulations would impose significant economic costs on the liner shipping industry and on our customers. Notwithstanding those costs, we would have no objection to the proposed regulations if we believed that there was a reasonable probability that those regulations, if adopted, would protect right whales. The problem with the proposal is that the agency's own analysis provides virtually no basis to believe that the proposed speed reduction regulations will have the desired effect. More specifically, the Council pointed out the following in the comments that it filed in October of 2006 with NMFS and with OIRA:

1. To the extent that vessel speed is related to the probability of a whale strike, what evidence there is suggests that lower speeds could actually increase, not decrease, the probability of a strike. (Council Comments at 4-7)

2. The data indicates that the threat from vessel strikes associated with military vessels and vessels less than 20 meters in length, both of which are exempt from the proposed rules, is substantially greater than any threat from containerships. There is no basis for adopting an economically burdensome rule that includes only those vessels that are least likely to cause the harm sought to be avoided. (Council Comments at 3, 6-7)

3. There is virtually no evidence to indicate a correlation between vessel speed and the severity of injury in the event of a collision. (Council Comments at 7-9)

4. With respect to the geographic scope of the rule (30 nautical mile radius of the entrance to mid-Atlantic ports), NMFS and the Navy previously determined during the Endangered Species Act consultation process that 20 nautical miles was an appropriate radius for any operational restrictions. (Council Comments at 12-13)

The World Shipping Council has supported and continues to support the establishment of Areas to be Avoided and Dynamic Management Areas based on known aggregations of right whales. Although such dynamic measures have the capability of disrupting the predictability of vessel schedules and therefore come with their own costs, those measures also offer something that the proposed rule does not – the possibility of being effective. As we have maintained in our comments and at public hearings, if the agency can tell vessels where the whales are, then those vessels will take the necessary measures to avoid them.

We write simply to request that you use your office's review process to ensure that any rule that emerges from this process has a reasonable likelihood of achieving its stated goals. We are concerned that the government will take action despite the fact that there is no meaningful scientific basis to conclude that the chosen action will protect right whales.

Please do not hesitate to call on us should you have questions or should you require additional information. Thank you for your kind attention to this matter.

Sincerely,

Don O'Hare

Donald L. O'Hare
Vice President

cc: Mr. David Rostker (david_rostker@omb.eop.gov)

WORLD SHIPPING COUNCIL
PARTNERS IN TRADE

Comments of the

World Shipping Council

Before the

National Marine Fisheries Service

In the matter of

Proposed Rule to Implement Speed Restrictions to Reduce the Threat of Ship Collisions with North Atlantic Right Whales

RIN 0648-AS36

October 5, 2006

I. Introduction

The World Shipping Council ("the Council", "WSC" or "we") submits these comments in response to the Notice of Proposed Rulemaking (NPRM) published by the National Marine Fisheries Service (NMFS) in the Federal Register on June 26, 2006 and the Draft Environmental Impact Statement (DEIS) made available by the Environmental Protection Agency on July 7, 2006.

The Council appreciates the opportunity to provide comments to NMFS on the proposed measures to implement seasonal speed restrictions on vessels in certain areas along the East Coast of the United States. The stated purpose of these measures is to reduce the likelihood of death and serious injury to endangered North Atlantic right whales from collisions with ships. The Council, a non-profit association of more than thirty international ocean carriers, was established to address public policy issues of importance to the international ocean liner shipping industry. The Council's members are primarily operators of containerships and roll-on/roll-off vessels that serve America's international commerce. (A list of WSC member companies is attached.) They provide regular, scheduled services connecting U.S. importers and exporters with virtually every country in the world. They serve all of the East Coast ports covered by the Proposed Rule and the nature of their services makes them, as acknowledged in the DEIS, subject to the most severe economic impact from the Rule.

II. General Comments

WSC supports NMFS's efforts to enhance right whale recovery. We and our member lines have participated in a number of the non-regulatory programs described in the NPRM as well as in the Mandatory Ship Reporting System (MSRS). We do not, however, believe that the science and statistics cited as the basis for the speed reduction measures detailed in the Proposed Rule reasonably support a conclusion that these measures will be effective in achieving the agency's objective and the proposal might, in fact, expose right whales to additional risk of ship strikes. The measures

will have a direct negative economic impact on the shipping industry and its customers and may do nothing to protect the species.

As WSC stated in its comments on the 2004 Advance Notice of Proposed Rulemaking (ANPR), we have supported the Port Access Route Studies (PARS) conducted in the northeast and southeast regions where right whales are known to congregate at certain times of the year. We supported, and continue to support, the designation of Areas to be Avoided (ATBAs) in areas where research has shown that right whales are likely to congregate during certain months. And we support the implementation of Dynamic Management Areas (DMAs) which set up precautionary areas around sighted right whales so that mariners can navigate around them. In short, we support measures which science and common sense tell us will be effective in reducing ship strikes on right whales.

We, however, see no scientific basis in the record of this rulemaking for imposing a 10-knot speed restriction within 30 nautical miles (nm) of East Coast ports in the mid-Atlantic range (New York to Savanah, GA). This is the coastal range where the science is the weakest and the economic impact is the greatest. It is the range through which the right whales migrate and in which considerably more research and scientific analysis needs to be done before such costly and disruptive measures are imposed.

The liner shipping industry understands the need to take steps to protect right whales from ship strikes. Regulations, however, must be reasonably supported and expected to have the desired effect of protecting the whales. The backdrop against which the NPRM emerged suggests at least the possibility, despite the good faith of all involved, that the proposed regulations may be more effective in showing action than in reducing whale injury and mortality. Unfortunately, the treatment of the scientific studies offered in support of the rulemaking reinforces that perception. The perception is further enhanced by the complete exclusion from coverage of the regulatory restrictions of government vessels – the category of vessels documented as being the single most destructive to right whales. If the species is indeed at a tipping point, where the death of a single animal is significant and the regulatory restriction would in fact achieve the desired results, then political distinctions should have no place in the equation. Such distinctions would plainly be lost on the whales. If the objective is a serious and necessary one, which we believe it is, then the scientific analysis and the effectiveness of the management actions selected to achieve that objective

must reflect the same seriousness. The Council respectfully submits that more work is necessary before the scientific rigor will match the importance of the results sought.

For reasons set forth in detail below, we urge NMFS to change its approach and adopt an Interim Final Rule implementing measures which help mariners avoid areas where right whales are, or are likely to be, at certain times. We ask NMFS to include sovereign vessels and vessels under 65 feet in these regulations, as together they account for more than 50 percent of large whale strikes when vessel speed is known. And we ask NMFS to undertake serious scientific research during the effective period of the Interim Final Rule to better understand the migration of right whales in the mid-Atlantic region and to better assess the potential effect of vessel speed on the frequency and severity of ship strikes. It is essential that this research be carried out before costly, disruptive and potentially ineffective measures are imposed.

III. The Speed Issue

Although the Proposed Rule is not specific on this point, there are two speed-related issues in the documents referred to in the NPRM. The first is the relationship between speed and the likelihood of a ship/whale collision. The second involves the relationship between speed and the severity of injury to the whale when a strike occurs.

Speed as it relates to the likelihood of ship strikes: In reviewing the various lengthy and complex documents and studies cited by NMFS in the Proposed Rule, we find no compelling evidence that speed is a determining factor in the incidence of ship strikes to large whales. In fact, we find no evidence that the speed of liner ships (container and roll-on/roll-off vessels) has ever been a causal factor in a ship strike mortality of a North Atlantic right whale. Further, we cannot find a single, confirmed incident in all of the cited studies where a liner vessel (in excess of 180m in length) has been involved in a confirmed fatal right whale ship strike along the U.S. East Coast.

Ships do, on occasion, hit large whales. Based on the most frequently cited study, *Jensen and Silber (2003*), 58 cases of ship strikes to large whales were reported worldwide from 1975 – 2002 where vessel speed was known. The study reports that "the greatest numbers of vessels were

traveling in the range of 13-15 knots, followed by speed ranges of 16-18 knots and 22-24 knots respectively." The study goes on to report that the average speed of the 39 strikes that resulted in serious injury or death was 18.6 knots and that 20 of those strikes resulted in death.

We submit that the speed ranges presented in *Jensen and Silber* closely track the speed ranges of large vessels at sea and that these records indicate that ship strikes, in fact, decreased as vessel speed increased. We submit that this is so because there are more ships traveling in the slower speed ranges. Simply put, if all ships traveled at 16-18 knots, all whale strikes would take place in that range. The data here describes how fast ships usually travel but indicates nothing about whether there is a causal connection between ship speed and ship strikes.

In a more recent study, *Vanderlaan and Taggert (2006)*, the authors, using the same databases as the NMFS, looked at the issues of probability of lethal injury based on vessel speed and the consequence of increased whale exposure to vessels navigating at slow speed. We will look at the first issue later in these comments. As for the second, the study concluded that "...the encounter probability [between ship and whale] increases slowly as speed decreases from 24 knots or greater and then begins to increase more rapidly as vessel speed continues to decrease toward zero." (at page 5)

Vanderlaan and Taggert also arrive at the following conclusions:

- "Slow-moving vessels may provide opportunity for whales to avoid a collision or for vessel operators to avoid whales. However, we are unaware of any compelling evidence for either." (at page 5)

- "Large vessels navigating at low speed may not be able to maneuver successfully where success is partially dependent on the operator's ability to predict the movement of the whale once detected." (at page 6)

- "We can suggest that the paucity of low-speed collision reports is related to a paucity of vessels operating at slow speed." (at page 6)

These observations indicate that the proposed speed reduction measures are, at best, arbitrary and might actually increase the likelihood of ship strikes because the ship is in the whale habitat for a longer time. This is

in direct contradiction to the NMFS objective of reducing these strikes. Again, this study is based on the same worldwide large whale ship strike database used by NMFS in defending its Proposed Rule. These alternative results have not been addressed by NMFS in the formulation of its proposed measures.

Additionally, NMFS concedes in the NPRM that "there are only two definitive strikes to right whales where associated vessel speed is known with absolute certainty." The NMFS states that one was in 1991 when a right whale calf was killed by a ship traveling at 22 knots and the second, a right whale juvenile, killed by a vessel operating at 15 knots. What NMFS fails to include in their description of these ship strikes is that, according to *Jensen and Silber(2003)*, both were U.S. Coast Guard vessels which are exempted from this Proposed Rule.

NMFS candidly admits that the scientific data available is essentially anecdotal, and we believe that such data therefore has little predictive value under any recognized system of statistical analysis. Because this is the best data available, however, and because the agency feels compelled to take some action, NMFS has assumed, for the purposes of the Proposed Rule, that this anecdotal data in fact does have some predictive value. Any other assumption would necessarily require abandonment of speed restrictions as a management measure until statistically meaningful data has been obtained.

WSC respectfully submits that this lack of statistically significant data in fact requires NMFS to modify its approach, and we set forth below the form we believe that approach should take. For the purposes of the present discussion, however, we note simply that if NMFS is going to assume that anecdotal data has predictive value, that assumption must be applied consistently across all available data.

In order to explore what predictions would result if the data set relied upon by NMFS in support of the Proposed Rule was analyzed with respect to vessel size and speed, *Testaverde and Hain (2006)* graphically plotted the same 58 large whale interactions in which vessel speed and size are known as were used in *Jensen and Silber* (2003). That graph is included as Figure 3. With respect to vessels of a size comparable to the containerships that regularly call the United States East Coast (i.e., vessels in excess of 180 meters), Figure 3 indicates that only five interactions occurred with respect to vessels of that size. One of those vessels was a naval vessel, two were

cruise ships, one was a tanker, and one was a containership. The containership incident occurred in 1972, and the vessel was therefore necessarily of a hull configuration not employed today. In addition to the fact that less than 9% of the plotted incidents involved vessels within the size range and type that would be most impacted by the proposed rule, all of those interactions occurred at speeds in excess of 15 knots, with four of the five falling between 19 and 22 knots. Under the logic employed in support of the Proposed Rule – i.e., that anecdotal observations have predictive value – this data, which forms the backbone of NMFS's analysis, indicates that the lowest speed limit that should be under consideration for large vessels is 15 knots.

The data also shows that if maximum conservation impact is the goal of the rule, then vessels less than 20 meters in length are of far greater concern than are large containerships. There are 13 of these vessels in the data set, more than twice as many as fall within the range that would be primarily affected by the proposed rule. WSC respectfully -- but specifically and emphatically -- requests that NMFS explain in any final rule that it may issue, whether and how it differentiated between the predictive conclusions that it chose to acknowledge, discuss and include in the rule, and those predictive outcomes – based on applying the same methods to the same science – that it chose to ignore.

Taken together, the data relied upon by the Proposed Rule does not demonstrate any causal relationship between increased speed and increased frequency of collisions. If anything, studies indicate an inverse relationship. That is, the chance of collision may increase as speed decreases.

Speed as it relates to mortality or severity of injury: Given that the data relied upon in the NPRM essentially shows no predictive correlation between vessel speed and the likelihood of a collision, the only remaining basis on which speed restrictions could be justified would be if there were a demonstrable correlation between increased speed and increased mortality. The NPRM provides virtually no discussion of the extent to which the proposed speed restrictions may be based on an attempt to lessen the severity (as opposed to the frequency, addressed above) of whale/vessel collisions. Accordingly, it is impossible to comment meaningfully on the validity of any scientific analysis that might have been employed in formulating the proposed rule. Therefore, to the extent that any final rule

attempts to rely on a correlation between speed and mortality, such a rule would be unsupported by adequate data or explanation, and for that reason would be invalid.

That said, the NPRM does make reference to *Vanderlaan and Taggart (2006)*, which we understand has been accepted for publication after the date of the NPRM. According to the NPRM, that study states a range of probable mortality at three different speeds: 9 knots, 15 knots, and 21 knots. None of those speeds, however, is a speed that has been proposed as a maximum speed for covered areas. Moreover, that study ends with the observation that: "In summary, and acknowledging the uncertainties, our analyses provide compelling evidence that as vessel speed falls below 15 knots there is a substantial decrease in the probability that a vessel striking a large whale will prove lethal." *Vanderlaan and Taggart* (at page 6). Accordingly, to the extent that NMFS decides to adopt a speed restriction, this report would seem to indicate that 15 knots would be a more defensible figure.

A figure at the upper end of the range of proposed speeds is also indicated by *Laist (2001)*, upon which the NPRM principally relies. That study states that: "Most severe and lethal injuries caused by ship strikes appear to be caused by vessels traveling at 14kn or faster."(at page 56) After having analyzed various factors that could affect the observation regarding the very low numbers of fatal collisions at speeds below 14 knots, the author concludes that those factors do not undermine the legitimacy of the conclusion: "The scarcity of collision accounts below 14 knots could be an artifact of the small sample size of collision records found in this study; however, the absence of accounts involving severe or lethal whale injuries at speeds below 10 knots, and the low number of such collisions below 14 knots, seems significant." The DEIS adopts this finding, stating (at page1-5) that *Laist* "reported that of 28 recorded collisions causing lethal or severe injuries, 89 percent involved vessels traveling at 14 knots or faster and the remaining 11 percent involved vessels traveling at 10-14 knots." In addition, as noted above (see *Testaverde and Hain* at Figure 3), all five vessel strikes for which vessel size and speed are known for the class of vessels in excess of 180 meters are at 15 knots or above, and only one of those was a containership, in 1972.

This record provides no justification for imposing a 10-knot speed restriction on liner vessels – the class of vessels most severely impacted by the Proposed Rule.

In addition to the fact that the studies relied upon by NMFS indicate that, if any conclusions can be drawn about speed, 14 or 15 knots may be an inflection point at which possible speed-related benefits might be realized, there are additional reasons to use the 14-15 knot figure.

First, the Council would urge NMFS to guard against the unsupportable assumption that if some speed reduction is good, a greater speed reduction must be better. As discussed above, the data does not support that.

Second, as the admitted need for additional hydrodynamic testing indicates, it is entirely possible that the optimum speed for avoiding whale injury is not necessarily the slowest navigationally feasible speed. Just as vessels passing one another in opposite directions in close quarters rely on and compensate for bow waves that push the vessels apart, so it may be that whales within a certain quadrant in front of an oncoming vessel could be pushed away from a vessel at one speed, but drawn toward it at a lower speed.

The point is simply that we do not have these answers yet, and it must be recognized that when one guesses, one is as likely to guess wrong as to guess right. Guessing low is not the same as being more conservative or providing more protection to whales. The more draconian choice is not necessarily the better choice. Instead, implementing measures where we have a reasonable expectation that such measures are appropriate, and waiting to adopt other measures when there is significant support for them would give effect both to the underlying statutory mandates and to the tenets of sound science and conservation management.

Finally, it is worth noting that moving from no controls to the most severe controls precludes any possibility of collecting additional data at speeds between today's 18-22 knot average and the most severe proposed restriction of 10 knots. Particularly in light of the evidence that most if not all of any available benefit in terms of reduced mortality would be obtained at 14 or 15 knots, there is no justification in the currently available data for going below that number.

IV. The Distance Issue

The NPRM has proposed a 10-knot speed restriction inside a 30 nautical mile zone around the entrance of all major East Coast ports (from New York to Savannah, GA) from November 1 until April 30 of each year. This 30 nm zone is arbitrary with no adequate scientific evidence that the measure will provide added protection for right whales.

NMFS points out that the mid-Atlantic region is used by right whales for migration between the calving area in the southeast and the feeding grounds in the northeast U.S. and Canada. The NPRM states: "Satellite tagging data, opportunistic sighting data and historical records of right whale takes in the commercial whaling industry indicate that right whales often occur within 30nm of the coast and in waters less than 25 fathoms."

The only NMFS study we find dealing with this issue is "Right Whale Sightings and Survey Effort in the Mid Atlantic Region: Migratory Corridor, Time Frame and Proximity to Port Entrances" (*Knowlton, Ring and Russell, 2002*). This study provides some revealing facts about the rarity of right whale strikes in the mid-Atlantic, and observations about the lack of scientific knowledge regarding right whale migration through the mid-Atlantic region.

The study notes that there have been only five right whale mortalities in mid-Atlantic waters recorded in the 32-year period between 1970 and 2002. However, in checking *Knowlton and Kraus (2001)*, we found only three strikes in what is now defined as the mid-Atlantic in the NPRM – one in 1979, one in 1983 and one in 1993 (listed as a probable ship strike). No vessel type or speed was known for any of these. Of these three, two were discovered on the beach and one at the mouth of Chesapeake Bay. In checking the NOAA database through 2003 (*Waring, et.al., 2005*), we discovered three additional recorded strikes in the mid-Atlantic since 1999. Again, vessel type and speed were unknown or unpublished. All three of these whales were also found well inshore and two had propeller cuts which we believe to be inconsistent with a large vessel strike. A generous conclusion is that there were six right whale ship strike mortalities in 33 years or one every 5.5 years in the mid-Atlantic migration path. (There was one additional reported mid-Atlantic strike in 2005 by a naval vessel). A more realistic assessment is that of these six, none was attributed to a large

ship and all were likely killed near the coastline. There is absolutely no basis here for regulating large commercial vessels within 30 nm of the mid-Atlantic coast.

The *Knowlton 2002* study calls the recorded mid-Atlantic right whale sightings on which it bases its analysis to be "sparse" and goes on to say that "unlike the feeding grounds in the Gulf of Maine and the calving ground off the southeast U.S., survey effort in the mid-Atlantic has not been extensive."

Nevertheless, the study does attempt to analyze the exiting sighting and tagged-animal data and arrives at the following conclusion in Table 1:

63.8% of sightings occurred from 0-10 nm of shore
76.9% of sightings occurred from 0-15 nm of shore
87.1% of sightings occurred from 0-20 nm of shore
92.2% of sightings occurred from 0-25 nm of shore
94.1% of sightings occurred from 0-30 nm of shore

The NMFS 2004 Advance Notice of Proposed Rulemaking considered speed restrictions on vessels in a range of 20-30 nm from port areas. Based on the "sparse" sighting data, NMFS has decided on 30 nm in the Proposed Rule even though the extra 10 nm picks up only an additional 7 percent of right whale sightings, while increasing the distance burden on ships by 50 percent. Even using the cost methodology for carriers from the DEIS (cost per hour of sea time lost), the extra cost burden on liner shipping would be reduced by half if NMFS imposes a speed restriction within 20 nm instead of 30 nm. Given the evidence that most, if not all, strikes in the mid-Atlantic occur near shore by smaller vessels, such an action would likely pose little, if any, additional risk to the whales. Even using the low cost data provided in the DEIS, to be discussed later, a 20-mile zone would reduce the cost burden of the Proposed Rule on the liner shipping industry by tens of millions of dollars.

The *Knowlton 2002* study also concludes that the sighting data "suggests that the majority of sightings at distances greater than 30nm from the coast occur at the northern end of the range" (not included on the NPRM mid-Atlantic range). "For the remainder of the range," [NPRM mid-Atlantic range] "the overwhelming majority of the sightings are within 15-20 nm of shore." This conclusion reinforces the point that the 30 nm zone proposed

for mid-Atlantic ports is arbitrary at best. It is also costly to the industry, and there is no basis to conclude that it provides increased security for the whales.

If any Seasonal Management Area speed restrictions are adopted, the range should reflect the likely location of the whales. What little science there is indicates that 20 nm is a far more logical limit. NMFS must address this data and its impact on the analysis underlying the Proposed Rule. It cannot ignore information that is directly counter to one of the central bases of the NPRM.

To the extent that the agency has based its analysis regarding an appropriate speed zone on Table 3 in *Knowlton 2002*, entitled "Total number of sightings within 40 miles of port and % within each buffer," that table likewise does not support the proposed 30 nm buffer. Although the Table 3 data varies by port, it could be argued that the data in that table demonstrates that there is a higher percentage of sightings in the 20-30 nm band in the vicinity of ports than in a range of 20-30 nm of the shoreline as a whole. It is impossible to evaluate that possibility, however, because Table 1 and Table 3 use different methods for measuring distance. Table 1 measures a zone that is parallel to the shoreline. Table 3, in contrast, measures concentric bands with a fixed center point at the port. That means, for example, with respect to Table 3 data, that a sighting could be 30 miles from the port but only one mile from shore. Especially since the data in Table 3 appears to be a subset of the data in Table 1, it seems more likely that the Table 3 data reflects near-shore sightings that are at considerable distance from the port than that it reflects port-vicinity sightings that are further offshore. If the agency were in fact to issue a final rule with a 30 nm speed restriction zone around each mid-Atlantic port, it would need to explain the relationship of the data presented in Tables 1 and 3 of *Knowlton (2002)* and affirmatively demonstrate that whales are found further offshore around port areas than in other areas. WSC does not believe that the underlying data would support such a conclusion.

Finally with respect to the 30 nm proposal, the consultation between NMFS and the United States Navy under Section 7 of the Endangered Species Act has resulted in a finding that speed restrictions for Navy vessels (in non-emergency operations), which are exempt from the NPRM, are appropriate within a 20 nm – not a 30 nm – radius of a port. An unclassified Navy advisory from December 2004 entitled "Right Whale Protective

Measures for Mid-Atlantic Fleet," which was obtained from NOAA through a Freedom of Information Act request, states as follows:

> "National Marine Fisheries Service (NMFS) has proposed specific mid-Atlantic ports where vessel transit during right whale migration is of highest concern. During the months indicated below and within a 20nm arc of the specified reference points for each of these ports (except as noted), Navy vessels shall use extreme caution and operate at a slow, safe speed that is consistent with mission and safety."

Inasmuch as Section 7 of the Endangered Species Act requires either a finding that the actions of a federal agency will not jeopardize the continued existence of an endangered species or that a waiver of such requirement be issued, and we are not aware of any such waiver, the only legally permissible conclusion available is that NOAA has made a determination that speed restrictions for Navy vessels (which have the highest ship strike rate of any class of vessels) are necessary only within 20 nm of ports. In light of that determination, if NMFS were to issue a final rule with a 30 nm geographic scope, it would have to explain why 20 nm is adequate for Navy vessels, but 30 nm is necessary for commercial vessels. Failure to provide a reasoned explanation for these inconsistent positions would render any rule incorporating a 30 nm limit arbitrary and capricious

V. <u>The Safety Issue</u>

Reduced vessel speed for large ships results in reduced maneuverability. This is particularly true for high-profile vessels such as containerships and roll-on/roll-off vessels. Ten knots is at the borderline of safe, maneuverable speed and, in certain conditions, is unsafe. Many East Coast ports have narrow traffic separation schemes (TSS) in their approaches and some have narrow breakwaters at their entrances. Often strong currents and winds make port entry and departure hazardous, particularly during winter months which are included in the NPRM seasonal management areas. Slow speed adds to those hazards. Safe navigation of a vessel will always remain the responsibility of the master. Any speed measure imposed by NMFS under the Rule must contain a safety exception that permits a captain to conform his vessel's speed to the conditions he faces, i.e., weather, tides, or vessel traffic at any time. Not to include such

an exception would be reckless and increase the likelihood of vessel collisions, groundings or serious environmental incidents.

VI. Economic Impact of the NPRM on the Liner Shipping Industry

The NPRM and DEIS make an attempt to estimate the cost to the liner shipping industry (container and roll-on/roll-off ships) of the 10 knot/30 nm Proposed Rule. We believe that:

1. The per hour cost estimate for a vessel at sea used in the estimate is 2.5-4 times too low;
2. The estimate of hours lost per port call is 2.5-3 times too low;
3. There is no estimate of the cost of extra fuel required to make up lost time on a multi-port string – a major added cost;
4. The cost to the shipping and port industries and its customers if vessels are forced to bypass a port to maintain schedule is high but difficult to calculate or predict; and
5. There are a number of other costs and operational considerations associated with speed restrictions that are not dealt with in the DEIS.

We will discuss each of these issues below.

The shipping industry has never attempted to put an acceptable or unacceptable price on the life of a right whale. We have said from the beginning of the rulemaking process that we share NMFS's objective of implementing measures that will reduce ship strikes. However, it is critical that all affected parties have confidence that the cost and service disruption caused by a regulation is contributing to the safety of the whales and the recovery of the species.

The imposition of Dynamic Management Areas, for example, would help keep ships and whales apart, and we support the program – even though they may be more costly and disruptive to liner shipping services than seasonal management. The DEIS estimates the annual cost of DMAs to the shipping industry, with a 10-knot restriction, at $17 million. Because of our cost calculations below, we believe that figure will be considerably higher. The NPRM gives carriers the choice of slowing down through a DMA or

avoiding it. We anticipate, because of our view on the ineffectiveness of speed measures, that liner ships will choose to avoid the whales rather than proceed more slowly through areas where they are known to be. This is a measure that we believe will be meaningful and effective.

As to the issues raised above:

1. The DEIS estimates, based on Army Corps of Engineers confidential data, that the cost of operating a containership at sea is approximately $1100 per hour (including capital costs, crew, fuel and other operating costs). The actual estimates received from our member lines vary from $2400 to $4000 per hour depending on the size and speed of the vessel. For our calculations, therefore, we are using $3200, which we believe to represent the average liner vessel serving the East Coast at average speed.

2. The DEIS estimate for hours lost per port call by speed reduction in the mid-Atlantic is approximately one hour. Based on the distance from port at which 20-22 knot ships must begin to slow to comply with the Proposed Rule (estimated at 45 nautical miles) and the time required to resume sea speed outbound, we conservatively estimate 2.5 – 3 hours of lost time per port call.

3. A major cost for carriers will be extra fuel burned at higher than service speed to make up lost time to maintain schedules. This will far exceed any minimal fuel savings at reduced speed in the 30-mile zone. One member line with four East Coast port calls per week estimated an increased fuel cost of $20,000 per week or $520,000 for the 26 week seasonal management period in the mid-Atlantic.

4. The cost to ports and the shipping industry when vessels are forced to bypass a port on its itinerary in order to maintain schedule are difficult to calculate, but substantial. The DEIS makes an attempt to quantify this by estimating the positive economic impact of a vessel call at two northeast ports with the implication that there is a direct correlation to potential loss if a scheduled vessel bypasses those ports. This ignores the potential costs to the shipping line, which will be faced with increased labor and berthing costs at the next port-of-call, and increased intermodal transportation costs to move cargo over land which was due to be off-loaded at the bypassed port.

Importers and exporters will be faced with longer transit times, increased transportation costs, and delays to delivery of their cargo. Again, the impact of this is vastly underestimated in the DEIS.

5. There are a number of other operational implications not associated with the issues discussed above. These include:

   - The DEIS recognizes the added cost to coastwise shipping in the cabotage trades based on additional miles traveled southbound along the coast to stay outside of the 30 nm zone. We would point out that liner vessels in international trade would face the same situation and added cost.

   - Ships' engines will require additional maintenance as a result of continuous variation of speed and poor combustion and engine fouling from slow steaming. Blower motors will be required to operate for longer periods and will require more frequent maintenance.

   - The NPRM restrictions are primarily during the winter months when speed and schedules are already adversely affected by the weather.

   - Modern containership engines are designed to operate at high RPM and are shown to have an increased production of NOx emissions when operated at lower RPM for a longer time.

As a result of the issues stated above and the shortcomings of the DEIS, it is difficult to provide a meaningful picture of the economic impact of this Proposed Rule on the liner shipping industry. The DEIS calculates the overall impact on the entire shipping industry of the Proposed Rule, if it had been in force in 2004, at $49.4 million dollars. This includes containerships, roll-on/roll-off ships, tankers, bulk carriers, combination vessels, general cargo ships, passenger ships, barges, etc. Containerships and roll-on/roll-off ships (liner vessels) account for just over $21 million of that estimate. Some simple calculations based on the operating costs and hours-lost-per-port figures in 1 and 2 above for liner ships will show how low that estimate really is.

According to the U.S. Maritime Administration, in 2004 liner vessels made 12,263 calls at east coast ports. If we subtract calls at ports south of Jacksonville (not included in the NPRM) we arrive at approximately 10,500 port calls for the year and approximately 5,000 calls for the seasonal management periods (more than 90 percent of these calls are in the mid-Atlantic region). If we very conservatively say that vessel calls have not increased since 2004 (which they have by about 5 percent) and we use the average current liner vessel hourly operating cost ($3200) and the average lost time per port call (2.75 hours), we arrive at an estimated cost to the liner sector of $44 million dollars ($40 million in the mid-Atlantic) for lost hours alone. While it is impossible to calculate all of the additional costs discussed above, we can safely say that the DEIS is low in its cost estimates by at least a factor of two and more likely three. It is not unreasonable then to put the range of economic impact on the shipping industry at $100 - $150 million rather than the $49.4 million estimate in the DEIS.

The DEIS concedes that the $49.4 million (more likely $100+ million) cost burden for the shipping industry at the 10-knot limit would be reduced to $18.35 million if that speed were set at 14 knots. This would be a 63 percent decrease in the cost burden to the shipping industry. The DEIS further concedes that the total estimated impact of the 10 knot limit on all entities of $107.4 million would be reduced to $30.2 million if the speed were set at 14 knots – a 72 percent reduction.

Clearly, everyone would realize a substantial reduction in cost burden with a 14-knot limit – with no discernable increased risk of a fatal right whale ship strike and possible reduced risk of any ship strike as discussed above. As noted above, reduction of the 30 nm zone in the mid-Atlantic to 20 nm would provide further substantial relief without increased risk.

VII. Further Study Is Needed

WSC believes that there is little, if any, sound science to justify the speed and distance restrictions in the NPRM, particularly for liner vessels which are the most severely impacted economically. It is also clear that the science is weakest in the region which imposes the most severe economic burden – the mid-Atlantic. We submit that before these measures are implemented in the mid-Atlantic, more research is required. Having reviewed the various supplementary documents to the Proposed Rule, we believe that further work is needed in three primary areas – hydrodynamics, acoustics and survey data.

Hydrodynamics – WSC is aware of two documents dealing with related hydrodynamic studies performed under contract with NMFS. These are "The Hydrodynamic Effects of Large Vessels on Right Whales" (*Knowlton et.al. 1995 and 1998*). Both are based on computer models which factor the forces created as water moves around a vessel's hull. The 1998 study claims to have introduced new, more sophisticated factors into its modeling by including additional forces, vessel types and speeds and whale behavior scenarios. Nevertheless, the results are inconclusive. In some scenarios, whales are pushed away from ships and in others they collide. This study, however, suffers from shortcomings that render any conclusions meaningless as they relate to liner vessels. Three hull types are studied – a VLCC tanker, a navy destroyer and an SL-7 containership built in 1972. None of these hull types resembles, in any way, modern liner vessels serving the U.S. East Coast. The SL-7 had a long, tapered hull, with narrow beam and twin propellers which was built for speed (33 knots) and has no relationship to today's wider, deeper, slower, single-propeller containerships. Additionally, the water depth used in the simulations was 20 meters – an extremely shallow depth which dramatically alters the hydrodynamic forces exerted and in no way reflects water depth where real ship/whale encounters might occur.

WSC has offered to provide more realistic hull characteristics to NMFS for further computer simulation research but, to our knowledge, no further work has been done. Additionally, we have asked that more realistic hydrodynamic tank testing be conducted, but again we do not believe that any such tests have been conducted to date.

WSC urges NMFS to undertake additional computer simulation testing and initiate a tank testing program which includes the hull characteristics of today's liner vessels before imposing any speed restrictions on the shipping industry. Existing studies, even with incorrect input, suggest that vessel speed is not a factor in vessel/whale collisions in many scenarios and that ships moving at higher speeds may, in fact, repel whales. Further work must be done in this area.

Acoustics – Two acoustics issues should be considered regarding avoiding right whale ship strikes – the effect of ship noise on whale behavior and the potential of passive acoustic technology in locating migrating whales along the mid-Atlantic coastline.

In *Gerstein et al. (2005)*, as discussed in *Testeverde and Hain*, the authors studied the effect of acoustics on whale behavior and concluded that whales can detect faster vessels at greater distances and thus have considerably more time to react and avoid a collision. They argue that slowing ships will actually increase the risk of a ship strike. This requires further study before speed restriction are implemented.

Additionally, the Office of Naval Research (ONR) is developing both active and passive acoustic technology for locating and identifying whales. They have developed Passive Aquatic Listeners (PALs) which could be used locate migrating whales around port areas in the mid-Atlantic and provide a warning system for mariners when whales are in their path. This technology could well provide a more effective alternative to the costly and disruptive seasonal management measures in the Proposed Rule.

Survey Data – As acknowledged in *Knowlton et. al. (2002)*, the data on right whale migration through the mid-Atlantic region is "sparse". NMFS should fund additional survey flights in this region during the upcoming migration season and attempt to better understand the migration pattern of the right whales before implementing burdensome regulations in the region which may make no positive contribution toward protecting the whales.

VIII. Conclusion

The Council supports the purpose of the proposed rule – prevention of ship strikes to right whales and reduction of the severity of strikes that do occur. The science presented in support of those rules, however, provides no basis to conclude that the proposed speed restrictions will help to prevent ship/whale collisions or lessen their severity.

Accordingly, the Council urges NMFS to modify its approach and instead to implement, through an Interim Final Rule, Areas to be Avoided and Dynamic Management Area controls while it continues research on possible additional protective measures. To do otherwise would be to impose substantial costs to the shipping industry, and operational disruptions to U.S. commerce, without any reasonable expectation of increased

protection for the whales. Such an outcome is not consistent with good science, good conservation, or the law.

Finally, although we do not believe that there is adequate science to support speed restrictions, we recognize that NMFS might consider that course in any case. In the event that NMFS were to adopt speed restrictions, the Council urges, in the alternative, that the outer boundary of the restricted areas in the mid-Atlantic extend 20 nm, not 30 nm, from each port, and that the maximum speed be set at 14 or 15 knots, not 10 knots, in restricted areas. To the extent that there is any scientific basis for speed restrictions, indications in the cited studies are that virtually all speed-related benefits that there may be would be realized by a 20 nautical mile/14-15 knot rule.

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