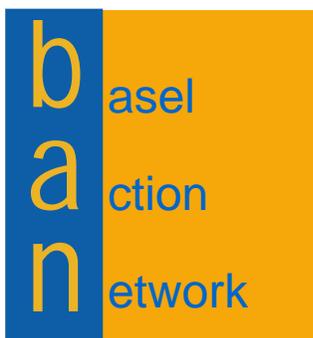


US EPA ARCHIVE DOCUMENT

# **Public Comments Received on EPA's Draft Technical Guidance for Determining Presence of PCBs at Regulated Concentrations on Vessels to be Reflagged**

## **Commenters:**

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2. Maritime Technical Services LLC
3. REEFMAKERS
4. SEACOR Holding Inc.
5. Utility Solid Waste Activities Group
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**TO:** Bill Noggle  
U.S. Environmental Protection Agency

**FROM:** Colby Self  
Basel Action Network

**DATE:** March 28, 2013

**SUBJECT:** Comment on "Draft Technical Guidance for Determining the Presence of Polychlorinated Biphenyls (PCBs) at Regulated Concentrations on Vessels (Ships) to be Reflagged"

On June 27, 2011, the U.S. Maritime Administration (MARAD) published a Clarification in the Federal Register titled "Approval Process for Transfers to Foreign Registry of U.S. Documented Vessels Over 1,000 Gross Tons", (76 FR 37280). The notice elaborated on a new process that required ship owners, who intended to transfer a U.S. flagged ship to a foreign registry, to first certify that the vessel does not contain regulated concentrations of PCBs. MARAD took this initiative in an attempt to prevent U.S. ships from being exported in violation of the U.S. Toxic Substances Control Act (TSCA), an act that is administered by EPA.

EPA has now drafted the guidance document titled, "Draft Technical Guidance for Determining the Presence of Polychlorinated Biphenyls (PCBs) at Regulated Concentrations on Vessels (Ships) to be Reflagged". This guidance is intended to assist ship owners in completing the self-certification process specified under the MARAD Clarification. In particular, this guidance attempts to define a process by which ship owners can certify with varying degrees of confidence "that after the exercise of reasonable due diligence, the vessel(s) do(es) not contain polychlorinated biphenyls (PCBs) in amounts greater than or equal to 50 ppm as regulated by the Toxic Substances Control Act (15 U.S.C. 2601 et seq.)" per the signed MARAD self-certification statement.

According to the Draft Technical Guidance, "EPA's primary goal is to prevent the export of any regulated levels of PCBs, where PCBs could possibly be mismanaged abroad." We thank the EPA for taking the initiative to develop the Draft Technical Guidance to support this primary goal. However, we fear that the Draft Technical Guidance in its current form, without strong oversight, is wholly insufficient to accomplishing this goal.

In general, we find the Draft Technical Guidance to be of great assistance in describing what constitutes *the exercise of reasonable due diligence*, as mentioned in the above second paragraph. However, there are a number of critical issues that we find concerning, and therefore we submit the comments below to highlight those concerns.

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## PROCESS ACCOUNTABILITY

The non-sampling approach is the first step in a process defined by the *EPA Recommended Process for Determining the Presence of Regulated Levels of PCBs on a Vessel to be Reflagged*, and as depicted in the flow chart on page 12 of the Draft Technical Guidance. This flow chart is helpful in depicting the processes strengths and weaknesses. One notable weakness is the fact that there are no checks or balances to bring accountability to the process. That is, EPA does not audit or evaluate any process outcome for accuracy or legitimacy, but rather relies on the beneficiary (the ship owner that benefits financially from a finding of no regulated PCB content) to regulate himself.

Self-regulation has not proven a successful model when large financial interests are at stake, and particularly when there are no checks and balances in place to disincentivize misconduct.

In practice, ship owners have not followed the *EPA Recommended Process for Determining the Presence of Regulated Levels of PCBs on a Vessel to be Reflagged* beyond the non-sampling approach. They have been willing to take this risk in self-certifying TSCA compliance without sampling because EPA has not audited one single self-certification since the program inception. As a result, EPA has approved with tacit consent and without any review for TSCA compliance, all reflagging requests that have used the self-certification process to date.

While EPA describes TSCA as a strict liability statute, stating “regardless of the approach used to determine the presence of regulated levels of PCBs on a vessel, if the vessel is exported with even one piece or component of the ship being greater than or equal to 50 ppm, the ship owner is in violation of TSCA,” it falls on EPA to enforce TSCA when such violations occur. But because EPA is positioning itself outside the process and is not involved in reviewing process outcomes, EPA is not in a position to enforce TSCA when violations are likely to occur.

We suggest EPA take an active role in providing oversight in the *EPA Recommended Process for Determining the Presence of Regulated Levels of PCBs on a Vessel to be Reflagged* in order to bring some level of accountability to the process and to better protect against the illegal export of regulated levels of PCBs. There is a higher likelihood that ship owners will exercise due diligence and follow the EPA described process beyond the non-sampling approach, if there is high risk of being held liable for failure to comply with TSCA. The contrary is also true, if there is a low risk of ship owners being held liable for TSCA violations, as in the current process, there is low likelihood that ship owners will exercise due diligence.

EPA has authority under TSCA to require ship owners to adhere to the processes described in the Draft Technical Guidance. Such a requirement would add real evidence that ship owners are indeed exercising reasonable due diligence as they would be required to furnish proof of such efforts.

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## PENALTIES

We recommend EPA incorporate a description of the related penalties for relevant TSCA violations in the Draft Technical Guidance Document itself, or as an appendix. The penalties are an important risk factor when ship owners assess the degree of confidence they seek about the absence of PCBs. Penalties are a deterrent and can lead to higher values of “conclusion probability” and lower values of “conclusion proportion” to provide higher degrees of confidence.

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## CUT-OFF DATE

EPA has clearly defined vessel vintage as a key indicator for the presence of PCB contaminated materials that, when exported or distributed in commerce, constitute a violation of TSCA. EPA has asserted that any vessel built 1979 or previous, is suspect of containing PCBs unless proven otherwise, noting *“Although no longer commercially produced in the United States, PCBs are most likely to be present in vessels deployed before the 1979 PCB ban. For such vessels, PCBs may be found in both the solid (waxy) and liquid (oily) forms in equipment and materials onboard ships.”*<sup>1</sup>

The Rand Report entitled *“Disposal Options for Ships”*<sup>2</sup> identifies the U.S. Coast Guard (USCG) PCB remediation practices, based on approximately 2,000 PCB sample analyses, in which the USCG removes and disposes of (as PCB waste) all electric cables dated 1980 and earlier, and samples all cables dated 1980 to 1984 if the amount warrants, otherwise they remove and dispose of cables as PCB waste. USCG experiences suggest vessels built previous to 1985 should be assumed to contain PCBs unless sampling proves otherwise.

Due to the conflict in EPA’s 1979 assumption, which solely points to the year in which the PCB ban was in full force, and USCG 1984 assumption, based on experiences in the field, BAN suggests the more stringent 1984 assumption be used until substantial evidence beyond the USCG experience proves otherwise.

Foreign built vessels operating under the U.S. flag should adhere to different cut-off dates. We recommend ship owners of foreign built U.S. flagged vessels to provide legal documentation from the State in which the vessel was built, which defines the year in which PCB materials were fully banned from shipbuilding in that State. If the vessel was built prior to the PCB ban and within 5 years after the State banned PCB use (5 years after ban is consistent with USCG findings for U.S. built vessels), the process for identifying PCB content described in the Draft Technical Guidance should apply.

Thank you for your time and consideration.

Sincerely,



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<sup>1</sup> National Guidance: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs, <http://www.epa.gov/owow/oceans/habitat/artificialreefs/documents/pcb.pdf>

<sup>2</sup> Disposal Options for Ships, Prepared for the U.S. Navy by Rand’s National Defense Research Institute, 2001. See page 78.

COMMENTS OF MARITIME TECHNICAL SERVICES LLC  
ON EPA'S DRAFT TECHNICAL GUIDANCE FOR  
DETERMINING THE PRESENCE OF POLYCHLORINATED  
BIPHENYLS AT REGULATED CONCENTRATIONS ON VESSELS  
(SHIPS) TO BE REFLAGGED.

March 28, 2013

MARITIME TECHNICAL SERVICES LLC

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## Introduction

Maritime Technical Services LLC (MTS) appreciates the opportunity to present these comments on EPA's Draft Technical Guidance for Determining the Presence of Polychlorinated Biphenyls at Regulated Concentrations on Vessels (Ships) to be Reflagged ("*Draft Guidance*"). MTS also appreciates the extension that EPA granted to MTS until March 31 (or the next business day following that date) for the filing of these comments.

As a company that is extensively involved in conducting environmental audits for PCBs on vessels, MTS applauds EPA in its efforts to develop comprehensive technical guidance on how a ship owner may analyze, test, and create a comprehensive report that can support the self-certification process as outlined in the Department of Transportation's Approval Process for Transfers to Foreign Registry or U.S. Documented Vessels Over 1000 Gross Tons [76 Fed. Reg. 37,280 (June 27, 2011)]. More broadly, however, a final document should provide guidance to ship owners in satisfying themselves that they are complying with TSCA in conducting their activities relating to the reflagging or transfer of vessels to non-US entities.

MTS believes that the *Draft Guidance* appropriately addresses a number of major issues concerning the PCBs certification process and MTS urges that these aspects of the *Draft Guidance* should remain unchanged. In certain other respects, however, MTS submits that the *Draft Guidance* document could be made even more useful to ship owners, both by providing additional useful information and by incorporating ways in which determinations concerning the presence or absence of PCBs on vessels could be performed in a more streamlined and efficient manner without compromising the reliability of the outcome.

Perhaps the three most significant deficiencies in the *Draft Guidance* are the lack of information provided on PCB ban dates in other countries, the lack of clarity on how vessel construction and maintenance history can be used to limit or avoid sampling, and the preference for a blind statistical sampling approach (where sampling is required) rather than sampling based on judgment and expertise in ship construction. The blind statistical sampling approach outlined in the *Draft Guidance* produces such an extraordinarily high number of samples, and would so interfere with the continued operation of the vessel, that such sampling in many cases may not be feasible. The number of samples would be exorbitantly costly, would take so much time that ship reflagging or other transactions would be subjected to such significant delays that transactions would be thwarted, and in some cases may not even be feasible while keeping the ship afloat. The assurance provided by a methodology producing such an unreasonably burdensome testing regime is therefore illusory, and the blind statistical approach may serve as little more than an academic exercise. That approach should be replaced by an approach that is based on the realities of ship construction. In constructing vessels, the same materials typically are used in similar applications in adjacent areas. For example, a particular cargo hold may have a huge surface area, but does not require extensive paint sampling because the hold would have been painted at one time using one kind of paint. Therefore, collecting multiple samples of the same kinds of materials on adjacent areas of a vessel based on nothing more than square footage is wasteful and unnecessary. Sampling based on the premise that all of these

materials are different does not reflect ship building practice and produces only greater costs and obstacles, not greater confidence in the actual results.

Through these comments, MTS highlights both positive aspects of the *Draft Guidance* that should be retained and ways in which the *Draft Guidance* should be improved and made more valuable for the regulated community.

In certain portions of these comments, we quote text from the Draft Guidance. Extended quoted text will be indented, while our recommended changes will be in italics, bold, and bounded by brackets. Deletions are shown in bold and strike-through. Recommended changes are provided with supporting commentary.

## I. Particular Strengths of *Draft Guidance*

MTS submits that the following concepts are particular strengths of the *Draft Guidance* that should be retained in the final guidance produced by EPA;

- A. Function of Guidance Document: The *Draft Guidance* document appropriately recognizes the function of the document – to provide assistance and guidance to *ship owners* in making their own determinations concerning the presence or not of PCBs above regulated levels on vessels. The *Draft Guidance* states that it is intended to be “a resource to assist ship owners in identifying regulated levels of polychlorinated biphenyls (PCBs) [i.e. greater than or equal to ( $\geq$ ) 50 parts per million (ppm)] in shipboard materials before their ships are . . . transferred to a foreign flag registry.” *Draft Guidance* at 1. The emphasis on provision of guidance is correct, as the regulated community could benefit from such guidance.
- B. Non-Binding Nature of Guidance Document: Given the function of the document to provide guidance to the regulated community, the *Draft Guidance* appropriately acknowledges that the document is not binding and that determinations concerning compliance rest with the regulated entity. The *Draft Guidance* states that it is “not a regulation” and “does not impose any requirements or obligations on . . . the regulated community.” *Draft Guidance* at 1. This limitation is correct, as determinations concerning the truthfulness of a certification must necessarily rest on the entity making the certification. Similarly, determinations of an entity as to the means of ensuring its own compliance with laws rests with the regulated entity, and any requirements and obligations imposed by TSCA and its implementing regulations promulgated through notice and comment rulemaking are the only ones binding on ship owners.
- C. Use of Records: Importantly, the *Draft Guidance* recognizes that determinations concerning the presence of PCBs on ships can in many instances be based solely on the date of construction of the vessel, the location in which the vessel was constructed, and the location(s) at which the vessel was repaired. The *Draft Guidance* properly states that “[t]he process of evaluating a vessel for the presence of PCBs begins with a review of historical records related to the construction and maintenance of

the vessel and type of vessel. In some cases, the records alone or the records and related documents will facilitate a confident conclusion that the vessel is unlikely to contain regulated levels of PCBs.” *Draft Guidance* at 5. Given that PCB bans were in effect in various countries at various times, there is no need to conduct expensive and time-consuming sampling, and to delay reflagging or ship sale transactions, if it can be determined based on location of construction and repairs, and PCB ban dates, that PCBs would not have been used at the relevant times at the relevant locations.

- D. Balance Between Records and Sampling: The Draft Guidance prudently allows ship owners to select a balanced approach to sampling based on historical records. “The ship owner can use available information and the technical guidance in this document to select a balance of documentation and chemical testing that yields a cost effective approach to conclude whether PCBs are likely to be present at concentrations  $\geq 50$  ppm.” *Draft Guidance* at 11. In some cases, it may be prudent to expend resources searching for additional historical information and in other cases it may be more prudent to conduct sampling where records are not readily available.
- E. Use of Targeted Sampling: The *Draft Guidance* endorses the use of targeted sampling – that is, using “historical records to determine items, materials, areas, and/or parts of the vessel that do not contain PCBs. Sampling would then be performed on the remaining items on the vessel.” *Draft Guidance* at 5. Targeted sampling is an important component of an efficient evaluation of a vessel for possible PCB content. MTS does, as set forth below, have suggestions as to how the targeted sampling approach provided in the document could be expanded and improved.
- F. Selection of Level of Confidence Left to Ship Owners: Consistent with the nature of the document as providing guidance to ship owners and its non-binding nature, the *Draft Guidance* properly leaves the selection of sampling levels of confidence to the ship owner. The *Draft Guidance* “does not require a ship owner to reach an EPA-specified level of confidence. The ship owner can select the degree of confidence that they desire to achieve . . . . This document provides technical guidance on how to achieve a specific level of confidence” based on sampling. *Draft Guidance* at 17. The ship owner’s decision as to the level of confidence ties into the text of the Marad certification, which requires the ship owner to have made the certification “after the exercise of reasonable due diligence.”
- G. Recognition of TSCA Continued Use Authorizations: Under the TSCA implementing regulations, certain items containing PCBs are authorized for continued use subject to certain provisions. The Draft Guidance properly recognizes that the continued use authorizations may apply to certain PCB-containing items for ships “and thus [such items], may not need to be removed from the vessel, even if the item contains regulated levels of PCBs.” *Draft Guidance* at 8. The Draft Guidance states that “these authorizations apply to the export of a vessel that will continue to be used as a vessel.” *Id.*

## II. Ways in which the *Draft Guidance* Should Be Strengthened and Improved

As noted above and in the *Draft Guidance*, evaluating a vessel for the presence of PCBs may be more or less complicated based on the date of construction of the vessel, the country of construction, and the location(s) where repairs to the vessel were conducted. Accordingly, any evaluation of a vessel for the presence of PCBs must begin, as noted in the *Draft Guidance* itself, with review of the vessel's year of build and places of construction and repairs. Only after acquiring this information can it be decided where actual sampling and analysis for PCBs may be necessary.

There are three overall ways in which the *Draft Guidance* should be strengthened and improved. First, because of one significant omission from the document, the *Draft Guidance* falls short of serving its function of providing useful guidance and information for the regulated community. This omission concerns information about the timing and scope of PCB bans in different countries. Second, the document does not clearly enough delineate when sampling may be required versus when records are adequate, and making this clarification would enhance the utility of the *Draft Guidance*. Third, although the document recognizes the utility of basing initial PCB determinations, where possible, on available record information, it fails to take into account the realities of ship construction and repair in recommending the extent of PCB sampling when sampling is necessary. Because of this latter failure, the *Draft Guidance* recommends a process that is much more burdensome, costly, and time-consuming than it needs to be to accomplish the same result. Indeed, the statistical sampling approach recommended in the *Draft Guidance* is a process that, at its upper level of confidence, is so excessive that it can prove totally infeasible. The purported protection provided by this statistical approach, therefore, is illusory. Instead of a blind statistical approach, an approach that considers the similarity of materials on the vessel and the timing and location of repairs in different locations can permit a dramatic reduction in the number of samples without any resulting reduction in reliability of the results.

### A. Addition of Information on PCB Ban Dates in Foreign Countries

The *Draft Guidance* acknowledges the importance of time and place of construction and repairs of a vessel in relation to PCB ban dates in the relevant country. The section on PCB Laws and Regulations on page 2 of the *Draft Guidance*, however, refers only to TSCA. Vessels that were not constructed or maintained in the U.S. would not have been subject to the TSCA PCB ban, and, therefore, the date of the TSCA ban would not be helpful in ascertaining the presence of PCBs in such vessels. Nonetheless, such vessels may have been subject to the PCB bans in place in many other countries.

In describing the "Non-Sampling Approach" to PCBs, the *Draft Guidance* refers at 1) c) to "Contemporary PCB laws and regulations banning use of PCBs." Nowhere in the *Draft Guidance*, however, does EPA provide any information on what those laws and regulations are, or the dates as of which PCBs were banned, in other countries.

Given that most vessels are not constructed in the United States, and that quite frequently maintenance on vessels (including even vessels constructed in the United States) is conducted outside of the United States, this omission is highly significant. The omission

means that the Draft Guidance does not provide the key pieces of information that ship owners need to know in evaluating whether sampling on their ships should be performed.

While it is relatively simple for ship owners to ascertain the dates as of which PCBs were banned in the United States, it is quite burdensome and complicated for the regulated community to ascertain those dates for the many other countries in which ships are frequently constructed and maintained. Unfortunately, the *Draft Guidance* does not contain such information. Thus, perhaps the single most important and useful type of guidance that the *Draft Guidance* could provide is missing from the current draft.

The utility of the *Draft Guidance* would be significantly enhanced by the addition of a section or an appendix containing PCB ban dates in the many other countries that frequently are involved in the construction or maintenance of vessels. These countries should include, at a minimum, the United States, Japan, West Germany, Singapore, Korea, and any other countries where ships are typically manufactured. The information might be tabulated as follows:

Country	Year	Level	Law	Nature of Ban/Type of Materials Banned
United States	1979	50ppm	TSCA	
Japan	1980	All		
West Germany	1978		10th BImSchV	Ban on placing PCBs on the market in open systems.
West Germany	1983			Production of PCBs stopped.
West Germany	1984			Use of PCBs in electrical equipment banned.
West Germany	1989	50 mg/kg	PCB/PCT Prohibition Ordinance	Total ban on placing PCBs on the market
Singapore	1980			Singapore has prohibited the import and use of PCBs, including electrical transformers and capacitors containing PCBs since 1980

**B. Clarifications on When Sampling is Appropriate**

The *Draft Guidance* should clarify when one vessel would require a more comprehensive review over a different vessel. For example, a vessel built in the USA prior to implementation of TSCA would require a more complicated review and analysis than a similar vessel constructed in Japan in 1985. This is so because the U.S. vessel would have been built before the United States banned PCBs, while the other was built 5-years after a total ban on PCBs was imposed by the Japanese government. These subtleties should be explained in more detail within the *Draft Guidance* so vessel owners can better understand the options and processes involved in determining a vessel is free from PCBs above regulated levels at a reasonable cost.

1. **Section II of *Draft Guidance: Overview: Approaches for Determining Presence of Regulated Levels of PCBs in/on Shipboard Materials (Page 4)***

Section II of the *Draft Guidance* does not fully clarify when sampling versus non-sampling is appropriate for determining the presence of PCBs. We note that Section III contains some additional information on this issue; however, we believe that clarification in Section II will assist the reader and industry on the many different situations that can exist when dealing with this highly technical process. Therefore, the following recommendations are outlined below.

The section on “Approaches for Determining Presence of Regulated Levels of PCBs in/on Shipboard Materials, on page 4 of the *Draft Guidance*, begins as follows:

All of the approaches in this draft technical guidance focus on evaluating the ship as a whole, or evaluating categories of shipboard materials individually and then combining the data from the individual material categories to make an overall assessment of the presence of regulated levels PCB on the ship as a whole

We agree with the statement; however, this section as a drafted is confusing because List II.A. is placed between two important paragraphs, which adds confusion for the reader. Since the first step in any environmental PCB audit of a vessel begin with a technical review of the ship’s build date, place of build, and construction standard, the points in paragraph 1 and 3 (bottom of page 5) should not be separated by this list.

To correct this issue, we recommend that List II.A. be moved to the end of this section or just before the section on Liquid PCBs on page 7. Alternatively, it could be placed in an appendix to the document at large.

Additionally, we recommend that the following information be added to the paragraph quoted above to provide a more complete description of the different scenarios owners face when beginning the process of determining if a vessel meets TSCA and can be self-certified as free from PCBs above regulated levels. Specifically, MTS suggests inserting the following after the paragraph quoted above:

- a. *[A vessel built in the U.S after the effective date of the TSCA PCB ban should be presumed to be free from PCBs above regulated levels as long as all post build maintenance was completed in the United States.*
- b. *A vessel built in the U.S after the effective date of the TSCA PCB ban that had maintenance completed outside the continental U.S. should be presumed to be free from PCBs above regulated levels under the following circumstances:*
  - i. *All post-build maintenance was completed with products manufactured in the U.S. after the effective date of the TSCA PCB ban; or*
  - ii. *All post-build maintenance was completed with products manufactured by a country that had a ban on PCBs in effect when the products were manufactured or the maintenance was*

*completed in a country that had a ban on PCBs in effect when the maintenance was completed. If this information is not available, then the sampling plan should be targeted to the specific area where the maintenance was accomplished. The remainder of the vessel should remain presumed to be free from PCBs above regulated levels.*

- c. *A vessel built in a foreign yard in a country that had a total ban on the manufacture and importation of PCBs should be presumed to be free from PCBs above regulated levels where all post-build maintenance was completed with products manufactured by a country that had a ban on PCBs in effect when the products were manufactured or the maintenance was completed in a country that had a ban on PCBs in effect when the maintenance was completed.*
  - i. *All post build maintenance on the vessel was completed with products manufactured by a country that had a ban on PCBs in effect when the products were manufactured or the maintenance was completed in a country that had a ban on PCBs in effect when the maintenance was completed. If this information is not available, then the sampling plan should be targeted to the specific area where the maintenance was accomplished. The remainder of the vessel should remain presumed to be free from PCBs above regulated levels.*
- d. *A vessel built in a foreign yard in a country that had a partial ban on the manufacture and importation of PCBs should be presumed to be free from PCBs above regulated levels for all materials subject to the country's restrictions where all post-build maintenance was completed with products manufactured by a country that had a ban on PCBs in effect when the products were manufactured or the maintenance was completed in a country that had a ban on PCBs in effect when the maintenance was completed. With regard to materials not covered by the PCB ban in the country of manufacture or maintenance, all such materials should be considered as potentially containing PCBs.*
- e. *A vessel built in a foreign yard in a country that did not have a ban on the manufacture and importation of PCBs should be considered possibly to contain PCBs above regulated levels and therefore a more widespread testing regime should be considered.]*

By adding the information above, owners will have a better idea of when historical records alone will be adequate or when sampling of particular areas or items of the vessel should be considered.

## **2. Section II of Draft Guidance: Overview: Use of Historical Records (Page 6)**

On page 6 under the heading Use of Historical Records, the clause indicated in brackets below should be added to acknowledge that countries other than the United States had

PCB bans in effect and these bans should be considered in deciding where sampling is appropriate.

*Use of Historical Records*

The presence of PCBs in shipboard material could potentially be determined through documentation, such as records related to the construction and maintenance of the vessel. The ship owner may have sufficient documentation to prove that a specific material category or an entire vessel itself does not contain regulated levels of PCBs. For example, a ship owner may have documentation that a ship was constructed in the United States with only materials manufactured after TSCA was in effect [*or in a country with a ban on the production or use of PCBs*] See Section IV of this document for more details on this non-sampling approach.

**3. Section III of *Draft Guidance: Sampling versus Non-Sampling: Guidelines for Selecting an Approach: General Guidelines (Page 10)***

On page 10, under Heading III. Sampling versus Non-Sampling: Guidelines for Selecting an Approach, Sub-heading General Guidelines, we recommend the addition the following text in brackets following the first bullet point:

Vessel was built and serviced only in places that did not use PCBs at the time (e.g. after TSCA was in effect for U.S.-built ships [*or in a country where a ban on the production or use of PCBs was in effect*])

In the second bullet in the second set of bullets on page 10, the following bracketed text should be added:

All materials in that category can be documented as not having regulated concentrations of PCBs, either with documents that address PCBs directly or with documents that show that the place of their manufacture makes it unlikely that they would have regulated concentrations of PCBs [*as in the case where the product was manufactured in the United States after 1979 or in another country with a ban on PCBs in effect as of the time of the manufacture or servicing, as indicated in [Cross-reference section with listing of PCB bans in various countries]*], thus the entire category can be omitted and reinforces when sampling might not be required.

#### 4. Section III of *Draft Guidance: Sampling versus Non-Sampling: Guidelines for Selecting an Approach: Cost Considerations (Pages 10-11)*

In the section on Cost Considerations at the bottom of page 10, we recommend switching the order of the first two (i.e., the subsection on Sampling v. Gathering Documentation should precede the subsection on Preliminary Testing: Screening Level Assessment) in this section and adding an introductory paragraph that addresses the actual costs that might be encountered when conducting a PCB audit. We recommend the following modifications to the Sampling v. Gathering Documentation subsection:

Chemical testing for PCBs can be very costly [*and can cause significant delays in reflagging or other transactions*]. If several categories of materials are tested and the ship owner wants results that provide a high degree of confidence about the low likelihood of the presence of regulated levels of PCB, then many samples will be required. [*Sampling can perhaps be eliminated altogether, or, t*]he number of samples required can be [*significantly*] reduced if some categories can be omitted from testing by virtue of adequate documentation [*of the dates of construction and/or maintenance, in conjunction with the dates of PCB bans in the relevant locations*] or [*through*] proactive remediation.

[*In addition to the costs of laboratory analysis for PCBs, there are also costs of collecting samples and*] ~~There are costs associated with chemical testing, and there are costs associated with~~ assembling documentation. If the costs for sampling are high, it might be more cost-effective to assemble available documentation, when it is available, as an alternative to chemical testing. The ship owner can use available information and the technical guidance in this document to select a balance of documentation and chemical testing that yields a cost effective approach to concluding whether PCBs are likely to be present at concentrations 50 ppm. EPA's primary goal is to prevent the export of any regulated levels of PCBs, where PCBs could possibly be mismanaged abroad. If a ship owner knows of documentation that could exclude portions of a material category and the ship owner chooses not to apply that documentation prior to determining random sample locations, then the ship owner could be testing areas that are already known not to contain regulated levels of PCBs.

[*As an example of the cost of sampling, based on the statistical sampling noted in the sampling plan worksheet on page 80, the associated cost to perform the work required to sample and test 1,724 material samples would be range between \$86k and \$129K in lab costs. The addition of labor, staging and insurance costs to obtain those 1,724 samples may drive the overall cost of the*

*sampling effort to exceed \$250K. In addition, many weeks may be required to collect and analyze the samples. It may be possible to eliminate many of these costs and delays through the prudent use of historical documentation.]*

As an example of the time required simply to collect the number of samples specified in the *Draft Guidance* under some scenarios, obtaining 1724 samples could require a minimum of 4 persons with one assistant almost 30 days to complete, assuming each team was capable of obtaining over 50 samples per day (1 sample every 9.6 minutes on average), which based on our experience is unlikely due to vessel operations and safety concerns. This sampling time does not include the time for laboratory analysis or for evaluation of the results.

**5. Section III of *Draft Guidance*: Sampling versus Non-Sampling: Guidelines for Selecting an Approach: Chart III.A (Page 12)**

MTS recommends that Chart III.A on page 12 be amended to include the place and date of build to clarify the recommendations outlined on page 4 of our recommendations, as follows:

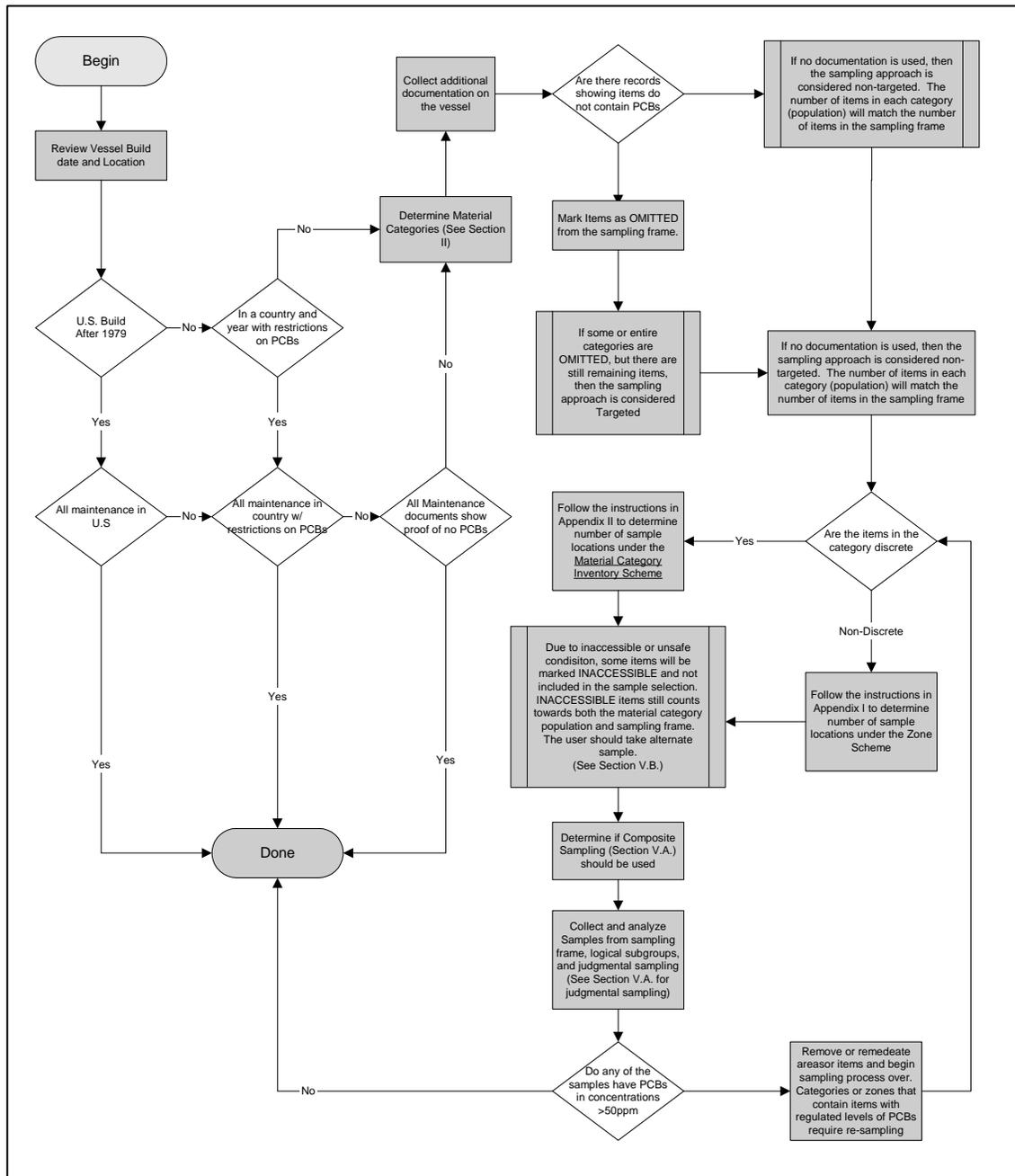


Figure 1

**6. Section IV of Draft Guidance: Non-Sampling Approach (Page 13)**

MTS recommends that the first sentence of the last paragraph on page 13 of be re-worded to read as follows: *[In General ships constructed in the United States after the TSCA PCB ban was in effect, or in a country as outlined in [Reference Table or Section with PCB Ban Dates] after the effective date of the relevant ban, are assumed to not contain regulated levels of PCBs at the time of construction.]*

On the first paragraph of page 14, the paragraph should be re-worded to clarify the intent of this paragraph, which we believe is for ships built after TSCA came into effect but

without adequate records of maintenance. This paragraph should be amended to reflect that this includes ships built in countries that had bans on PCBs in place during construction and should clarify that in the absence of documentation on the records of maintenance sampling is recommended in those maintenance areas. In other words there is no need to include the entire vessel in the material category inventory.

These changes reinforce two important points:

1. The United States is not the only country that has imposed bans on PCBs; and
2. When vessel were built under the governing laws of a country that imposed a ban on PCBs, then the only items that come under question are the items that may have been installed after the vessel construction was completed.

In the third bullet on page 14, the words “in the U.S.” should be deleted, as PCBs may be removed or decontaminated in many countries, and there is no reason to limit this point to removal of decontamination in the United States.

Lastly, in this section one additional bullet point should be added to the three bullet points on page 14

- *[Absent information in [Reference table or section with PCB ban dates] regarding the governing laws in effect at the vessel’s original construction, any supporting legislative documentation that a shows a particular country had imposed a restriction, partial or total ban on PCBs that might reduce one or more material categories is considered supporting evidence for the material category in question. ]*

### **C. Means Through Which Required Sampling Could Be Reduced Without Impairing the Reliability of the Conclusions Reached**

In some instances, the need for sampling may not be eliminated based on historical documentation of ship construction and maintenance. This section discusses certain ways in which the recommended sampling approach in the *Draft Guidance* could be streamlined and made more efficient, without limiting the reliability of the results, in those areas and for those materials for which sampling is required.

#### **1. Section V of Draft Guidance: Sampling Approach: Limitations of the Sampling Approach (Page 16)**

This section states the first limitation on the sampling approach specified in the Draft Guidance and specifically states that “*a conclusion based on a statistical sample approach provides a known degree of confidence, but not certainty.*” The Draft Guidance does not recognize that the fundamental problem here is the very concept of using a blind statistical based approach. This approach, as outlined in the *Draft Guidance*, might require hundreds if not thousands of samples. It may require the removal of materials necessary for the operation of the vessel. MTS respectfully submits that there is a better approach that reaches the same results with fewer samples, lower costs, and shorter delays.

Based on our experience with ship construction and maintenance, and as further explained below, MTS recommends an iterative approach in which the experience of the sampler with ship construction and maintenance is drawn upon to identify zones of a vessel in which similar materials (e.g., paint or insulation) would be used. Areas of such similar materials would be considered one zone and one or two samples would be collected from each such zone. If PCBs are found in any of the materials, then further sampling would be required with greater frequency from such materials. Absent detections of PCBs above regulatory limits in the random sampling of similar materials from a given zone, however, is highly unlikely that PCBs are present in the zone given the realities of ship construction, and the extent of sampling can be significantly reduced. Areas subject to maintenance would be considered their own units and may be subject to their own sampling separate from the sampling conducted based on original construction.

**2. Section V.A. of Draft Guidance: Sampling Approach:  
Determining Number of Samples: Non-Discrete Materials  
(Pages 17-18)**

While paint and caulk can sometimes be difficult to itemize into discrete units, MTS disagrees with the *Draft Guidance's* approach to addressing non-discrete materials in a sampling program. Rather than adopting a blind statistical approach to address non-discrete materials, we believe it is appropriate to look at the ways in which ships are manufactured and maintained in deciding how sampling should be conducted. As further explained below, for example, given our years of experience in ship construction and maintenance, it is our professional opinion that each deck of a deckhouse (superstructure) should be considered as one unit in the population for non-discrete materials. This is so because, given the nature of ship construction and maintenance, each deck of a deckhouse will almost certainly contain materials of the same origin. This means that if one sample of each non-discrete material is obtained at random from each deck, the owner maintains a very high confidence from the results as to the presence or absence of PCBs and does not need to obtain as many physical samples. If one such random sample of a given type of material (e.g., caulking) does not contain PCBs, there is a very small chance that another sample of the same material on the same deck does contain PCBs. This approach requires some adjustment when there are different color variations in paint, for example, and our recommendations with regard to paint sampling are discussed in more detail below. Additionally, a large exterior deck that was subject to extensive maintenance painting might require additional sampling.

While statistical based sampling may look good on paper, it is MTS's professional opinion that sampling specific areas based on judgment and experience is both more efficient and more realistic than a sampling plan based on blind statistics. Statistical sampling produces such extraordinarily high numbers of samples that the approach is unworkable and unrealistic. Blind sampling cannot replace the judgment that comes from the experience of sampling personnel familiar with ship construction. As outlined below, reliance on an understanding of where PCBs are typically found on a vessel coupled with the knowledge of ship design and construction is far superior in identifying the location of possible PCBs on board a vessel.

Specifically, the following points apply:

### **a. Paint**

MTS disagree that paint should be broken into units based on the coverage area of one gallon of paint. This methodology creates an unnecessarily high population and thus requires a significant number of samples to obtain a high degree of confidence that PCBs are not present in regulated quantities. The fallacy in this approach is that it assumes that shipyards constructing a vessel coat large areas with different kinds of paint purchased in one gallon containers from multiple sources. This is not the reality of ship construction, as typically paint is purchased in batches and then applied over large areas at the same time. Moreover, based on our experience it is quite feasible to detect differences in paint types by visual inspection. Our experience has shown that in many cases the population can be more easily broken down into smaller areas or zones and then sampling can be based on the paint scheme of the area in question. For example, a vessel's ballast tanks would be one zone, as it is highly likely that the same paint was used to paint the ballast tanks throughout the vessel. If these tanks were painted at different times (e.g., because of maintenance or repairs) or appear visually different from one another, then adjustments may be made (e.g., by splitting the zone) to account for the difference.

Since ballast tanks and other structural components of a vessel are originally painted at the same time and using the same paint product, a high degree of confidence can be achieved by obtaining one or two random samples from each tank or space. When there is subjective evidence to suggest that there is more than one coating in the space due to maintenance, then it is possible to determine the number of different color variations in the space's coating system and consider each color as one zone in the tanks' population. This approach would require one sample from each color variation to ensure a high confidence level that the sampling has accounted for different paints used in the spaces. This alternative method reduces the overall number of paint samples required as compared to the blind use of the coverage area of one gallon to determine the overall population. Moreover, the more focused method of sample selection produces an extremely high degree of confidence with fewer physical samples and testing, thus reducing costs and delays.

Based on the realities of ship construction, paint of the same types on the same kinds of objects should be recognized to be homogenous with respect to the presence or absence of PCBs. Accordingly, the method MTS proposes is a more practical approach to determining paint population and has an equivalent level of reliability.

The recommendations made in this suggestion are also applicable to Appendix I: Section B. Number of Paint Samples to Test for PCBs

### **b. Insulation Materials**

Structural fire protection insulation and other insulation materials found on a vessel are also likely to have been installed during new construction. Like paint and most other shipyard materials, these materials are purchased in bulk by the shipyard, and therefore are homogeneous. More importantly, these insulation materials are fabricated in batches and then added to the ship from the originally purchased materials as it is built or when undergoing a major modification. Therefore, the shipboard population of these materials should not be determined based on linear feet of insulation on the ship, but based on known fabrication methods. As with paint, we recommend obtaining random samples of

insulation materials on each deck. Each deck would be considered one unit in the overall population. If a sample comes back above regulated levels, then each deck would be required to be broken down into a larger population for further sampling. This approach also works for piping system insulation. This approach produces more practical approach to sampling and will still produce reliable results that these materials do or do not contain PCBs above regulated quantities.

### c. Caulking

Like structural fire protection, caulking materials are usually installed on a ship in batches and installed at different times during vessel construction. Therefore, once again, determining the population by deck is a better way to calculate the overall shipboard population of these materials than performing blind statistical sampling. Frequently, all wire runs are caulked at the same general time, for example, so caulking used on a vessel would be expected to be uniform.

### d. Judgmental Sampling (Page 18)

The Draft Guidance allows use of “Judgmental Sampling” only in addition to blind statistical sampling to provide “extra sampling points.” As explained above, this is a serious mistake. Judgmental sampling is far superior to blind statistical sampling because it draws not upon blind luck but upon the judgment and expertise of the professional directing the sampling and upon the realities of ship construction. A “judgmental sampling” approach should be substituted for the blind statistical approach preferred in the *Draft Guidance*.

### 3. Section V.C.1. of *Draft Guidance*: Sampling Approach: Sample Collection: Paint Samples (Page 22-24)

It is the professional opinion of MTS, having collected hundreds of materials samples from ships, that the recommendation in this section to use replaceable/disposable blades is not feasible. While obtaining paint samples using a disposable blade would reduce the need to decontaminate the tools, it would be impossible to use such products due to the quality of most disposable paint scrapers. Collecting paint samples involves careful use of the tool to remove paint to the base metal and retain a sample of each layer that exists in the paint stratum. This objective cannot be accomplished with a razor blade style paint scraper or when the paint is an epoxy based product. We agree that the use of chemical strippers and electrical tools are inappropriate for the job and may create a potential health hazard for the individual collecting the sampling.

### 4. Section V.C.4. of *Draft Guidance*: Sampling Approach: Sample Collection: Cable Insulation Samples (Pages 25-26)

Again, based on considerable experience in collecting samples from vessels, it is MTS’s professional opinion that EPA’s recommendation in this section to cut and remove pieces of insulation on active vessels is impractical if not totally impossible. On page 26, the *Draft Guidance* states: “For cable sampling, EPA recommends that a cross section of the cable is cut by the sampling crew and the sample is sent to the laboratory for separation

and analysis". A better solution is to obtain a sample from each of the cables' constituent parts at the end of a cable run. For example, where the cable terminates, it may be possible to collect a small section of insulation from each conductor (red, white, gray, etc..) as well as any protective sheaths/coverings. (See Figure 2) This means that a cable may represent several material samples.

This is a better, more efficient and safer means to sample the constituent parts of an electrical cable and can be accomplished with the power secured and the circuit tagged out.

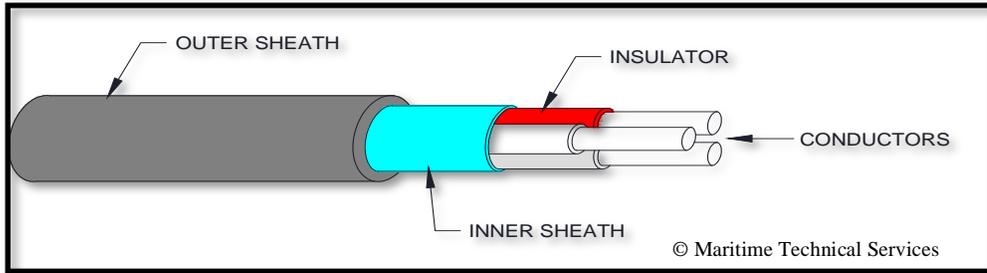


Figure 2

5. **Section V.H. of Draft Guidance: Sampling Documentation and Recordkeeping: Documenting the Sampling Event (Pages 38-39)**

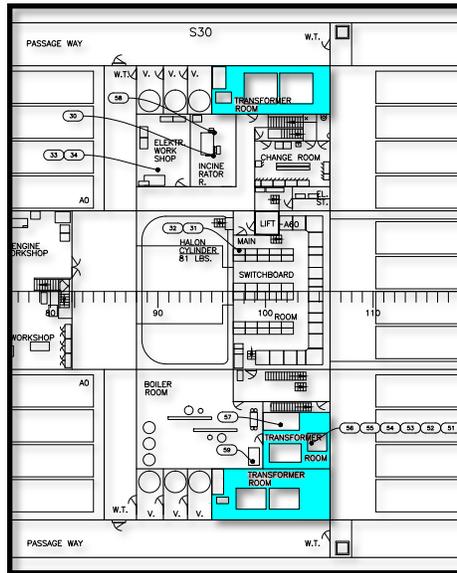


Figure 3

MTS recommends that the sampling team record the sampling location on the vessel General Arrangement drawing or other drawing as depicted in Figure 3 above. This will identify the space where the sample was obtained. When used in conjunction with the sample log and photograph file, the drawing easily identifies the exact location where the sample was taken e.g. overhead or as seen in the figure above e.g. number 30, the sample obtained near the ship's incinerator.

**6. Section V.J. of *Draft Guidance*: Sampling Documentation and Recordkeeping: Sampling Handling and Custody (Pages 40-41)**

Several points outlined in this section are flawed and should be amended. Specifically

1. Paragraph 3 requires that all samples be placed in coolers
2. Liquid samples should be packed in coolers with ice or ice packs.
3. Ship or deliver all samples to the laboratory on the day of collection unless a secure storage area has been identified.

Reading into this section it is evident that EPA recommends that all liquid samples be refrigerated after being obtained. Considering that a sampling might occur in a foreign country or while a ship is sailing between two countries it may be impractical to refrigerate samples or ship on the day collected. Additionally, packing samples in a cooler may not be a practical approach depending on how and where the samples will be transported. This criterion is clearly something practiced in the shore side-testing world where the testing-site is stationary and is not entirely practical for large vessels over 1000GT. More importantly, while sample refrigeration may be appropriate for some media – such as groundwater – it is unnecessary for the kinds of samples collected from vessels, where any PCBs would be bound in a matrix just as they would be during the lifetime of the vessel. Lastly, we would like to point out that obtaining 1724 samples, for example, as noted on page 80 of the *Draft Guidance* can take weeks. Depending on the vessel's location and status (e.g. U/W, anchored. or moored), it may make more sense for chain-of-custody control to control all samples until delivered to the laboratory at the same time.

**7. Appendix I of *Draft Guidance*: Sampling Approach Using Zones (Page 47)**

Appendix I begins as follows:

As mentioned throughout this technical guidance document, EPA believes that sampling using the zone scheme is best suited for non-discrete items on a vessel, primarily paint. This appendix is written specifically for the application of paint, but EPA recognizes that the ship owner may find this zone scheme a good fit for other non-discrete material categories.

MTS agrees that the use of “zones” is sensible, but, as mentioned above, we respectfully submit that the zone approach outlined in the *Draft Guidance* can be simplified as described in these comments, while still maintaining a high level of confidence in the results.

**8. Appendix I.A of *Draft Guidance*: Sampling Approach Using Zones: Underlying Statistical Issues with Zone Sampling Approach: Assumptions (Page 47)**

This section begins as follows:

Different types of paint are applied to different shipboard surfaces, so it is reasonable to expect PCB levels to vary from location to location in ways that are related to the function of the surfaces, as well as their painting history. Paint may be found in layers that were purchased and applied at a wide variety of times and places. Thus, it may be impossible to determine from records or by visual inspection which surfaces have similar concentrations of PCBs. In general, there are minimal assumptions a ship owner can make about the distribution of PCBs in paint throughout the vessel. PCBs may be concentrated in a few areas or throughout painted surfaces of the vessel.

As noted above, MTS agrees with the use of zones, and that, by breaking the vessel down into zones and then using each zone as a separate population, it is possible to eliminate entire areas from sampling requirements. MTS disagrees, however, that there are “minimal assumptions a ship owner can make” about paint surfaces. Because of the way ships are constructed, it is MTS’s professional opinion that breaking a ship down by deck, cargo holds, ballast tanks, engine room, fidley are good ways to use the zone methodology. Absent maintenance, it is highly unlikely that multiple types of coatings would be used on a single type zone, and, therefore, large numbers of samples from a single zone serves no purpose and does not increase the confidence level of determinations made about the presence or absence of PCBs in the zone.

**9. Appendix I.B of *Draft Guidance: Sampling Approach Using Zones: Design of Zones and Number of Samples in each Zone: Proportion of Samples to Collect in Each Zone (Page 48)***

This section states at the beginning:

The paint samples will be collected from each zone in fractions that approximate the proportion of the vessel’s painted surface in that zone to the overall painted surface area of the ship. For example, if a single zone contains 50% of the painted surface of the vessel, then half of the total number of paint samples will be collected from that zone. If the zones contain roughly equal areas of painted surface, then equal numbers of samples should be collected from each zone.

MTS disagrees with blind statistical approach set forth in this section. Simply because an area of the vessel may constitute 50% of the painted surface, should not necessarily mean that one-half of the samples on the vessel should be obtained from this area when it is clear based on ship construction that the same paint was used on the entire area. Some areas of the vessel -- for example, a cargo hold -- may contain a large surface area but are almost invariably painted at one time using one paint system. Due to the homogenous nature of paint, this means that the population of paint in this area could and should be classified as one, and collecting multiple samples is wasteful. A better approach than blind sampling is to use knowledge of ship construction to evaluate each compartment

independently to assess the likelihood that different paints were used, rather than to make such decisions based on the square footage of a gallon of paint.

**10. Appendix I.B of *Draft Guidance*: Sampling Approach Using Zones: Design of Zones and Number of Samples in each Zone: Number of Paint Samples to Test for PCBs (Pages 48-49)**

This section begins as follows:

The total number of paint items (population) should be the total approximate painted surface area (in square feet) of the vessel divided by 400. Instructions in Appendix II can be used to calculate the number of recommended paint samples in the sampling plan based on the total number of paint items (population).

The number of paint samples to be tested depends on several factors:

1. The approximate total painted surface area on the ship
2. The approximate painted surface omitted from testing due to documentation showing the paint does not contain regulated levels of PCBs
3. The number of logical groupings the user can accurately create. (See Section V.A. Number of Samples.)
4. The degree of certainty with which the user wishes to conclude that the ship is unlikely to contain PCBs at  $\geq 50$  ppm, as expressed by the conclusion proportion and conclusion probability described in Appendix II
5. The number of categories of materials that will be sampled for PCBs, as described in Appendix II

Note that composite sampling does not alter the number of samples to be taken from the vessel.

As discussed above, we believe the blind approach outlined in the *Draft Guidance*, which does not take into account the realities of ship construction, unnecessarily increases the number of samples required in order to maintain a high degree of confidence when there are alternative methods that would produce reliable results with a significantly reduced burden.

**11. Appendix I.D of *Draft Guidance*: Sampling Approach Using Zones: Detailed Sample Site Selection Procedures: Methodology for Determining Sample Locations (Pages 50-51)**

This section begins as follows:

The methodology described above effectively itemizes the paint into 400 square foot sections for the purposes of determining the overall number of samples in the paint

inventory or sampling frame. However, it would be difficult for a ship owner to physically determine the actual 400 square foot sections on the vessel to be included in the sampling frame and subsequent random sample generator. Even if the ship owner could delineate this layout on the ship plans or on the ship itself, EPA recommends that a random site selector method is not appropriate for determining locations for paint samples. Painted surfaces on ships are often applied in batches, where each batch of paint could have a different PCB concentration. Given this assumption, EPA recommends that sampling in evenly spaced increments is more appropriate and will be more effective in finding the different batches of applied paint and thus, more effective in determining whether regulated levels of PCBs are in the paint. Randomly selecting sample locations could result in multiple samples taken from one room and none from several other compartments, thus potentially missing several batches of paint. The intent of this methodology is to test as many unique painted surfaces as possible.

This paragraph reinforces our conclusion that sampling is more appropriately conducted in a targeted manner based on knowledge of ship construction rather than through the blind statistical approach set forth in the *Draft Guidance*..

### **III. Conclusion**

Once again, MTS appreciates this opportunity to provide these comments based on our considerable experience in sampling vessels for PCBs. We also appreciate the extension in the comment period provided by EPA.

As older vessels begin to outlive their usefulness and are ultimately scrapped or sold foreign, the ship population that might contain PCBs will be reduced, as vessels of more recent construction will not have PCBs. In the intervening years, determining the presence or absence of PCBs on ships will need to be done ship by ship. MTS has learned from our experience in completing TSCA audits on vessels that there is a means to determine compliance reliably without the need to obtain thousands of shipboard material samples. This result can be accomplished through a review of a vessel's history, its age, place of build and location and nature of maintenance. By establishing when and where the vessel was built, we can conclude whether and to what extent the possibility exists for the vessel to contain PCBs above TSCA threshold limits. Reliance on historical records, as compared against PCB ban dates not only in the United States but in many other countries, can and usually does narrow the scope of required sampling and testing, which results in a better evaluation of the vessel at a much more reasonable cost to the vessel owner.

Accordingly, MTS believes that one of the most significant changes that EPA can and should make to any final guidance document is the addition of information on PCB bans in other countries (including the nature of materials banned and the dates on which particular bans became effective). Information of this sort is not readily accessible to

individual ship owners, and the community of ship owners and consultants would benefit greatly from having such a resource available to them.

MTS also believes that, for those areas of a ship that do require sampling, a much more efficient process can be utilized for selecting the number and distribution of sampling. The blind statistical sampling approach adopted in the Draft Guidance is wasteful and in some cases requires an unnecessarily large number of samples because it does not take into account the realities of ship construction and maintenance. In the real world, absent unusual maintenance (which should be taken into account based on the facts of the situation), multiple different kinds of paint are not used to paint adjacent surfaces in the same areas of a ship. True targeted sampling – that is, selection of sample locations and frequency based on the actual situation in a particular area of the vessel, rather than based on the assumption that different paint surfaces are used throughout the vessel, requiring random sampling – can much more efficiently ascertain the presence or absence of PCBs on vessels and produce equivalent confidence in the results.

MTS hopes that these comments will help improve this document, bring a level of reasonableness to the process of evaluating a vessel for the presence of PCBs, and, more importantly, assist vessel owners in choosing the method that is right for their particular circumstance.



March 29, 2013

Re: Comments for the Draft Technical Guidance for Determining the Presence of Polychlorinated Biphenyls (PCBs) at Regulated Concentrations on Vessels (Ships) to be Reflagged

The following comments are offered for consideration after review of the above referenced DRAFT document.

**General:**

In general, this document was well organized and presented in a manner that provides a simplified, iterative approach to determining if there is a probable risk of PCB containing materials on board a vessel. In particular, the logic from beginning to end is easily understood and the worksheets proved to be useful tools facilitating the comprehension of the plan presented therein. There are, nevertheless, some substantive tenets within the document which require further deliberation before this guidance can be applied:

- √ Almost directly from the outset, the guidance undermines the stated objective of proper PCB management by emphasizing the strict liability of TSCA and its resultant consequences, thus outweighing any impetus for a good faith application effort
- √ There is an inequitable application of PCB management among reflagging and other disposal methods for vessels
- √ The proposed sampling plan elements for determining population reflect a lack of understanding or regard for how vessels are built and maintained
- √ The extension of applicability of this guidance should include consideration for alternate transportation vessels (rail cars, airplanes) in addition to alternate disposal options for vessels (export and domestic disposal)
- √ The burden of implementation of the proposed statistical sampling may have adverse financial implications on the various vessel disposal options.

It is understood that this is a guidance document and it is not intended to modify regulations. As stated on page 11, "EPA's primary objective is to prevent the export of any regulated levels of PCBs, where PCBs could possibly be mismanaged abroad". This DRAFT Guidance document has been developed to achieve that objective. It appears counterintuitive that, almost from the outset (Section I. Objective, page 1), the document states the completion of a "guidance-based assessment, such as that presented in this draft guidance, does not guarantee that regulated levels of PCBs will not be found on the ship at a later date, nor does it create a defense against a violation under TSCA if that occurs". Although this may

be true in a legal sense, it would seem more prudent for EPA to acknowledge that the existence of a good faith, guidance based assessment will be considerably more valuable in a TSCA based legal proceeding than the absence of one. If the guidance is properly developed and applied, then there is a higher probability of EPA achieving its stated goal. Punitive action is available and warranted where there is flagrant disregard for the statutory and regulatory objective.

A general, philosophical question arises from the description regarding the regulatory ability to reflag vessels for continued use when electrical equipment contains regulated PCBs (refer to page 8, fourth paragraph of the DRAFT document). When a ship is reflagged, at some point in the future, the ship will be recycled via scrapping and the PCB disposal (management) will not fall under the jurisdiction of the US EPA at that time. How is that any different than recycling through scrapping immediately after reflag, with regard to potential mismanagement of PCBs abroad? It seems that reflagging and/or disposal cannot be considered wholly separate with regard to proper management of PCBs.

#### **Comments on EPA Specific Requests:**

#### **2. Approach to Logical Grouping**

A logical basis for grouping like materials and/or like use should be employed. Caulk, tapes, adhesives, mastics should be grouped together. Caulk is not similar to gaskets and rubber mounts.

#### **4. Determining Category Population Size for Non-Discrete Items**

Considering methods and modes of vessel construction and repair is paramount to determining population size. A holistic approach with regard to many of the materials categories within the document would be more appropriate than their consideration as "discrete" items.

##### **Cable:**

In theory, the approach of sub categories of cable based on like characteristics seems reasonable. In practice, however, painted cable all looks the same. In all probability, the cable of same size, which is original to the ship, will in fact be from the same "lot" and could, conceivably, be considered one item. It would have been purchased at the same time, accordingly with the same specifications, spooled, and delivered during the ship construction. The cables would not have been purchased in separate runs. In other words, counting separate cable lines is artificially increasing population.

**Gaskets:**

Counting individual gaskets may also not be representational. All of the gaskets for a specified purpose would have been purchased and installed from one lot of similar materials. Replacement gaskets would be ordered in lots too, not as individual items. It may be more appropriate to determine visible differences and be certain to sample each of the different types.

**Caulk and Paint:**

The determination of a unit of paint at 400 square feet based upon a gallon's coverage and caulk at 10 linear feet based upon a "tube" may be consistent with a residential paradigm, not the practice used in an industrial/ shipboard setting where the materials are ordered in large quantities. Painting and caulking activities are frequently completed during scheduled shipyard alteration/repair activity periods. The materials are ordered in very large quantities. At a minimum, the paint unit should be re-evaluated to consider 5-gallon pails for interior paint. Hull paint below the water line would be homogenous and one sample should be sufficient, barring evidence to the contrary. Exterior shipboard paint could be categorized by color or use (deck paint or bulkhead paint being a use determinant). These paints may be purchased in tote sized volumes.

**5. Applicability of the Draft Technical Guidance to Other Ship Activities**

Theoretically, if this DRAFT Guidance is implemented for ship reflagging, it should be implemented for all other transfer of title or disposal including:

- Continued Use (to track potential PCB)
- Domestic Disposal (to ascertain that materials are being handled and disposed appropriately)
  - Although permissible (761.20(c) (2)) to distribute regulated PCB in commerce for disposal, in order to dispose/ manage the potentially PCB containing materials appropriately, one would need to complete the sampling in the same manner as for export disposal.
- Reefing
- Military operations (Sink-Ex)

By extension, the same parameters should then, also, be required for building demolition/disposal and disposal of any other vehicle/mode of transportation including rail cars, trucks, cars, airplanes, etc.

**6. Cutoff Date for When Materials on a Vessel Can Be Assumed to Not Contain PCBs.**

At a minimum, one may assume that any vessel with drawing dates after July 2, 1979 (761.2 PCB concentration assumptions for use) is without regulated PCB. To assume otherwise is a predetermination of illegal activity (presumptive guilt). The logic being that if the drawings were not begun, materials specifications would not have been written and orders for the requisite materials not made prior to that date and therefore they could not have been purchased (distributed in commerce).

### **Comments or Edits on Specific Document Text:**

**Definitions:** The terms “test” and “sample” should be defined in definitions and the defined use of the work should be used consistently throughout the document.

### **Page 4, Identification of PCB-containing Materials and Potential On-board Locations, Paragraph 2**

...several areas on ships may have an increased likelihood *of the presence of* PCB-containing...Be aware that *some* pieces of equipment...could leave *PCB residues*...

#### Categories that could contain non-liquid (solid) PCBs

Paint (e.g., oil based or aluminized)

Comment 1 – water –based paint is not known to have contained PCBs, this should be noted.

Comment 2 – Aluminum paint is the term usually seen relating to PCB. Has it been determined whether this is “aluminized” or paint for aluminum structures (where-in it would provide fire retardant properties)? These distinctions make a difference in likelihood of PCB content.

### **Page 8, Electrical Equipment**

Items such as switchboards, consoles, radio equipment, voltage regulators, switches, re-closers, bushings, and electromagnets *may contain solid or liquid PCBs in the component parts such as wiring or capacitors.*

### **Page 9, Spills and Surface Contamination**

First sentence ...disposed (delete “of” – sentence should not end with preposition)

### **Page 10, Last line of the last bullet:**

*for* that area of the vessel

### **Page 15, 2 e)**

...to perform *laboratory analysis by an EPA approved method for determining PCBs.*

### **Page 19, First bullet**

Since the average is 12ppm, as presented, it is not possible for all of the samples to be 108 ppm or the analytical result of the sample would be 108 ppm. Additional explanation may be required. Since the average of the 9 samples is 12ppm, it is

possible that that 11 of the samples are actually non- detect and one of the samples is 108ppm. The samples were collected “blind” meaning that is it unknown which sample possibly exceeds the criteria. Because this is unknown, it must be assumed that any of the samples may contain PCBs at 108ppm, therefore each of the samples are suspect of containing PCBs at 108ppm.

Paragraph prior to Logical Grouping of Items in a Material Category

... Because the ship owner may need to collect...level of confidence in the result, EPA believes (delete “could be relatively large” prior to comma and EPA believes).

**Page 23, Item 2.**

The area specified for collecting paint samples will not produce enough material for analysis. One (1) meter square is recommended as an alternate.

**Page 24**

Wipe samples – Note: it should be mentioned that this sampling method is for determining if apparent spills are PCB containing. This is not an appropriate method for collecting samples for underlying matrix.

**Page 25**

Specifying VOA bottles may result in bottleware delivered containing preservatives.

**Page 25, Item 4., Last sentence**

... so as not to volatilize any PCBs that... (delete “the ” preceding “any”)

**Page 26, third paragraph concerning liquid in cables**

Comment – if a cable contains liquid, there should be no need to sample – it should be assumed to have regulated PCB.

**Page 26, Item 5., Gaskets, Isolation Mounts...**

Gaskets are found in air handling ducts and around doors, hatches and between flanges on other shipboard *systems*...generally, gasket material is rubber, felt, *graphite, asbestos or metal. Graphite and metal is not a suspect material*...

**Page 27, First paragraph**

...The mounts *may be* rubber material

**Page 27, Second paragraph**

...to determine the amount of sample *for* gaskets...and/or caulk needed for analysis (delete “is” following caulk)

**Page 32, Possible Materials Needed, Third Grouping**

...one labeled and filled with deionized or distilled water and one (delete “labeled” following distilled water)

**Page 34, QA/QC, Item 3.**

Requires a period at the end of sentence.

**Page 34, QA/QC Structures**

...For PCB sampling and analysis, *which* must be completed by a laboratory...

**Page 38, Documenting the Sampling Event, Number of layers of paint**

Note: this is indeterminate unless it is a single layer only

We trust these comments will be helpful in the further development of this guidance. We appreciate the opportunity to comment.

Respectfully,  
REEFMAKERS



Christian Harlander Adryan



John M. Mateo



Jeffrey C. Dey



February 28<sup>th</sup>, 2013

**VIA E-MAIL TO [ORCRPCBShipGuidance@epa.gov](mailto:ORCRPCBShipGuidance@epa.gov)**

U.S. Environmental Protection Agency  
Materials Recovery and Waste Management Division  
1200 Pennsylvania Avenue, NW  
Mail Code 5303P  
Washington, DC 20460

RE: Comments on Draft Technical Guidance regarding PCBs in Vessels being Reflagged

This letter responds to your request for comments on the Environmental Protection Agency's ("EPA") "Draft Technical Guidance for Determining the Presence of Polychlorinated Biphenyls (PCBs) at Regulated Concentrations on Vessels (Ships) to be Reflagged."

SEACOR Holdings Inc. ("SEACOR") is a global provider of equipment and services primarily supporting the offshore oil and gas and marine transportation industries. SEACOR offers its customers a diversified suite of services that include offshore marine, inland river, marine transportation, crisis and emergency management preparedness and response solutions, commodity trading and logistics and offshore and harbor towing. SEACOR is publicly traded on the New York Stock Exchange (NYSE) under the symbol CKH.

As the owner and operator of a large fleet of vessels, SEACOR has extensive experience with the construction and operation of vessels that may be subject to the draft guidance and is pleased to offer this experience to the EPA for its consideration in preparing any final guidance document.

You have requested comments on several topics addressed in the draft guidance, including the proposed approaches to composite sampling, logical groupings for sampling, cable samplings, determination of sample size for items such as paint, the applicability of the draft guidance to other ship activities, and finally, on a cutoff date for when materials on a vessel can be assumed to not contain PCBs.

We have focused our comments on three items: (1) a reasonable cutoff date; (2) the EPA's approach to sampling ships for the presence of PCBs above regulated levels; and (3) the relationship between the guidance and a presumption of compliance with the Toxic Substances Control Act ("TSCA") if the final guidance is followed by vessel owners and operators. In addition, we note that the draft guidance would probably not be suitable for other ship activities without a thorough vetting of the guidance with respect to any such use.

### Proposed Cutoff Date

After TSCA became effective on January 1, 1978, the manufacture, processing, or distribution in commerce of PCBs was prohibited in the United States. As a result, and based on our knowledge of how ships are built, SEACOR recommends that EPA adopt a cutoff date of no later than January 1, 1980, after which companies and the EPA can safely assume that no vessels built or repaired in the United States contain PCBs in regulated amounts. The EPA itself acknowledges, at page 13 of the draft guidance document, that "ships constructed in the United States after TSCA was in effect should not contain regulated levels of PCBs at the time of construction." SEACOR concurs with this finding for the reasons outlined below.

The construction of vessels starts with the laying of the keel and other steel work, which does not contain PCBs. It can take between one to two years to construct a large seagoing vessel. Only after the steel work is completed are other materials and items added to the vessel that could have contained PCBs. For example, PCBs may have been used, prior to 1978, in the following items:

- Cable insulation;
- Rubber and felt gaskets;
- Thermal insulation material including fiberglass, felt, foam, and cork;
- Transformers, capacitors, and electronic equipment with capacitors and transformers inside;
- Voltage regulators, switches, reclosers, bushings, and electromagnets;
- Adhesives and tapes;
- Lubricating oil, including in electrical equipment and motors, anchor windlasses, and hydraulic systems;
- Oil-based paint;
- Caulking;
- Rubber isolation mounts;
- Foundation mounts;
- Pipe hangers.
- Light ballasts; and
- Any plasticizers.

After PCBs were banned in the United States, they would not be used in these items and hence would not have been installed in ships after 1978. Therefore, it is safe to assume that no vessel whose construction was begun after the effective date of TSCA and no vessel that was completed after our proposed cutoff date of January 1, 1980 contains PCBs in any regulated quantities. In this regard, we note that the U.S. Maritime Administration has selected 1985 as the cutoff date, and the federal government agencies charged with oversight on this issue should develop a uniform cutoff date.

### Comments on Sampling Approaches

The sampling methodologies that EPA proposes, whether it be by composite sampling, logical grouping, cable sampling, or taking samples of painted surfaces every 400 square feet of the ship by hand scraping (see the draft guidance document at page 22), are extremely costly and time-consuming and, at the end of the day, will not produce the certainty that is required for ship owners and operators to comply with TSCA and be able to sell or reflag their vessels in a timely manner in international commerce. U.S.

companies regularly participate in the international shipping industry and commerce and often sell their ships to foreign owners or reflag them for use outside of the United States. It is for these reasons that SEACOR has stressed the need for a reasonable cutoff date as described above.

The EPA has recommended that as an alternative to sampling, ship owners and operators resort to historical records to prove that their vessels do not contain PCBs in regulated amounts. However, due to the age of vessels built prior to 1978 that may have contained PCBs, these records are not typically readily available to ship owners or operators, forcing them to resort to the time-consuming and expensive protocols suggested by EPA in the draft guidance document. If ship owners and operators were to follow the protocols suggested by EPA to detect the presence of PCBs, they would literally have to take the ship apart to comply, making compliance not only expensive but also making it virtually impossible to sell the ship on the open market and leaving the ship probably unseaworthy as well.

Moreover, the draft guidance states that once a ship owner finds any PCBs in regulated quantities, wherever located on the ship, there would be a violation of TSCA if it were exported and the ship owner presumably would be barred from selling its vessel on the open marketplace. SEACOR recommends that the EPA adopt a de minimis standard for sampling and a presumption that after a certain amount of sampling is conducted, the ship owner can safely self-certify compliance with TSCA. This approach would be more consistent with President Obama's Executive Order on Regulation, E.O. 13563, signed January 18, 2011, which requires federal agencies to consider costs and reduce burdens for American businesses and consumers when developing rules, among other measures. In this regard, the 99-page guidance document does not meet the President's test for consideration of costs and the burdens on industry from compliance.

#### Presumption of Compliance with TSCA

Ultimately, if a ship owner elects to follow the sampling protocols, it needs to be assured that compliance with the protocols and any final EPA guidance document or regulations gives them a "safe harbor" from a potential violation of TSCA. Yet, EPA has not offered this "safe harbor" and in fact as part of the draft guidance states that compliance with the guidance document and its sampling methodologies does not assure compliance with TSCA and leaves them exposed to liability. However, the draft guidance presumes that once a ship owner finds any amount of PCBs in regulated quantities, TSCA will be violated if the vessel is exported and the ship owner cannot reflag its vessel or otherwise sell it abroad. This arrangement puts ship owners and the maritime industry in the dilemma that the draft guidance was supposed to avoid.

#### Summary

In conclusion, we strongly recommend that the EPA: (1) adopt as a reasonable cutoff date for TSCA compliance January 1, 1980 based on industry practices for ship construction; (2) review its sampling methodologies to determine if they are realistic to conduct in a timely manner and still leave a vessel intact and available for sale; and (3) grant a presumption of compliance with TSCA should a ship owner

elect to follow the recommended sampling protocols. Finally, we believe that the draft guidance would probably not be suitable for other ship activities without a thorough vetting of the guidance by the maritime industry with respect to any such use.

Sincerely,

A handwritten signature in black ink, appearing to read "John Gellert".

John Gellert

Sr. Vice President

CC: Tony Salgado, Partner, Blank Rome  
Robert Clemons, Vice President, SEACOR Marine LLC  
Paul Robinson, General Counsel, SEACOR Holdings Inc.

**Utility Solid Waste Activities Group**

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March 29, 2013

**SUBMITTED VIA ELECTRONIC MAIL**

Office of Resource Conservation and Recovery (ORCR)  
U.S. Environmental Protection Agency  
[ORCRPCBShipGuidance@epa.gov](mailto:ORCRPCBShipGuidance@epa.gov)

Re: Draft Technical Guidance for Determining Presence of PCBs at Regulated Concentrations on Vessels to be Reflagged<sup>1</sup>

To whom it may concern:

The Utility Solid Waste Activities Group (“USWAG”) submits these comments on EPA’s “Draft Technical Guidance for Determining the Presence of Polychlorinated Biphenyls (PCBs) at Regulated Concentrations on Vessels (Ships) to be Reflagged” (“Draft Guidance”).

USWAG, formed in 1978, is an association of over one hundred energy utilities, utility operating companies, energy companies, and associations including the Edison Electric Institute (“EEI”), the American Gas Association (“AGA”), the American Public Power Association (“APPA”), and the National Rural Electric Cooperative Association (“NRECA”).<sup>2</sup> Together, USWAG members represent more than 73 percent of the total electric generating capacity of the United States, and service more than 95 percent of the nation’s consumers of electricity and 91 percent of the nation’s consumers of natural gas.<sup>3</sup>

While USWAG members generally do not own or operate ships, USWAG nonetheless appreciates the opportunity to comment on this important draft guidance, the implications of which could extend far beyond PCB sampling on ships bound for

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<sup>1</sup> Available online at [http://www.epa.gov/epawaste/hazard/tsd/pcbs/pcb\\_shp\\_guidnce.htm](http://www.epa.gov/epawaste/hazard/tsd/pcbs/pcb_shp_guidnce.htm).

<sup>2</sup> EEI is the principal national association of investor-owned electric power and light companies. AGA represents local energy companies that provide service to the nation’s consumers of natural gas. APPA is a national trade association that represents publicly-owned energy utilities. NRECA is the national association of rural electric cooperatives.

<sup>3</sup> Throughout these comments, we refer to our industry as the “utility” industry. In addition to individual electric and natural gas utilities, this term is intended to include those portions of the industry and those USWAG members that generate electricity but do not directly provide electricity to the public and are therefore technically not “utilities.”

foreign countries. To USWAG's knowledge, this guidance represents the first time EPA has developed formal guidance addressing the sampling of non-liquid PCBs. Until their manufacture was banned in 1979, PCBs were used in a wide range of industrial and commercial applications, and can be found in non-liquid materials such as caulk, paint, and plastics in public and private buildings throughout the country. Accordingly, EPA's approach to sampling such materials on ships to be reflagged has implications for the sampling of similar materials in countless other contexts.

The sampling plans and procedures that will be utilized by ship owners seeking to reflag a vessel are highly complex, and decisions made regarding the best approach to this sampling will be based on a combination of facts and circumstances specific to a given situation. For this reason, it is critical that EPA avoid any overly prescriptive language in the final guidance, and present recommendations in a manner that leaves room for an owner to craft a sampling approach tailored to a given ship.

### Purpose and Limitations of Guidance Documents

As a threshold matter, it is important to clarify the purpose of agency guidance documents such as the Draft Guidance, as well as the limitations of such documents. Agency guidance documents can be tremendously useful tools to assist regulated entities in understanding existing regulations and an agency's position regarding how it plans to implement and enforce such regulations. As the Office of Management and Budget ("OMB") explained in the preamble to its Final Bulletin for Agency Good Guidance Practices, guidance documents are an agency tool that, when "used properly, can channel the discretion of agency employees, increase efficiency, and enhance fairness by providing the public clear notice of the line between permissible and impermissible conduct while ensuring equal treatment of similarly situated parties." 72 Fed. Reg. 3432 (Jan. 25, 2007).

However, it is well settled that an agency may not use guidance documents to impose new, legally binding requirements on the regulated community. See *id.*; see also *Appalachian Power Co. v. EPA*, 208 F.3d 1015 (D.C. Cir. 2000). Only "legislative rules" – that is, those rules that are promulgated in compliance with the requirements spelled out in the authorizing statute and under the Administrative Procedure Act ("APA") – have the force and effect of law and may legally bind regulated parties. 5 U.S.C. § 551 *et seq.*; see also *Appalachian Power*, 208 F.3d at 1020. The United States Court of Appeals for the District of Columbia Circuit has cautioned federal agencies against treating guidance documents as though they are "controlling in the field" or from basing enforcement actions on the policies or interpretations set forth in a guidance document. *Appalachian Power*, 208 F.3d at 1021.

EPA does explain in the introduction to the Draft Guidance that it is a "draft technical guidance document, not a regulation or policy document," and states plainly that the draft document "does not impose any requirements or obligations on EPA or the regulated community." Draft Guidance at 1. However, despite this initial disclaimer, USWAG is concerned that the Draft Guidance in certain areas could be interpreted as

seeking to establish sampling procedures with which ship owners would be required to comply prior to certifying that a ship to be reflagged contained no regulated levels of PCBs. It is critical that EPA make clear in the final version of the Draft Guidance that the sampling approaches described therein are *recommended* approaches, and not requirements. In addition, the final guidance should make clear that ship owners are permitted to follow alternative approaches when evaluating the potential presence of PCBs at levels  $\geq 50$  ppm on a ship to be reflagged, and that the failure to follow any of the recommended approaches in the final guidance does not create a regulatory presumption or bias against the results obtained from using such alternative sampling approaches.

*Need for accuracy and consistency with TSCA and existing PCB regulations* – In addition to making clear that the final guidance document is not legally binding and imposes no new requirements on ship owners or the broader regulated community, it is imperative that EPA ensure that the final guidance is fully consistent with TSCA and the existing PCB regulations. The Draft Guidance includes several statements that, if not inaccurate, at a minimum overstate the existing requirements for PCBs, and therefore would likely give rise to regulatory uncertainty. Some of these statements are discussed in connection with specific substantive sections, below; other troubling overstatements include:

- EPA states that there is a “high probability of liquid PCBs being found in electrical equipment.” Draft Guidance at 8. This is simply untrue. The manufacture of PCBs ceased with TSCA’s ban, over thirty years ago; PCB-containing electrical equipment manufactured prior to the ban or otherwise contaminated<sup>4</sup> with PCBs (e.g., through servicing) have been steadily removed from service over the past three decades. As EPA recognized in its Advance Notice of Proposed Rulemaking (“ANPRM”) to reassess the PCB use authorizations that “[t]he population of PCB-containing equipment is continually decreasing and will never grow or rebound due to the ban on manufacturing.” 75 Fed. Reg. 17645, 17653 (April 7, 2010)). More recently, the Agency has acknowledged that “the number of potential sources of PCBs at levels  $\geq 50$  ppm has declined since the TSCA section 6(e) prohibitions went into effect.” 77 Fed. Reg. 74006, 74009 (Dec. 12, 2012). In comments on the 2010 PCB ANPRM, USWAG provided EPA with data confirming that the number of pieces of electrical equipment containing PCBs at concentrations  $\geq 50$  ppm has drastically declined in recent years. See USWAG Comments on PCB ANPRM<sup>5</sup> at 20-28 (submitted Aug. 10, 2010). Therefore, the statement that there is a “high probability of liquid PCBs being found in electrical equipment” should be deleted from the final guidance.

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<sup>4</sup> For the purposes of these comments, the terms “contaminated with PCBs” and “PCB-contaminated” refer to materials with PCBs at concentrations  $\geq 50$  ppm.

<sup>5</sup> Available online at [www.regulations.gov](http://www.regulations.gov), Docket ID No. EPA-HQ-OPPT-2009-0757.

- EPA makes the blanket statement that “[u]nder the TSCA regulations, a spill of liquids containing PCBs  $\geq$  50 ppm is considered illegal disposal of PCBs.” Draft Guidance at 9. This is inaccurate. TSCA regulates as illegal disposal only those spills of PCBs at regulated levels that post-date TSCA. See 40 C.F.R. § 761.50(b)(3)(i)(A).

To avoid creating confusion among the regulated community, EPA should clarify these statements in the final guidance.

### Assumptions Regarding PCB Contamination; Burden of Persuasion

Persistent throughout the Draft Guidance, and wholly inconsistent with the existing, duly promulgated regulations governing PCBs, is the suggestion that a ship owner bears the burden of affirmatively demonstrating an absence of PCB contamination at regulated levels (*i.e.*,  $\geq$  50 ppm) even where the ship is being exported for purposes other than disposal.<sup>6</sup> Notwithstanding any requirement imposed by the Maritime Administration (“MarAd”) for certification from a ship owner seeking to reflag a vessel for export to certify that the ship does not include regulated levels of PCBs, EPA’s own PCB regulations do not impose on a ship owner (or any other regulated entity) any affirmative duty to sample for PCBs prior to disposal, or prior to export for continued use. See 40 C.F.R. Part 761 generally and at § 761.97; see *also* letter from John W. Melone, Director, National Program Chemicals Division, Office of Prevention, Pesticides, and Toxic Substances, USEPA, to Keith R. Reed, President and CEO, Environmental Protection Services (Sept. 18, 1998).<sup>7</sup> However, the Draft Guidance in several sections suggests that an owner is required to either demonstrate through sampling and analysis that materials are not PCB-contaminated or treat any unsampled materials as if they do, in fact, contain PCBs at concentrations  $\geq$  50 ppm, even where the vessel is being exported for purposes other than disposal.

In considering this issue, it is important to note that EPA’s regulations plainly state that it is the Agency that bears the initial burden of presentation and persuasion in

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<sup>6</sup> EPA’s regulations do provide that, for purposes of export for disposal only, “PCBs and PCB Items” of unknown concentrations shall be treated as if they contain  $\geq$  50 ppm.” 40 C.F.R. § 761.97(a)(2) (emphasis added). However, this provision is narrow in scope, and does not provide a regulatory basis for EPA’s suggestion throughout the Draft Guidance that ship owners are to assume shipboard materials contain PCBs at  $\geq$  50 ppm absent sampling to the contrary. First, this provision applies only in the context of export for purposes of disposal; second, this provision applies only to “PCBs” and “PCB Items.” In other words, in the context of the Draft Guidance, there is a regulatory basis for requiring a ship owner to assume a shipboard item contains  $\geq$  50 ppm PCBs only where (1) the ship is being exported for purposes of disposal, and (2) an item is known to contain some uncertain level of PCBs (*i.e.*,  $>$  0 ppm).

<sup>7</sup> Mr. Melone’s letter states unambiguously that “[t]he PCB disposal regulations ... do not explicitly require testing. Thus, some companies may decide to not test the PCB equipment or fluids and to apply knowledge based on factors such as permanent nameplates; mark or other documentation from the manufacturer of the equipment indicating the PCB concentration; and other documentation or service records indicating the PCB concentration of all fluids used in servicing the equipment since it was manufactured.”

any enforcement case. 40 C.F.R. § 22.24(a); see also EPA PCB Question & Answer Manual at 49. It is only after EPA has met that initial burden of presentation, establishing a prima facie case that a regulatory infraction has occurred, that the burden shifts to the respondent to present any defense to the Agency's allegations. In its final guidance document, EPA should make absolutely clear that a ship owner bears no regulatory obligation to affirmatively demonstrate the absence of PCBs at regulated levels (other than and apart from any certification requirements imposed by MarAd) in a ship being reflagged other than under the narrow circumstances described above. Further, EPA should clarify that no assumptions for disposal exist in the domestic context to avoid creating regulatory confusion.

*Assumptions regarding presence and extent of PCB contamination in non-liquid materials* – Closely tied to this issue is the question of what, if any, assumptions are appropriate to make regarding the presence and extent of PCB contamination in non-liquid materials. The existing PCB regulations set forth at 40 C.F.R. Part 761 establish assumptions regarding PCB contamination relevant to the use of certain categories of electrical equipment; these so-called “assumptions for use” were promulgated through formal notice and comment rulemaking as required under the APA. See 40 C.F.R. § 761.2. However, the PCB regulations establish no assumptions regarding PCB contamination in non-liquid uses such as those contemplated in several sections of the Draft Guidance (e.g., caulk, applied paint, cable). The existing regulations require owners to treat PCBs and PCBs of unknown concentration as if they contain  $\geq 50$  ppm only in the context of export for disposal. See *id.* at § 761.97(a)(2).

Despite the absence of any regulatory basis for the blanket recommendation that ship owners assume certain shipboard materials to be PCB contaminated, the Draft Guidance is peppered with such recommendations; these recommendations are in no way limited to scenarios where a ship is to be exported for purposes of disposal. For example:

- In addressing PCB electrical equipment, the Draft Guidance states that “[i]t should be assumed that drained PCB Articles (e.g., transformers and pipes) have surface residue with the same concentration as the liquid PCBs in the PCB Article. If the concentration of the liquid PCBs is not known, the ship owner may choose to remove the PCB Article, decontaminate the PCB Article, and/or sample the PCB Article through wipe sampling for the presence of regulated levels of PCBs.” Draft Guidance at 7. This paragraph is problematic for multiple reasons. First, the recommended assumption that electrical equipment drained of free-flowing liquids would have surface residue with the same level of PCB concentration as the removed liquids has no basis in regulation or practice.<sup>8</sup> Second, the next sentence of this paragraph suggests that an owner of electrical equipment is required to sample to demonstrate the absence of PCBs at regulated levels, or to remove

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<sup>8</sup> In fact, the PCB regulations expressly allow for drained, PCB-contaminated transformers to be disposed of in municipal solid waste landfills, indicating that in EPA's own opinion this category of equipment is unlikely to be contaminated with PCBs at  $\geq 50$  ppm. See 40 C.F.R. § 761.60(b)(6)(ii)(A).

or decontaminate the equipment. In fact, as discussed above, the existing PCB regulations include no such requirement to sample electrical equipment in use or intended for disposal. EPA should make clear in the final guidance that owners of electrical equipment are not required to sample for potential PCB contamination, and explain that the guidance is merely recommending a conservative approach that may be adopted by a ship owner preparing to certify that the ship to be reflagged does not contain PCBs at regulated levels.

- The Draft Guidance recommends that ship owners “consider all liquid applications to be regulated [*i.e.*, contain PCBs  $\geq$  50 ppm]” and goes on to state that, where ship owners decline to sample electrical equipment manufactured prior to July 2, 1979, “it should be assumed that the equipment contains PCBs in regulated quantities.” Draft Guidance at 8. Again, these overly broad statements, which lack any basis in practical experience, do not apply other than in the context of export for disposal.

These and other similar statements throughout the Draft Guidance conflict with the existing rules governing PCBs and create regulatory confusion. EPA should eliminate all suggestions that a ship owner is required to assume PCB contamination for purposes other than export for disposal. At a minimum, to the extent any of the recommendations regarding assumptions of PCB contamination are retained in the final guidance, EPA should take pains to emphasize that these recommendations are made in the spirit of suggesting a conservative approach which ship owners may, but are not obligated to, follow to assist in making the certification required by MarAd. Further, EPA should make clear that no assumptions regarding PCB contamination exist in the domestic disposal context.

#### Role of Owner's Judgment and Knowledge

USWAG appreciates EPA's acknowledgement, throughout the Draft Guidance, that a ship owner's knowledge, experience, and judgment play a critical role in the development of an approach to sampling. For example, the discretion explicitly afforded a ship owner in determining the appropriate degree of confidence and the necessary number of samples makes sense from both a regulatory and operational perspective. See Draft Guidance at 16-17. With respect to the level of confidence achieved by the ship owner, USWAG recommends that EPA apply a policy of exercising its enforcement discretion in those instances where an owner has achieved a relatively high level of confidence (*e.g.*, 95%) based on a correspondingly high number of samples but nonetheless is subsequently found to have materials containing PCBs  $\geq$  50 ppm in shipboard materials. The explanation of such an enforcement discretion approach in the final guidance would encourage ship owners to adopt a conservative approach and seek a high level of confidence – thus increasing the accuracy of sampling and the thoroughness of associated removal and remediation – while still affording owners an appropriate level of discretion.

Similarly sensible is the Draft Guidance's statement that a sampling crew may supplement a sampling plan with "best judgment to collect additional unplanned samples," and may use their knowledge and judgment to consider those areas where PCBs may be present in higher or lower concentrations. *Id.* at 18. In light of the absence of any affirmative regulatory requirement to sample, the experience and judgment of a ship owner is an essential tool to be used in developing an efficient approach to achieving compliance. USWAG believes that EPA's deference to the ship owner's knowledge, experience and judgment in developing a PCB sampling plan is appropriate in other contexts as well, particularly in the electric and gas utility context where owners/operators have decades of experience in managing PCBs and PCB-containing equipment in their utility operating systems.

### Significance of PCB Use Authorizations Post-Export

EPA states in the Draft Guidance:

Please note that some liquid-filled electrical equipment (e.g., transformers) may fall under a continued use authorization (40 CFR parts 761.20 and 761.30), and thus, may not need to be removed from the vessel, even if the item contains regulated levels of PCBs. However, the continued use authorizations do not apply to an export for scrapping/disposal. Instead, these authorizations apply to the export of a vessel that will continue to be used as a vessel.

Draft Guidance at 8 (emphasis added). This paragraph seems to indicate that ship owners may export vessels with PCBs  $\geq 50$  ppm provided those PCBs are present in a manner consistent with the existing use authorizations for PCBs, including those use authorizations for PCBs in electrical equipment (40 C.F.R. § 761.30) and for porous surfaces contaminated with PCBs (40 C.F.R. § 761.30(p)).

While USWAG agrees that such continued uses would pose no unreasonable risk to health or the environment, the suggestion that the use authorizations continue to apply after export appears to be in conflict with the MarAd requirement that a vessel owner certify that a ship to be reflagged for export contain no regulated levels of PCBs (*i.e.*,  $\geq 50$  ppm). To avoid creating regulatory confusion in the ship reflagging context and in other export scenarios, EPA should clarify in the final guidance how such continued use of PCBs  $\geq 50$  ppm, in compliance with the use authorizations set forth at 40 C.F.R. Part 761, is consistent with the MarAd certification requirement.

### Costs and Practical Considerations

The Draft Guidance appropriately acknowledges the high costs often associated with sampling both liquid and non-liquid PCBs. See, e.g., Draft Guidance at 7, 10-11, 19-20. USWAG also appreciates EPA's recognition in the Draft Guidance that sampling certain types of items, including electrical equipment and electrical cables, "could render them useless." Draft Guidance at 22. USWAG has raised this practical consideration in

the various contexts, including in comments on EPA's PCB ANPRM. See USWAG Comments on PCB ANPRM at 51-54. It is critical that EPA continue to acknowledge this reality in the final guidance and in any relevant regulatory actions, including guidance, in the future.

In addition, many of the categories of waste addressed in the Draft Guidance fall within the definition of "PCB bulk product waste," meaning "waste derived from manufactured products containing PCBs in a non-liquid state, at any concentration where the concentration at the time of designation for disposal was  $\geq 50$  ppm." 40 C.F.R. § 761.2. Common examples of PCB bulk product waste include caulk and applied paint, manufactured with PCBs and containing PCBs  $\geq 50$  ppm at the time the owner designates the material for disposal.<sup>9</sup> The distinction between PCB bulk product waste and other regulated PCB waste is important as the regulations allow for the disposal of many categories of PCB bulk product waste in non-TSCA units (*i.e.*, municipal solid waste landfills), representing a far less burdensome and costly disposal method than those available for other categories of PCB waste. See *id.* at § 761.62(b). The final guidance should define PCB bulk product waste and provide examples of those shipboard items likely to fall within this definition, and should explain the disposal options available for PCB bulk product waste.

#### Approach to Sampling, Generally

*Zone Approach* – USWAG supports EPA's recommendation of a "Zone Approach" to sampling, whereby the ship owner may "divide the ship into sections" for purposes of sampling based on historical records and other information. See Draft Guidance at 15-16. This is another example of an appropriate utilization of the owner's experience and judgment to determine the most effective approach to sampling, an approach that is applicable in other contexts including those involving the sampling of utility facilities and equipment.

*Distribution of PCBs throughout a ship* – USWAG agrees that, as a general matter, shipboard items should be "considered to be homogenous with respect to the spatial distribution of PCBs within a given item." *Id.* at 16; see also *id.* at 22 (regarding PCB distribution in cable). EPA should clarify that the owner's experience, information, and judgment will play a critical role in determining the likelihood that PCBs are evenly distributed in any shipboard item (or category of items).

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<sup>9</sup> EPA recently modified its interpretation of the definition of PCB bulk product waste to include PCB-contaminated substrate or building material that is contaminated only as a result of the PCB bulk product waste (*e.g.*, paint, caulk) and that is still attached to the PCB bulk product waste at the time of designation for disposal. EPA should clarify in the final guidance the extent to which this interpretation would apply in the context of PCB bulk product waste on ships (*e.g.*, where large portions of painted metal are being removed from the ship and disposed of because they had been coated with paint containing PCBs at  $\geq 50$  ppm).

## Spills and Surface Contamination

*Availability of PCB Spill Cleanup Policy* – In its discussion of spills and surface contamination, EPA misstates the requirements of the PCB Spill Cleanup Policy. Specifically, the Draft Guidance states that, “[f]or cleanup of spills within 72 hours of the time of the spill, the ship owner can use EPA’s PCB spill cleanup policy ...” but indicates that, “[f]or other spills [*i.e.*, where more than 72 hours have passed since the time of the spill], the ship owner should follow the regulations under 40 CFR § 761.61 to properly cleanup the PCB remediation waste.” Draft Guidance at 9 (emphasis added). EPA’s suggestion that the PCB Spill Cleanup Policy is unavailable for spills that are older than 72 hours is incorrect and in fact directly at odds with the PCB regulations and relevant interpretive guidance addressing the availability of the Spill Policy. The relevant factor for determining the availability of the PCB Spill Cleanup Policy is the length of time since discovery of the spill, not since the time of the spill itself. 40 C.F.R. §§ 761.120(a), 761.125; see also letter from Denise Keehner, EPA, to Peter Friedmann, Esq. (Jan. 4, 1989) (explaining that the Cleanup Policy response clock starts when a spill is *discovered* by a company or when the company is notified of the spill, even where circumstances show that the spill is more than 72 hours old). Because the Draft Guidance is in direct conflict with the relevant regulations, it is imperative that EPA correct this error in the final guidance.

*Water with no visible oil trace* – Also troubling, and lacking foundation in either the regulations or common sense, is EPA’s suggestion that ship owners should sample water that shows no visible traces of oil. Draft Guidance at 9. While it may make sense to sample water which the owner knows has come into contact with PCBs, even if there is somehow no visible trace of oil, absent such knowledge there is little value to contemplating whether to sample such water as it is extremely unlikely to contain PCBs. EPA should clarify and narrow this recommendation in the final guidance.

*Painted surfaces* – EPA states that “wipe sampling is not appropriate for measuring PCBs on porous surfaces,” adding that paint is considered a porous surface. However, wipe samples are routinely (and appropriately) used in the context of 40 C.F.R. § 761.30(p), the use authorization for continued use of PCB-contaminated porous surfaces. EPA should correct this misstatement in the final guidance to avoid creating any regulatory confusion associated with the use of this critically important regulatory provision.

*Determining number of samples for painted surfaces* – Also problematic in the Draft Guidance’s treatment of sampling painted surfaces is the recommendation that painted surfaces be sampled every 400 square feet, “because one gallon of paint, which is a typical unit for painting, covers approximately 400 square feet.” Draft Guidance at 17. While it may be true that one-gallon cans are the most common unit of paint in the typical (non-industrial) consumer retail scenario, this recommendation ignores the reality that in commercial and industrial settings, it is extremely unlikely that large structures – including but not limited to ships – will be painted using one-gallon paint cans. Application of paint in industrial and commercial settings most likely involves much

larger containers from which the paint is dispensed and therefore the suggestion that the paint be sampled every 400 square feet would impose needless time and expense on PCB sampling for painted surfaces. The final guidance should encourage ship owners to use their experience and judgment, and any other relevant documentation or knowledge, to determine the appropriate number and location of samples from large painted surfaces. Similarly, the suggestion that caulk samples be taken every 10 linear feet will prove inappropriate in most commercial and industrial settings, as this does not reflect the manner in which caulk is generally applied in such settings. Accordingly, this suggestion also should be removed from the final guidance and discretion should be afforded to ship owners evaluating the appropriate number and location of caulk samples.

#### Fluorescent Light Ballasts: Significance of Equipment Failure

USWAG agrees with EPA's statement that the failure of a light ballast does not equate to leaking of potentially PCB-containing liquid. See Draft Guidance at 8. USWAG made the point that equipment failure does not correlate to release of or exposure to liquids (PCB-containing or otherwise) from that equipment in comments on the PCB ANPRM. See USWAG Comments on PCB ANPRM at 37-39. We appreciate the acknowledgement of this important reality in the Draft Guidance.

#### Composite Sampling

The Draft Guidance's recommended approach to composite sampling is overly conservative, arbitrary, and would require ship owners to apply an overly complicated process without any rationale based on risk or regulatory requirements. See Draft Guidance at 18-19. While composite sampling can be an effective and efficient means of sampling under certain circumstances, the approach recommended by EPA in the Draft Guidance would discourage ship owners from adopting such an approach.

Specifically, the requirement to "normalize" the results by multiplying the final concentration by the number of individual samples will in many instances lead to a gross overestimation of the actual PCB concentration of the material at issue, often requiring materials to be managed as PCB contaminated when in fact they are not. This "false positive" result would impose extremely high costs, as well as operational hurdles and time delays, as a result of the associated removal, remediation, and disposal – with no regulatory or risk-based justification. Even in a non-binding guidance document, EPA must take great care when suggesting such a conservative approach to avoid creating regulatory confusion or leading ship owners to expend unnecessary costs based on an understanding that the recommended approach is somehow required by law.

Composite sampling is yet another area where the experience and knowledge of a ship owner will play a key role. In evaluating whether the conservative normalization (*i.e.*, multiplication) approach makes sense in any given scenario, ship owners should be encouraged to use knowledge, experience, and judgment to consider how PCBs are

likely to be distributed in the relevant area. Moreover, the multiplier approach suggested in the Draft Guidance is directly at odds with existing regulations that expressly allow for PCB results being based on the concentration of the composited sample. See 40 C.F.R. § 761.289; see *also* 40 C.F.R. § 761.130. Accordingly, EPA should emphasize in the final guidance that the multiplier approach is an extremely conservative recommendation, and that owners may conduct composite sampling in any manner meeting the requirements of Subpart O of the PCB regulations or any other method that is consistent with the regulations and that the owner believes to be appropriate in light of site-specific circumstances.

#### Recognition of Destructive Sampling; Recommendations for Non-Destructive Sampling

*Sampling electrical equipment* – USWAG appreciates EPA’s acknowledgement, discussed above, that in many instances sampling can destroy the equipment or item being sampled. See Draft Guidance at 22. USWAG supports EPA’s recommendation that, in the case of items that may be rendered useless as a result of sampling, such as electrical equipment, a ship owner should use historical records that shed light on the potential for PCB contamination. In the final guidance, EPA should clarify that, in addition to or in the absence of relevant historical records, a ship owner can use other knowledge, information, or judgment to evaluate the likelihood of PCB contamination in such equipment.

*Sampling cable* – USWAG supports EPA’s recommendation that ship owners avoid destroying cables when sampling by sampling cable only at the end of a run to determine PCB concentration for the entire length of cable. *Id.* USWAG agrees that it is generally appropriate to assume that the concentration of PCBs in a run of cable may be consistent throughout the entire length of cable. *Id.* This is another instance in which the ship owner’s judgment and experience will prove valuable in determining the best approach to sampling.

Of more general applicability, USWAG supports EPA’s recommendation that samples should be taken “from any part of the item that will do the least damage to that item, or a part that is most accessible and safe to sample.” *Id.* at 16.

#### Logical Groupings of Items in Material Categories

USWAG supports EPA’s recommendation that ship owners “create a subgroup” of items that are related (e.g., in terms of timing of installation, physical attributes, and/or manufacturer specifications), and use a limited number of samples – including possibly a single sample – from this subgroup to assess PCB contamination for the entire subgroup. Draft Guidance at 19. This recommendation is sound from both operational and risk-based perspectives. EPA should make clear in the final guidance that, in addition to the categories of subgroups suggested in the Draft Guidance, owners may use their own knowledge and judgment to create subgroups based on other factors.

### Inaccessible or Unsafe Areas

EPA acknowledges that “practical considerations” will render certain items “impossible to test,” pointing to inaccessibility and/or safety concerns. Draft Guidance at 16-17, 21-22. USWAG appreciates EPA’s acknowledgement of this important reality in any PCB sampling scenario. USWAG has raised this issue with EPA in the context of EPA’s ANRPM to reassess the use authorizations for PCBs, pointing out that any requirement to sample in-use electrical equipment – either directly imposed through a new regulatory requirement or the practical result of requirements to phase out certain categories of PCB electrical equipment – would raise serious logistical and safety concerns. See USWAG Comments on PCB ANPRM, throughout and at 51-54. USWAG appreciates EPA’s recognition of sampling-related safety concerns in this guidance document, and in particular the Agency’s acknowledgement that “the health and safety of the sampling crew and remediation crew should be considered first.” Draft Guidance at 44.

However, EPA’s guidance to ship owners regarding how to approach potential PCB contamination in unsafe or inaccessible areas is confusing. In particular, EPA’s recommendation that owners avoid inaccessible or unsafe areas when sampling seems of little use or significance when considered in light of EPA’s subsequent discussion of the need to remediate those same areas. See Draft Guidance at 44. Further, the discussion of remediating inaccessible and unsampled areas in the Draft Guidance again inappropriately implies that owners should assume materials to be PCB contaminated in the absence of sampling demonstrating otherwise. In the final guidance, EPA should provide a fuller discussion regarding options for evaluating whether remediation of an unsafe or inaccessible location (where extent of PCB contamination, if any, is unknown) is appropriate or warranted. In addition, EPA should take care in the final guidance to avoid any inappropriate suggestion regarding assumptions of PCB contamination in the absence of analytical data demonstrating a lack of PCB contamination.

### Recordkeeping

The Draft Guidance references the existence of applicable federal, state, and local recordkeeping regulations, and instructs that “any and all PCB compliance records should be maintained.” Draft Guidance at 36 (emphasis in original). This is a gross overstatement of the existing PCB recordkeeping requirements (40 C.F.R. 761, Subpart J). Even in a non-binding guidance document, such inconsistency with the regulations is problematic as it is bound to create confusion regarding applicable regulatory requirements. EPA should reconsider its characterization of relevant recordkeeping requirements, and take care in the final guidance to make plain that its recommendations regarding recordkeeping practices – to the extent those recommendations are broader than the regulatory requirements – are merely recommended and non-binding.

## Analytical Methods

*Range of available analytical methods* – The Draft Guidance recommends the use of EPA SW-846 Method 3540C, Soxhlet Extraction, but fails to mention other available options, including sonication and EPA SW-846 Method 3541 (Automated Soxhlet Extraction), both of which are allowed under the PCB regulations. See Draft Guidance at 41. In fact, Automated Soxhlet Extraction – a commercially-available, three-stage extraction system – achieves analyte recovery comparable to Method 3540C, but in a significantly shorter time. This method is a fully automatic extraction process that reduces the extraction time to one-fifth of that of the traditional Soxhlet technique (Method 3540C). In the final guidance, EPA should provide a fuller discussion of other available analytical options that may be more cost-effective and/or less complex. In particular, EPA should make clear in the final guidance that chemical analysis may be performed in accordance with the most current extraction version of *any* of the following EPA SW-846 Methods: 3500, 3540, 3541, 3545, and 3550.

*Extraction holding time* – Also misleading is EPA's discussion in the Draft Guidance of the extraction holding time for samples. See *id.* In the Draft Guidance, EPA recommends a holding time of 14 days for samples extracted for PCB analysis (7 days for aqueous samples). However, the current SW-846 has eliminated the extraction holding time for both aqueous and solid samples. See SW-846 Chapter 4, Organic Analytes. Further, holding time has little bearing on accuracy of analysis; it is strange to suggest that in-place materials will retain PCBs for decades but that the PCBs will leave the sample in a matter of days or even weeks. EPA should therefore eliminate the unnecessary references to extraction holding times, or at a minimum make clear that such extraction holding times are recommendations only and not in any way required by the regulations.

\* \* \* \* \*

USWAG appreciates the opportunity to comment on this important Draft Guidance. Please contact Douglas Green (dhgreen@venable.com; 202-344-4483) at Venable LLP or USWAG Executive Director Jim Roewer (jim.roewer@uswag.org; 202-508-5645) with questions on these comments.

Sincerely,



James R. Roewer  
Executive Director



March 29, 2013

**VIA:** [ORCRPCBShipGuidance@epa.gov](mailto:ORCRPCBShipGuidance@epa.gov)

Attn: Office of Resource Conservation and Recovery (ORCR)/ Materials  
Recovery and Waste Management Division  
US Environmental Protection Agency  
Washington, DC 20004

**Re.: Request for Comments on "Draft Technical Guidance for Determining the Presence of Polychlorinated Biphenyls (PCBs) at Regulated Concentrations on Vessels (Ships) to be Reflagged".**

Dear Sir or Madam.

The Chamber of Shipping of America (Chamber) represents 35 U.S. based companies that own, operate or charter oceangoing tankers, container ships, and other merchant vessels engaged in both the domestic and international trades. The Chamber also represents other entities that maintain a commercial interest in the operation of such oceangoing vessels.

The Chamber appreciates the opportunity to provide comments relevant to the above referenced guidance document on PCB assessment on vessels which are to be reflagged.

We would like to express our sincere appreciation to the EPA for the significant outreach and education program the agency has undertaken to provide information to stakeholders on this issue including their collaboration with the Maritime Administration (MARAD) in ensuring a timely and legally defensible process through which reflagging petitions can be processed. Vessel owners will find value in using the final guidance document during the design and implementation of a PCB assessment protocol during the reflagging process and their interactions with what are traditionally, experts with which the vessel owner contracts that are certified to perform the requisite testing and sampling for PCBs e.g. certified industrial hygienists and/or hazardous waste identification and assessment professionals.

Furthermore, we strongly support the flexibility provided in the guidance document to use various sampling and non-sampling procedures to conduct the assessment based on a specific vessel's history and maintenance/repair records. We also believe the guidance document provides a comprehensive list of suspect areas and materials where PCB assessment should be conducted in accordance with this document.

We offer the following comments on the three specific areas in which EPA requested comments.

**The approaches to composite sampling, logical groupings (subgroup approach), cable sampling and determining category population size for non-discrete items (e.g. paint, caulk).**

CSA believes the guidance document provides the necessary and comprehensive list of suspect areas and materials that need to be examined and assessed in order to determine the presence/absence of PCBs. With regard to questions associated with sampling protocols and groupings, due to the highly technical nature of creating and implementing a statistically correct sampling program which requires the input of experts proficient in the areas of sampling and testing, we are unable to provide specific comments on these issues. As noted in our preamble above, these services are not typically performed by on-staff employees of vessel owners but rather are secured via contract where the need for these services are required e.g. reflagging. Such professional expertise is generally provided by entities which specialize in hazardous waste identification, assessment and management and generally employ certified industrial hygienists and other professionals with the necessary training and expertise required for these highly technical tasks.

**The question of whether elements of this proposed guidance could be applied to ship-related activities other than the reflagging process.**

We believe that a proper PCB assessment protocol could and should be used whenever such an assessment is legally necessary without regard to the larger process of which it is a part. For example, a PCB assessment associated with reflagging should be no different than a PCB assessment conducted prior to the decision to recycle/scrap a vessel. We would however add that the assessment in the latter case should be consistent with the provisions of the recently completed International Maritime Organization's (IMO) ship recycling convention in order to assure international consistency in how these assessments are conducted. This convention, entitled "The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009", was adopted at a diplomatic conference held in Hong Kong, China in May 2009. The Convention is aimed at ensuring that ships, when being recycled after reaching the end of their operational lives, do not pose any unnecessary risks to human health, safety and the environment. The Convention addresses all the issues around ship recycling including the fact that ships sold for scrapping may contain environmentally hazardous substances such as asbestos, heavy metals, hydrocarbons, ozone-

depleting substances and other hazardous substances. It should also be noted that the Convention was developed over a 3 year period with input from IMO member states, relevant non-governmental organizations and in cooperation with the International Labor Organization (ILO) and the Parties to the Basel Convention. The requirements of the new Convention cover the design, construction, operation and preparation of ships so as to facilitate safe and environmentally sound recycling without compromising the safety and operational efficiency of ships as well as the operation of ship recycling facilities in a safe and environmentally sound manner. A number of guidelines have been developed by IMO to assist nations in implementing the requirements in the Convention's technical standards. With regards to the EPA draft guidance document and the need for alignment of this guidance with international guidelines, we would suggest that review of the following guidelines be conducted to assure this international consistency:

- 2011 Guidelines for the Development of the Inventory of Hazardous Materials, adopted by resolution MEPC.197(62)
- 2011 Guidelines for the Development of the Ship Recycling Plan, adopted by resolution MEPC.196(62)
- 2012 Guidelines for the Safe and Environmentally Sound Ship Recycling, adopted by resolution MEPC.210(63)
- 2012 Guidelines for the survey and certification of ships under the Hong Kong Convention, adopted by resolution MEPC.222(64)
- 2012 Guidelines for the inspection of ships under the Hong Kong Convention, adopted by resolution MEPC.223(64)

**The question of whether there is an appropriate cutoff date of a vessel's construction after which it could be assumed that because of the January 1, 1978 PCB ban, materials on that vessel do not contain PCBs.**

After polling our members, we suggest that an appropriate vessel construction date after which it could be assumed that the vessel does not contain PCBs is 1 January 1980 subject to the caveat explained below. We believe the two year period between the PCB ban date of 1 January 1978 and this proposed cutoff date provides sufficient time in which inventories of materials and equipment which was manufactured before the 1 January 1978 ban date would be exhausted through normal use and practices of shipyards and marine equipment suppliers.

The caveat that we would include relates to vessels which have been constructed after the 1 January 1980 proposed cutoff date but conducted shipyard and repair operations in a foreign country that may not, at that time, have imposed a PCB use ban. In this case, we would suggest that the general assumption that the vessel does not contain PCBs is valid subject to a review of shipyard and repair documentation conducted in a foreign country that focus on suspect areas and either provide assurance in the documentation that the materials and equipment used during these events did not contain PCBs (either explicitly in the documentation or implicitly by virtue of a national PCB use ban in the country in which the shipyard/repairs

were conducted) or trigger an assessment of materials/equipment in subject areas consistent with the provisions of this guidance document.

We thank you again for the opportunity to comment on the draft technical guidance document on PCB assessments for vessels which are to be reflagged. We would be pleased to answer any questions raised by these comments or provide further information upon request.

Sincerely,



Kathy J. Metcalf  
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**Southern  
Recycling**



Office of Resource Conservation and Recovery  
U.S. Environmental Protection Agency  
Ariel Rios Building (AR)  
1200 Pennsylvania Avenue N.W.  
Washington, DC 20004

RE: Request for Comments: Draft Technical Guidance for Determining the Presence of Polychlorinated Biphenyls (PCBs) at Regulated Concentrations on Vessels (Ships) to be Reflagged.

To Whom It May Concern:

There is a critical analytical flaw in the 2013 Draft Technical Guidance for Determining the Presence of Polychlorinated Biphenyls (PCBs) at Regulated Concentrations on Vessels (Ships) to be Reflagged (2013 Draft Guidance). The flag that a vessel (ship, barge, or marine structure) operates under has nothing to do with the manufacture of the vessel that might have PCB's above 50 parts per million (ppm), the threshold that Toxic Substances Control Act (TSCA) sets for management of the hazardous material that was commonly integrated into U.S. and foreign build ship manufacture from body paint to transformers. This analytical flaw must be corrected.

PCB's were banned in the United States in 1978 and domestic manufacture ended. However, under U.S. patent, the hazardous chemical continued in production for a number of years in other countries. While known production ended in the United States by 1978, use continued with stock in hand. Our industry experience is that there is no clear outer-limit for assuming some PCB use and if suspect materials are encountered in any year build, the suspect material is managed to U.S. regulatory requirements. For foreign-builds, as with domestic-builds, vessels we are recycling are sampled with plans derived from the November 30, 1995 EPA draft guidance: Sampling Ships for PCBs Regulated for Disposal (1995 Draft Guidance).

The 2013 Draft Guidance makes a point that it is not going to be used for compliance – left unsaid is that the Maritime Administration-administered Ship Transfer process has been knowingly ignoring TSCA, since TSCA was promulgated. We would also posit this is because the EPA is hiding behind the so-called U.S. Flag, instead of the more accurate universe of U.S. shipowners, U.S. built vessels, and the small pool of foreign shipowners that conveniently flag foreign builds into the U.S. Flag solely to take advantage of lucrative, subsidized military, and other forms of government-impelled cargo subject to the Cargo Preference Act of 1954. TSCA does not define a vessel or by its flag. Nor does TSCA – or the court ruling that established the import/export bans – imply that vessels that are recycled in the United States are bringing PCBs into commerce rather than managing their



identification and disposal during the dismantlement process. After analysis of numbers of vessels exported from the United States for disposal, it appears that this interpretation of the court ruling by the EPA has been a 25-year smokescreen to allow owners of U.S. and foreign-owned vessels built in the United States to expose foreign workers and environments to a known, deadly chemical, apparently because the shipowners don't want to follow the law. This is not acceptable to domestic industry that is investing to meet U.S. TSCA environmental and safety regulatory requirements.

The ludicrousness of using the U.S. Flag on vessels 10,000 deadweight tons (dwt) or greater as a baseline for anything other than foreign shipowners controlling government subsidies and lucrative trade routes is demonstrated by the attachment: Top 25 Flag of Registry by Type, Year-End 2010, Vessels 10,000 Deadweight Tons or Greater, which is available on the MARAD website: [http://www.marad.dot.gov/library\\_landing\\_page/data\\_and\\_statistics/Data\\_and\\_Statistics.htm](http://www.marad.dot.gov/library_landing_page/data_and_statistics/Data_and_Statistics.htm), updated 12/15/2011, which has the United States "Flag" ranked in the 21<sup>st</sup> spot with 192 U.S. Flag vessels (we note the 50+ US Laker fleet does not seem to be included in this list). On the other hands, the flags of convenience registries, Liberia and Marshall Island, which are U.S. companies headquartered in Virginia, rank 2<sup>nd</sup> and 3<sup>rd</sup>, with 2,309 and 1,255 vessels respectively. As the attached breakout of U.S. flagged vessels, based upon information derived from the MARAD report U.S.-Flag Ocean Going Fleet, Year-End 2007, augmented by data from IHS Fairplay, demonstrates, U.S. flagged 1985 or before U.S. build vessels, where PCB use is fairly known, are mostly gone; for the foreign-builds built 1985 or before and under the U.S. flag, only a handful remain.

In 2007, MARAD recorded 189 vessels and 95 vessels were built 1985 or before. We have found one that they missed and three other US builds, flagged out in 1998, of which two were recently sent to the beaches. We know the list is further incomplete as it does not contain other U.S. builds or U.S.-flagged vessels we know to have been exported for disposal, nor the U.S. Lakers (which appear to get scrapped in Canada). Nonetheless, using that basic MARAD database of 98 builds launched 1985 or before (which is attached), we found the following:

Domestic Builds: 67 are or were U.S. builds. Twelve of the 67 were bought by U.S. metal recycling companies and were scrapped or are in the process of being scrapped to U.S. regulatory requirements at domestic recycling facilities. Ownership of four has been acquired by the U.S. Navy. Fifteen were exported and broken outside the United States. Eight of those 15 are reported to have been reflagged prior to export. Additionally two have been reflagged, but are still listed as active. Thus, a little over five years after the list was compiled, less than half of the pre-1985 commercial U.S. builds remain, of which only 33 are still under the U.S. Flag. Fifteen polluted foreign shores, when there was ample capacity in the United States that could have scrapped the vessels to U.S. environmental and safety laws and regulations. The breaking nations listed are: Peoples Republic of China, India, Bangladesh, and Pakistan.

Foreign Builds: Thirty-three are or were foreign builds and 25 are reported to have been exported and broken outside the United States. The breaking nations listed are Peoples Republic of China, India, and Bangladesh. None were scrapped domestically to U.S. environmental or safety standards. Of the 33 vessels, one is German build; one is Norwegian build; two are French builds from one yard; two Dutch from one yard; six are Japanese builds at four different yards; 13 are Korean builds, from two yards; and seven are Danish builds from one yard.

If build is correctly used as a criteria, the scope of evasion of TSCA and pollution on foreign shores becomes clear. For example, attached is the breakout of vessels from the Bethlehem Steel Sparrows Point yard and the Bethlehem Steel Beaumont Yard which produced rigs and other marine structures which are also subjects of the IMO Ship Recycling Convention.

According to the IHS Fairplay analysis, Bethlehem Steel Corp. built at the Sparrows Point yard 149 vessels between 1950 and 1995. Ten are reportedly still in service/commission, of which seven are still U.S. flagged. Two pre-1985 vessels are laid-up (one U.S. Flag, one unknown); nine no longer meet IHSF criteria (six are still U.S. flagged); four are listed as To Be Broken Up; 11 were total losses (5 under U.S. Flag); three are reportedly still in the National Defense Reserve Fleet. The remaining 110 are reported broken; only 70 were still listed as registered under the U.S. Flag. Further research is necessary to determine whether the 110 were either scrapped in the United States or broken on the beaches and estuaries in export.

At the Bethlehem Steel Corp. Beaumont yard, 69 of the 70 rigs and marine structures were built between 1954 and 1982. Twenty-seven are still in service/commission (five remaining under U.S. Flag); 13 are laid up (three under U.S. Flag); 10 no longer meet IHSF criteria (seven under U.S. Flag); one is to be broken (U.S. Flag); and three are total loss (two U.S. Flag). The remaining 11 marine structures that are reported as broken, only four are reported to have been registered under the U.S. Flag.

To enforce and protect U.S. environmental interests and laws, owners of vessels built in the United States 1985 and before must also be subject to return for disposal in this country.

The only rational explanation of the widespread violation of U.S. environmental law is there is a financial benefit accrued to U.S. and foreign shipowners who willfully violate it. The benefit certainly isn't to American industry, its workers, the rule of law, our government institutions – or the environment and laborers on foreign shores who are exposed to U.S. manufactured items known to have PCBs used in their manufacture. We would suggest that the EPA work with the Justice Department and the US Coast Guard, using the model of education to prosecution that has been successfully used against “magic pipe” infractions to stop the violations. In the interim, if the draft guidance is to be used by the ship owning community that flies the rapidly dwindling U.S. Flag or owns U.S. manufactured vessels, the analytical error needs to be corrected in the Federal Register, especially if, as with the 1995 Draft Guidance, the 2013 Draft Guidance remains in draft form.

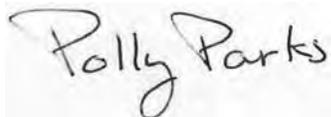
EPA should also take to Congress draft language to make the import of vessels into the U.S. an exception to the PCB import ban. This will strengthen the ability of the U.S. to meet its Organization for Economic Cooperation and Development (OECD) import and export rules and other related conventions and transboundary shipment agreements. We do not believe that the PCB export ban should be relaxed.

As to the utility of this guidance to the domestic ship recycling industry, the 1995 Draft Guidance has been successfully used by the domestic ship recycling industry and EPA Regions, outside of a 2010 Region IX aberration, as a baseline to ensure compliance with the TSCA PCB regulations. It has enabled compliant companies to establish premier sampling, remediation, and disposal of tens of thousands of tons of PCB solid waste. The cost to comply has been borne by the compliant companies as a cost of doing business. We believe the 1995 Draft Guidance should remain

as the baseline for the domestic ship recycling industry as it has proven a successful baseline for developing acceptable and successful domestic ship recycling plans. This has been aided by the robust cradle-to-grave regulatory regime for waste streams – something that is not replicated for PCBs in other nation in the world.

Our company is investing tens of millions in expanding our capacity for producing domestic environmentally compliant marine ferrous production – without federal subsidy. We encourage the EPA and the Administration to become more familiar with domestic vessel recycling and its role in the metal recycling industry that is the backbone of domestic steel production. If we can provide you with any further information, please let us know.

Sincerely,

A handwritten signature in black ink that reads "Polly Parks". The signature is written in a cursive, slightly slanted style.

Polly Parks  
Washington, D.C. office  
Southern Recycling – EMR  
(804) 410-2168

Pre-1985 Build U.S. Flag Ocean-Going Vessels									
	Name	Year	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
1	ARIZONA VOYAGER	1977	Tanker	Chevron Shpg. Co.	39,836	Scrapped	DOMESTIC ESCO Marine	7392036	FMC Corp, Portland
2	ASPHALT COMMANDER	1984	Asphalt & Bitumen Carrier	Sargeant Marine Inc.	33,869	Broken 2008	April 2008: Status changed to Broken Up, by Unknown Shipbreakers,B/Gladesh of Chittagong in Bangladesh	8101642	Bath, Maine
3	BLUE RIDGE	1981	Product Carrier	Crowley Maritime	42,268	Reflag Broken 2011	Reflagged to St. Kitts in August 2011: Name changed to RIDGE, Flagged by St Kitts & Nevis, Status changed to Broken Up by Shirdi Steel Traders in India for \$315 per LDT (10,802 LDT) \$3,402,630 total	7908172	NASSCO, San Diego
4	CHARLESTON	1983	Chemical & Oil Carrier	U.S. Shipping Ptnrs.	48,846	In Casualty	Cert expires October 2014.	8109668	Avondale, LA
5	CHEMICAL PIONEER	1968	Chemical & Oil Carrier	U.S. Shipping Ptnrs.	35,489	Active	Cert expires May 2014.	6806444	Bath, Maine
6	COAST RANGE	1981	Product Carrier	Crowley Maritime	40,632	Broken July 2011	July 2011 Among the few ships that were sold were Crowley Maritime's 1981-built MR tanker Coast Range, which was sold for \$4.79M at \$455/lb 'as is' in Bahamas to an Indian breaker.	7908184	NASSCO, San Diego
7	COLORADO VOYAGER	1976	Tanker	Chevron Shpg. Co.	39,842	Scrapped	DOMESTIC All-Star	7391238	FMC Corp, Portland
8	DELAWARE TRADER	1982	Tanker	Keystone Shipping	50,860	Broken 2012	February 2012 Keystone sold to Sealift: August 2012 Status changed to Broken Up, Broken Up by Unknown Shipbreakers, Pakistan in Pakistan for \$430 per LDT (11,223 LDT) \$4,825,890 total	8008929	NASSCO, San Diego
9	HOUSTON	1985	Product Carrier	United States Shpg.	30,610	Active	Cert expires May 2016.	8220761	Tampa Shipyards
10	INTEGRITY	1975	Tanker	OSG Overseas Ship.	39,847	Laid-Up	sold in 2009 initially Belize flag to Singapore based Coopers Mechanical Oilfield, renames to TOS INTEGRITY; January 2012 reflagged St Kitts/Nevis; 09-12 status changed to Laid-up; last position in Indian Ocean <a href="http://www.offshorewarehousing.com/warehouse.html">http://www.offshorewarehousing.com/warehouse.html</a> <a href="http://www.fffshorewarehousing.com">fffshorewarehousing.com</a>	7367469	FMC Corp, Portland
11	KEYSTONE TEXAS	1981	Product Carrier	Keystone Shipping	40,632	Broken 2009	Dec 09: Status changed to Broken Up, Broken Up by Unknown Shipbreakers, India in India for \$375 per LDT (10,532 LDT) \$3,949,500 total	7908196	NASSCO, San Diego
12	KODIAK	1978	Tanker	SeaRiver Maritime	124,751	Active	Group owner is Exxon. Ddue for inspection in April 2013	7408081	Sun, Chester PA

	Name	Year	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
13	NEW RIVER	1997	Chemical & Oil Carrier	AHL Shipping Co.	39,483	Scrapped	DOMESTIC: ISL/EMR 2011	5137913	Beth Steel, MD
14	OVERSEAS DILIGENCE	1977	Tanker	OSG Overseas Ship.	39,959	Scrapped	DOMESTIC: All-Star 2010	7391240	FMC Corp, Portland
15	OVERSEAS GALENA BAY	1982	Tanker	OSG Ship Mngt. (GR)	50,920	Reflag Broken 2010	reflagged to Panama (Providence Shipping in October 2010, broken in India in Dec: Status changed to Broken Up, Broken Up by Shiv Corp in India for \$480 per LDT (11,054 LDT) \$5,305,920 total	8008917	NASSCO, San Diego
16	OVERSEAS NEW ORLEANS	1983	Product Carrier	OSG Overseas Ship.	43,643	Reflag Broken 2011	April 2011: reflagged to Tuvalu; registered Snow-Drop in BVI: June 2011: Status changed to Broken Up, Broken Up by Honey Ship Breaking Pvt Ltd in India for \$525 per LDT (9,833 LDT) \$5,162,325 total	7932422	NASSCO, San Diego
17	OVERSEAS PHILADELPHIA	1982	Tanker	OSG Overseas Ship.	43,387	Broken 2010	July 2010 Name changed to ADELPHI, Status changed to Broken Up, Operator KNK Ship Management, Owner Natalia Shipping Ltd-St Kitts, Ship Manager KNK Ship Management, Group Owner KNK Ship Management, Broken Up by Unknown Shipbreakers, India in India for \$430 per LDT (10,194 LDT) \$4,383,420 total	7932410	NASSCO, San Diego
18	OVERSEAS PUGET SOUND	1983	Tanker	OSG Overseas Ship.	50,860	Reflag Broken 2011	April 2011: Name changed to PUGET, Flagged by Tuvalu, Status changed to Broken Up, Technical Manager Unknown, Broken Up by Gupta Steel in India for \$492 per LDT (11,282 LDT) \$5,550,744 total LDT) \$5,162,325 total	8008931	NASSCO, San Diego
19	PRINCE WILLIAM SOUND	1975	Tanker	Keystone Shipping	125,925	Reflag Broken 2011	March 2011: Name changed to WILLIAM, Flagged by Tuvalu, Status changed to Broken Up, Broken Up by Virendra & Co in India for \$430 per LDT (23,525 LDT) \$10,115,750 total	7395349	Sun, Chester PA
20	S/R BAYTOWN	1984	Product Carrier	SeaRiver Maritime	58,646	Possible reflag Broken 2010	September 2010: Name changed to BAY, Flagged by Unknown, Status changed to Broken Up, Broken Up by Jiangmen Xinhui Yuzhou Shipbre in China, People's Republic Of for \$360 per LDT (15,767 LDT) \$5,676,120 total	8109682	Avondale, LA
21	S/R WILMINGTON	1984	Chemical & Oil Carrier	SeaRiver Maritime	48,781	Scrapped	DOMESTIC: ISL/EMR 2011	8109670	Avondale, LA

	Name	Year	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
22	SEA VENTURE	1972	Chemical & Oil Carrier	Atlantic Tankships	19,266	Scrapped	DOMESTIC: ESCO	7203687	Hellenic/Tidewater, VA
23	SEABULK AMERICA	1975	Chemical & Oil Carrier	Seabulk Interntnl	46,587	Reflag Broken 2012	November 2011: flagged to Tuvala; January 2012: Status changed to Broken Up, Technical Manager Unknown, Broken Up by Virendra & Co in India for \$518 per LDT (11,729 LDT) \$6,075,622 total	7412757	Shin Yamamoto, Japan/Avondale, LA
24	SEABULK CHALLENGE	1981	Chemical & Oil Carrier	Seabulk Interntnl	51,668	Active	Cert renewed by ABS in Nov 2011; will expire in 2018.	7816551	Avondale, LA
25	SEABULK POWER	1969	Tanker	Seabulk Interntnl	38,460	Broken 2008	Note: was already broken in 2009; Name change to TT Power but no reported flag change. Feb 2008 Status changed to Broken Up, Broken Up by Unknown Shipbreakers, India in India for \$545 per LDT (8,390 LDT) \$4,572,550 total	6901969	Beth Steel, MD
26	SEABULK TRADER	1981	Chemical & Oil Carrier	Seabulk Interntnl	51,668	Active	Cert renewed by ABS in April 2012; expires April 2017; was double-hulled in China in landmark case in 2007; decided by appeals in 2009	7816549	Avondale, LA
27	SIERRA	1979	Tanker	SeaRiver Maritime	125,089	Active	Group owner: Exxon. Cert renewed by ABS in November 2011; expires January 2017.	7408093	Sun, Chester PA
28	WASHINGTON VOYAGER	1976	Product Carrier	Chevron Shpg. Co.	39,796	Scrapped	DOMESTIC: ESCO Marine	7391226	FMC Corp, Portland
29	EL FARO	1975	Ro-Ro	Sea Star Line LLC	16,011	Laid Up	November 2011.	7395351	Sun, Chester PA
30	EL MORRO	1974	Ro-Ro	Sea Star Line LLC	16,079	Active	Puerto Rico Jones Act Trade; company now owned by Tote	7367445	Sun, Chester PA
31	EL YUNQUE	1976	Ro-Ro	Sea Star Line LLC	16,144	Active	Puerto Rico Jones Act Trade; company now owned by Tote	7506015	Sun, Chester PA
32	GREAT LAND	1975	Ro-Ro	Interocean American	16,188	Scrapped	DOMESTIC: All-Star 2013	7420493	Sun, Chester PA
33	LURLINE	1973	Ro-Ro/Container	Matson Navigation	22,221	Active		7321087	Sun, Chester PA
34	MAJOR STEPHEN W. PLESS	1983	Ro-Ro/Container	Waterman Steamship	21,529	USNS	Was a Wilmington Trust group owned; became Government owned February 2012 -- MSC - Tech Mgr current is Keystone	7912123	General Dynamics, Quincy, MA

	Name	Year	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
35	MATSONIA	1973	Ro-Ro/Container	Matson Navigation	22,501	Active	Cert expires January 2017	7334204	Sun, Chester PA
36	PFC. DEWAYNE T. WILLIAMS	1985	Ro-Ro/Lo-Lo	Wilmington Trust Co.	22,454	USNS	Was a Wilmington Trust group owned; became Government owned February 2012 -- MSC	8219396	General Dynamics, Quincy, MA
37	PFC. EUGENE A. OBREGON	1982	Ro-Ro/Container	Waterman Steamship	25,073	USNS	MSC says USNS, -- MSC - Tech Mgr current is Keystone	7823463	Sun, Chester PA
38	SGT. MATEJ KOCAK	1981	Ro-Ro	Waterman Steamship	24,032	USNS	Group owner: USNS; previously International Shipholdings - MSC - Tech Mgr current is Keystone	7802706	Sun, Chester PA
39	WESTWARD VENTURE	1977	Ro-Ro	Totem Ocean Trailer	17,915	Scrapped	DOMESTIC: ESCO Marine	7614915	Sun, Chester PA
40	CLEVELAND	1969	General Cargo	Sealift Inc	22,536	Broken 2009	April 2009: Status changed to Broken Up, Broken Up by Virendra & Co in India for \$365 per LDT (9,815 LDT) \$3,582,475 total	6916873	Newport News
41	WILSON	1969	General Cargo	Sealift Inc	22,564	Broken 2008	June 2008: Status changed to Broken Up, Broken Up by Unknown Shipbreakers,B/Gladesh of Chittagong in Bangladesh for \$745 per LDT (9,784 LDT) \$7,289,080 total	6909911	Newport News
42	HORIZON CHALLENGER	1968	Containership	Horizon Lines LLC	21,274	Scrapped	DOMESTIC: Bay Bridge TX/Gudami Texas 2013	6812211	Sun, Chester PA
43	HORIZON CONSUMER	1973	Containership	Horizon Lines LLC	25,651	Laid Up	July 2012; cert expires November 2015.	7224306	Beth Steel, MD
44	HORIZON CRUSADER	1969	Containership	Horizon Lines LLC	20,695	Scrapped	DOMESTIC: SoRec Amelia/EMR 2010	6905252	Sun, Chester PA
45	HORIZON DISCOVERY	1968	Containership	Horizon Lines LLC	20,585	Active	Certificate expires July 2014	6820579	Sun, Chester PA
46	HORIZON ENTERPRISE	1980	Containership	Horizon Lines LLC	31,477	Active	JONES Act carrier Horizon Lines will pay \$1.5M to resolve previously announced oily water separator violations in the US-Hawaii box trade. Cert expires November 2015.	7617905	Beth Steel, MD
47	HORIZON FAIRBANKS	1973	Containership	Horizon Lines LLC	22,041	Laid Up	April 2008; certificate expired July 2012	7218462	Ingalls Pascagoula, MS
48	HORIZON HAWAII	1973	Containership	Horizon Lines LLC	21,909	Scrapped	Bay Bridge TX/Gudami Texas 2013		Ingalls Pascagoula, MS

	Name	Year	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
49	HORIZON NAVIGATOR	1970	Containership	Horizon Lines LLC	31,303	Active	Cert expires January 2016	7116315	Ingalls Pascagoula, MS
50	HORIZON PACIFIC	1979	Containership	Horizon Lines LLC	31,268	Active	Cert expires December 2015	7617890	Beth Steel, MD
51	HORIZON PRODUCER	1974	Containership	Horizon Lines LLC	25,651	Active	Cert expires November 2015	7366312	Beth Steel, MD
52	HORIZON RELIANCE	1980	Containership	Horizon Lines LLC	45,805	Active	Cert expires November 2015	7729461	Avondale, LA
53	HORIZON SPIRIT	1980	Containership	Horizon Lines LLC	46,154	Active	Cert expires May 2016	7729459	Avondale, LA
54	HORIZON TRADER	1973	Containership	Horizon Lines LLC	31,657	Active	Cert expires November 2015	7326233	Ingalls Pascagoula, MS
55	KAUAI	1980	Containership	Matson Navigation	26,350	Active	Cert expires February 2015	7802718	Sun, Chester PA
56	LIHUE	1971	Containership	Matson Navigation	38,656	Laid-Up	Cert expires July 2016	7105471	Avondale, LA
57	MAHIMAHI	1983	Containership	Matson Navigation	30,825	Active	Cert expires October 2013. US shipbuilders and Pasha Hawaii Transport Lines are contesting a ruling that allowed competitor Matson Navigation to use a Chinese shipyard for ship conversion work.	7907996	Avondale, LA
58	MANOA	1982	Containership	Matson Navigation	30,825	Active	Cert expires August 2013	7907984	Avondale, LA
59	MAUI	1978	Containership	Matson Navigation	26,665	Active	Cert expires May 2016	7602338	Bath, Maine
60	MOKIHANA	1983	Containership	Matson Navigation	30,825	Active	Cert expires November 2013	7908005	Avondale, LA
61	ENERGY ENTERPRISE	1983	Bulk Carrier	LCI Shipholdings	38,848	Active	Cert expires March 2013; Group Owner now International Shipholdings	8026799	General Dynamics, Quincy, MA
62	MARY ANN HUDSON	1981	Bulk Carrier	Teco Ocean Shipping	36,414	Active	Cert expires May 2013; Group Owner was United Maritime Group, which was picked up by International Shipholding in Dec 2012	7821154	Levingston Orange, TX

	Name	Year	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
63	TINA LITRICO	1973	Bulk Carrier	Teco Ocean Shipping	30,179	Reflagged Active	Bought December 2011; sold to Rand Logistics; reflagged to Canada and renamed Tucemsah. Jan 2012 status changes to laid-up; September 2012 In casualty. September 2012 USCG undertakes inspection at Sault Ste Marie, MI and finds one defect of Construction/Loadline Hull	7225855	Lockheed, Seattle, WA
64	SHEILA MCDEVITT	1980	Bulk Carrier	Teco Ocean Shipping	37,244	Active	Cert expired November 2012; Group owner was United Maritime Group which was picked up by International Shipholding in Dec 2012	7929308	IHI Marine United, Japan
65	GLOBAL PATRIOT	1978	Ro-Ro/Container	Red River Carriers	19,669	Reflag Broken 2009	Group owner was Global Container Lines. Sept 2009: Name changed to PATRIOT, Flagged by Tuvalu, Status changed to Broken Up, Broken Up by Unknown Shipbreakers, B/Gladesh of Chittagong in Bangladesh for \$181 per LDT (14,203 LDT) \$2,570,743 total. Global changed name to Global Cargo Logistics and is immersed in NGO/USAID humanitarian work: <a href="http://www.gogcl.com/">http://www.gogcl.com/</a> . Linked to something called Global Hand ( <a href="http://www.globalhand.org/en/about/gh_governance">http://www.globalhand.org/en/about/gh_governance</a> ) which is an initiative of Crossroads Foundation, Ltd. ( <a href="http://www.crossroads.org.hk/">http://www.crossroads.org.hk/</a> ) based in Hong Kong and does some UNCHR work including refugee simulations at world economic forum.	7504627	La Coitat, France
66	INDEPENDENCE	1978	Pure Car Carrier	Pacific-Gulf Marine	17,406	Reflag Broken 2009	Group owner Wilhelmsen Maritime. Flagged to Norway in April 2008. Named changed to Tellus and broken in June 2009. Disclassified NV, Status changed to Broken Up, Broken Up by Jiangyin Xiagang Changjiang of Jiangyin, Jiangsu in China, People's Republic Of	7518563	Mitsui, Tamano, Japan
67	LIBERTY	1985	Pure Car Carrier	Pacific-Gulf Marine	28,509	Reflag 2011	Wilmington Trust bought from TOTE in March 2009; Wilmington sold to WILSHIP in April 2011 when it was reflagged to Marshall Islands.	8320779	Hitachi Zosen, Japan
68	LTC. CALVIN P. TITUS	1985	Ro-Ro/Container	Crowley Maritime	24,500	Reflag Broken 2011	Was MSC vessel; bought by Neptune Orient in May 2006; reflagged St. Kitts and Nevis in December 2010. In January 2011: Name changed to CALVIN, Flagged by St Kitts & Nevis, Broken Up by Mahavir Shipbreakers in India	8322789	Odense, Denmark

	Name	Year	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
69	MAJOR BERNARD FISHER	1985	Ro-Ro/Container	Crowley Maritime	24,500	Active	MSC ship - Sealift is Group Owner.	8320559	Odense, Denmark
70	PFC. JAMES ANDERSON JR.	1979	Ro-Ro/Lo-Lo	Wilmington Trust Co.	21,050	Reflag Broken 2010	2009 Group Owner: AP Moller; name change to Anders; reflag St Kitts and Nevis; name change January 2010 to Endeavor: Name changed to ENDEAVOUR, Status changed to Broken Up, Broken Up by Unknown Shipbreakers, India in India	7702035	Odense, Denmark
71	PFC. WILLIAM B. BAUGH	1979	Ro-Ro/Lo-Lo	Wilmington Trust Co.	21,050	Broken 2010	Turned over to Maersk in 2008, renamed Maersk Texas; October 2010: PSC Inspected, Status changed to Broken Up, Broken Up by Jiangyin Xiagang Changjiang of Jiangyin, Jiangsu in China, People's Republic Of China. Posthumous in August 2012 Group Owner is changed to Maersk Lines Ltd (the US shell company).	7702023	Odense, Denmark
72	PVT. FRANKLIN J. PHILLIPS	1980	Ro-Ro/Lo-Lo	Wilmington Trust Co.	29,750	Broken 2010	July 2008 turned over to Maersk, renamed Maersk Tennessee; June 2009 MED MOU ABS inspection in Haifa; December 2010: Disclassified AB, Status changed to Broken Up, Broken Up by Unknown Shipbreakers, China of Jiangyin, Jiangsu in China, People's Republic Of China. Posthumous in August 2012 Group Owner is changed to Maersk Lines Ltd (the US shell company).	7717169	Odense, Denmark
73	SP5. ERIC G. GIBSON	1984	Ro-Ro/Container	Crowley Maritime	24,500	Reflag Broken 2012	Was USG-MSC ship, then sold to unknown November 2001; APL became mgr.; placeholder co Gibson Shipholding became registered owner May 2009. Operator was APL. August 2012 reflagged to St. Kitts and Nevis. In August 2012: Name changed to GIBSON 11, Flagged by St Kitts & Nevis, Broken Up by Leela Ship Recycling Pvt Ltd in India for \$370 per LDT (13,281 LDT) \$4,913,970 total	8320547	Odense, Denmark
74	TSGT JOHN A. CHAPMAN	1978	Ro-Ro/Container	Sealift Inc.	26,763	Active	MSC ship - Sealift is Group Owner.	7504639	La Coitac, France

	Name	Year	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
75	ADVANTAGE	1977	General Cargo	Sealift Inc	22,180	Active ???	HOWEVER: Indian Ocean MOU Inspection 2013-01-25 in Mombasa of the Advantage lists a Kenya flag. The inspection is done by American Bureau Of Shipping. Address of owner is listed at: Main St.86 W. Oystebav Nv.1177 -2294 Usa	7515339	Nippon Kokkan, Japan
76	MAERSK CONSTELLATION	1980	General Cargo	Moller AP	21,213	Broken 2011	May 2011: Disclased AB, Status changed to Broken Up, Broken Up by Jiangyin Xiagang Changjiang of Jiangyin, Jiangsu in China, People's Republic Of	7717171	Odense, Denmark
77	NOBLE STAR	1977	General Cargo	Sealift Inc	18,230	Active ???	However, Med MOU inspection in Port Said 2010-09-05 has flag as Afghanistan. 2011-06: SMC Certificate issued by American Bureau of S Expires 20160812	7529914	Kaldnes, Norway
78	VIRGINIAN	1984	General Cargo	Sealift Inc	21,541	Broken 2012	Bought by Sealift in 2003; August 2012: Name changed to VIRGINIAN-11, Flagged by Tuvalu, Status changed to Broken Up, Group Owner Unknown. Operator Green Ocean Ship Mgmt Pvt Ltd, Technical Manager Green Ocean Ship Mgmt Pvt Ltd, Owner Karnak Holdings Ltd, Ship Manager Green Ocean Ship Mgmt Pvt Ltd, Broken Up by Unknown Shipbreakers, Bgladesh of Chittagong in Bangladesh for \$431 per LDT (9,849 LDT) \$4,244,919 total. Green Ocean Ship Mgmt is an Indian cash buyer.	8300200	Bremen, FDR Germany
79	BUENOS AIRES	1984	Container Ship	Maersk Line	29,930	Broken 2010	Flagged US in December 2004/January 2005 Group Owner changes to International Shipholding Corp. December 2005 Operator becomes Maersk AS. 2008 reflagged to Marshall Islands. April 2010: Status changed to Broken Up, Broken Up by Unknown Shipbreakers, India in India for \$440 per LDT (10,830 LDT) \$4,765,200 total.	8128298	Van der Giessen-de Nord BV, Netherlands
80	LTC JOHN U.D. PAGE	1985	Container Ship	Moller AP	58,869	Active	Chartered	8212714	Daewoo, Korea
81	MAERSK NEBRASKA	1985	Container Ship	Maersk Line	36,003	Broken 2009	Group Owner: AP Moller February 2009: Status changed to Broken Up, Broken Up by Jiangyin Xiagang Changjiang of Jiangyin, Jiangsu in China, People's Republic Of for \$240 per LDT (15,330 LDT) \$3,679,200 total.	8200711	Samsung, Korea

	Name	Year	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
82	MAERSK NEVADA	1985	Container Ship	Maersk Line	36,003	Broken 2009	Group Owner: AP Moller February 2009: Status changed to Broken Up, Broken Up by Jiangyin Xiagang Changjiang of Jiangyin, Jiangsu in China, People's Republic Of for \$240 per LDT (15,330 LDT) \$3,679,200 total.	8200709	Samsung, Korea
83	SANTA CRUZ	1984	Container Ship	Maersk Line	29,730	Reflag Broken 2009	Flagged US in January 2005 by International Shipholding Corp. and name changed to Santa Cruz in April 2006; re-named HARI BHUM and reflagged to Marshall Islands in March 2008. August 2009: LR Class Withdrawn , Status changed to Broken Up, Broken Up by Unknown Shipbreakers, India in India for \$295 per LDT (11,483 LDT) \$3,387,485 total	8205371	Van der Giessen-de Nord BV, Netherlands
84	SEA-LAND ACHIEVER	1984	Container Ship	Maersk Line	58,869	Reflag Broken 2009	Reflagged to Marshall Islands in March 2009; Status changed to Broken Up, Owner Maersk Line Ltd, Broken Up by Unknown Shipbreakers, Unknown of Jiangyin, Jiangsu in China, People's Republic Of China	8212647	Daewoo, Korea
85	SEA-LAND ATLANTIC	1985	Container Ship	Maersk Line	58,869	Reflag Broken 2009	Reflagged to Marshall Islands in February 2009; PSC Inspected, Status changed to Broken Up, Owner Maersk Line Ltd, Broken Up by Jiangyin Xiagang Changjiang of Jiangyin, Jiangsu in China, People's Republic Of China.	8212685	Daewoo, Korea
86	SEA-LAND COMMITMENT	1985	Container Ship	Maersk Line	58,869	Reflag Broken 2009	Reflagged to Marshall Islands in February 2009; Status changed to Broken Up, Owner Maersk Line Ltd, Broken Up by Jiangyin Xiagang Changjiang of Jiangyin, Jiangsu in China, People's Republic Of China.	8212702	Daewoo, Korea
87	SEA-LAND FLORIDA	1984	Container Ship	Maersk Line	58,869	Reflag Broken 2009	Reflagged to Marshall Islands in February 2009; Status changed to Broken Up, Broken Up by Jiangyin Xiagang Changjiang of Jiangyin, Jiangsu in China, People's Republic Of China.	8212611	Daewoo, Korea
88	SEA-LAND MOTIVATOR	1984	Container Ship	Maersk Line	46,987	Reflag Broken 2009	Reflagged to Marshall Islands in January 2009; April 2009: Status changed to Broken Up, Technical Manager Moller AP, Ship Manager Moller AP, Broken Up by Jiangyin Xiagang Changjiang of Jiangyin, Jiangsu in China, People's Republic Of China.	8212623	Daewoo, Korea

	Name	Year	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
89	SEA-LAND PERFORMANC E	1985	Container Ship	Maersk Line	58,869	Reflag Broken 2010	Reflagged to Marshall Islands in May 2010; July 2010: Status changed to Broken Up, Broken Up by Unknown Shipbreakers, China of Jiangyin, Jiangsu in China, People's Republic Of	8212726	Daewoo, Korea
90	SEA-LAND PRIDE	1985	Container Ship	Maersk Line	46,987	Reflag Broken 2009	Reflagged to Marshall Islands in January 2009; March 2009: Status changed to Broken Up, Broken Up by Unknown Shipbreakers, China in China, People's Republic Of China.	8212661	Daewoo, Korea
91	SEA-LAND QUALITY	1985	Container Ship	Maersk Line	58,869	Reflag Broken 2009	Reflagged to Marshall Islands in April 2009; June 2009: Disclassed AB, Status changed to Broken Up, Owner Maersk Line Ltd, Ship Manager Moller Singapore AP Pte Ltd, Broken Up by Unknown Shipbreakers, Unknown of Shanghai in China, People's Republic Of China.	8212697	Daewoo, Korea
92	STAFF SGT. EDWARD A. CARTER	1985	Container Ship	Moller AP	58,869	Active	Cert expires November 2017.	8212673	Daewoo, Korea
93	CAPT. STEVEN L. BENNETT	1984	Dry Bulk	Sealift Inc	41,151	Active	Ship Mgr SeaLift	8313661	Samsung
94	HARRIETTE	1978	Dry Bulk	Sealift Inc	25,951	Broken 2011	2007 Sealift buys from Overseas Shipholding Group. May 2011: Broken Up by Unknown Shipbreakers, Bgladesh of Chittagong in Bangladesh for \$530 per LDT (6,102 LDT) \$3,234,060 total	7516993	Hitachi Zosen, Japan
95	MARILYN	1978	Dry Bulk	OSG Overseas Ship.	25,951	Broken 2011	2007 Sealift buys from Overseas Shipholding Group. March 2011: Broken Up by Unknown Shipbreakers, Pakistan in Pakistan for \$525 per LDT (6,102 LDT) \$3,203,550 total	7516967	Hitachi Zosen, Japan
96	CAPTAIN H A DOWNING	1957	Chemical Products Tanker	AHL Shipping Co.	40,017	Scrapped	Domestic -- All-Star	5137767	Beth Steel, MD
A	DELAWARE TRADER	1978	LNG Tanker	Shell-Royal Dutch	75,171	Broken	Flagged to Marshall Islands by Argent Marine in 1998. Shell, a UK company, picks up in 2001; re-names to Galeomma and flags to Singapore. Laid up since 2009. December 2012: Status changed to Broken Up, Broken Up by Unknown Shipbreakers, China of Zhoushan, Zhejiang in China, People's Republic Of China.	7391202	Newport News

	Name	Year	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
B	EL PASO SOUTHERN	1978	LNG Tanker	Shell-Royal Dutch	75,172	Broken	Flagged to Marshall Islands by Argent Marine in 1998. Shell, a UK company, picks up in 2002 (Unknown before), already named LNG DELTA and keeps flag of Isle of Man (2001) November 2011 status changes to In Casualty/Repairing. February 2013: Status changed to Broken Up, Broken Up by Zhoushan Changhong Intl of Zhoushan, Zhejiang in China, People's Republic Of China.	7391197	Newport News
C	EL PASO HOWARD BOYD	1978	LNG Tanker	GDF-Suez	64,991	Active	Flagged to Bahamas in 1997 by Group Owner United States Corp. Re-flagged to Norway in 2002 by Tractelbel LNG North America. January 2011: Group Owner GDF-Suez (a merger in 2006). Name changed to SUEZ MATTHEW in 2006 and in 2009 to MATTHEW. Currently off-loading in Boston, MA.	7391214	Newport News
							Sealift Note: Sealift was document holder for Abby G, a Maersk Group Owned MSC vessel (1979). July 2010: Broken Up by Unknown Shipbreakers, India in India for \$436 per LDT (19,071 LDT) \$8,314,956 total. Also owned the Wilson (1969). June 2008: Status changed to Broken Up, Broken Up by Unknown Shipbreakers,B/Gladesh of Chittagong in Bangladesh for \$745 per LDT (9,784 LDT) \$7,289,080 total		

Post 1985-Build U.S. Flag

**Bold = MSP Program**

	Name	Yr	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
1	ALASKAN EXPLORER	2005	Tanker	BP PLC	193,050	Active	Feb 2013: DELAWARE bankruptcy judge Peter Walsh has sided with OSG and halted BP's plan to liquidate their Alaska Tanker Co joint venture.	9244661	NASSCO
2	ALASKAN FRONTIER	2004	Tanker	BP PLC	193,049	Active	Feb 2013: DELAWARE bankruptcy judge Peter Walsh has sided with OSG and halted BP's plan to liquidate their Alaska Tanker Co joint venture.	9244659	NASSCO
3	ALASKAN LEGEND	2006	Tanker	BP PLC	193,050	Active	Feb 2013: DELAWARE bankruptcy judge Peter Walsh has sided with OSG and halted BP's plan to liquidate their Alaska Tanker Co joint venture.	9271432	NASSCO
4	ALASKAN NAVIGATOR	2005	Tanker	BP PLC	193,050	Active	Feb 2013: DELAWARE bankruptcy judge Peter Walsh has sided with OSG and halted BP's plan to liquidate their Alaska Tanker Co joint venture.	9244673	NASSCO
5	ANASAZI	1997	Chemical & Oil Carrier	AHL Shipping Co.	40,015	Scrapped	April 2010, AHL collapses. Keystone buys in May 2010; name change to Williams Clark. Bought by Southern Recycling and scrapped at Amelia	5137779	Beth Steel
6	CAPTAIN H.A. DOWNING	1996	Chemical & Oil Carrier	AHL Shipping Co.	40,017	Scrapped	April 2010, AHL collapses. MARAD collects 3 vessels and sells at auction. New River bought by Southern Recycling and scrapped at ISL.	5127767	Beth Steel
7	HMI BRENTON REEF	1999	Chemical & Oil Carrier	Seabulk Interntnl	45,671	Active	Oct 2010 bought by Chevron; 2008 name change to California Voyager	9144926	Newport News
8	MISSISSIPPI VOYAGER	1998	Product Carrier	Seabulk Interntnl	46,069	Active	1998 Group Owner: Seabulk; name change from Seabulk Mariner to Mississippi Voyager in 2007.	9131369	Newport News
9	NEW RIVER	1997	Chemical & Oil Carrier	AHL Shipping Co.	39,483	Scrapped	April 2010, AHL collapses. MARAD collects 3 vessels and sells at auction. New River bought by Southern Recycling and scrapped at ISL.	5137913	Beth Steel

	Name	Yr	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
10	OVERSEAS HOUSTON	2006	Chemical & Oil Carrier	Aker American Shpg.	45,955	Active	Group Owner is American Shipping Company, a Norwegian company	9351062	Aker Philly
11	OVERSEAS LONG BEACH	2007	Chemical & Oil Carrier	Aker American Shpg.	45,000	Active	Group Owner is American Shipping Company, a Norwegian company. December 2012: OSG HAS asked a US bankruptcy court to approve its continued chartering of 10 Jones Act product tankers. OSG affirms Jones Act tanker charters	9353527	Aker Philly
12	OVERSEAS LOS ANGELES	2007	Chemical & Oil Carrier	Aker American Shpg.	45,000	Active	Group Owner is American Shipping Company, a Norwegian company. December 2012: OSG HAS asked a US bankruptcy court to approve its continued chartering of 10 Jones Act product tankers. OSG affirms Jones Act tanker charters	9353539	Aker Philly
13	POLAR ADVENTURE	2004	Tanker	Polar Tankers Inc.	141,740	Active	Group Owner is ConocoPhillips	9244063	Avondale
14	POLAR DISCOVERY	2003	Tanker	Polar Tankers Inc.	141,740	Active	Group Owner is ConocoPhillips	9206114	Avondale
15	POLAR ENDEAVOUR	2001	Tanker	Polar Tankers Inc.	141,740	Active	Group Owner is ConocoPhillips	9193551	Avondale
16	POLAR ENTERPRISE	2006	Tanker	Polar Tankers Inc.	141,740	Active	Group Owner is ConocoPhillips	9250660	Avondale
17	POLAR RESOLUTION	2002	Tanker	Polar Tankers Inc.	141,740	Active	Group Owner is ConocoPhillips	9193563	Avondale
18	S/R AMERICAN PROGRESS	1997	Product Carrier	SeaRiver Maritime	41,250	Active	Group Owner is Exxon	9118628	Newport News
19	S/R LONG BEACH	1987	Tanker	SeaRiver Maritime	214,862	Broken	Group Owner is Exxon. 2009 status changed to laid up. February 2012: Name changed to BEACH, Flagged by Tuvalu, Status changed to Broken Up, Broken Up by Jiangmen Yinhu Ship Breaking in China, People's Republic Of China.	8414532	NASSCO
20	SEABULK ARCTIC	1998	Product Carrier	Seabulk Interntnl	46,069	Active	Flagged in to US in 1998	9131371	Newport News
21	SEABULK ENERGY	1999	Chemical & Oil Carrier	Seabulk Interntnl	45,671	Active	January 2010 Group Owner becomes Chevron. Name is changed to Oregon Voyager.	9144914	Newport News
22	SEABULK PRIDE	1998	Product Carrier	Seabulk Interntnl	46,069	Active	September 2010 name changed to Florida Voyager.	9118630	Newport News

	Name	Yr	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
23	SULPHUR ENTERPRISE	1994	Molten Sulphur Carrier	Sulphur Carriers	27,240	Active	Group Owner is International Shipholding.	9077044	McDermott/ Amelia
24	THE MONSEIGNEUR	1997	Chemical & Oil Carrier	AHL Shipping Co.	39,483	Scrapped	2011: All Star: Status changed to Broken Up, Broken Up by Unknown Shipbreakers, Usa of Brownsville, TX in United States Of America for \$275 per LDT (10,600 LDT) \$2,915,000 total	5137901	Beth Steel
							NOTE: Maersk Lines Ltd. lists the following post-85 build tankers as under US Flag:		
25	JEAN ANNE	2005	Pure Car Carrier	Strong Vessel Ops	12,561	Active	Group Owner is Pasha Group	9233167	Halter Marine
26	MIDNIGHT SUN	2003	Ro-Ro	Interocean American	22,437	Active	NASSCO is set to convert to LNG	9232278	NASSCO
27	NORTH STAR	2003	Ro-Ro	Interocean American	22,437	Active	NASSCO is set to convert to LNG	9232280	NASSCO
28	SGT. WILLIAM R. BUTTON	1986	Ro-Ro/ Lo-Lo	Wilmington Trust Co.	26,523	Active	Group Owner is General Dynamics / MSC vessel	8302466	General Dynamics / Quincy, MA
29	HORIZON ANCHORAGE	1987	Container ship	Horizon Lines LLC	21,282	Active	<p>In early 2013 Horizon secured two term loans totalling \$95M for the purchase of three previously leased vessels serving its Alaska market, the 1987-built Horizon Anchorage, Tacoma and Kodiak.</p> <p>The three were purchased on 13 January for \$91.8M by a newly formed subsidiary, Horizon Lines Alaska Terminals LLC, which leases the three container ships to Horizon Lines via bareboat charters.</p>	8419142	Bay Shipbuilding, WI

	Name	Yr	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
30	HORIZON KODIAK	1987	Container ship	Horizon Lines LLC	21,345	Active	<p>In early 2013 Horizon secured two term loans totalling \$95M for the purchase of three previously leased vessels serving its Alaska market, the 1987-built Horizon Anchorage, Tacoma and Kodiak.</p> <p>The three were purchased on 13 January for \$91.8M by a newly formed subsidiary, Horizon Lines Alaska Terminals LLC, which leases the three container ships to Horizon Lines via bareboat charters.</p>	8419166	Bay Shipbuilding, WI
31	HORIZON TACOMA	1987	Container ship	Horizon Lines LLC	21,291	Active	<p>In early 2013 Horizon secured two term loans totalling \$95M for the purchase of three previously leased vessels serving its Alaska market, the 1987-built Horizon Anchorage, Tacoma and Kodiak.</p> <p>The three were purchased on 13 January for \$91.8M by a newly formed subsidiary, Horizon Lines Alaska Terminals LLC, which leases the three container ships to Horizon Lines via bareboat charters.</p>	8419154	Bay Shipbuilding, WI
32	MANUKAI	2003	Container ship	Matson Navigation	30,000	Active	<p>Previous Manukai, built in 1970 at Beth Steel was reflagged and broken in China in 2003 @ 112/ton</p>	9244130	Kvaerner / Philly
33	MANULANI	2005	Container ship	Matson Navigation	30,000	Active	<p>Previous Manulani, built in 1970 at Beth Steel was sold in 2003 to Eastern Overseas, Inc., a US cash broker; reflagged to St Vincent and Grenadines and broken in Peoples Republic of China.</p>	9273674	Kvaerner / Philly
34	MAUI	1978	Container ship	Matson Navigation	26,665	Active	<p>Cert expires in 2016</p>	7602338	Bath, Maine
35	MAUNALEI	2006	Container ship	Matson Navigation	30,000	Active	<p>Previous Maunalei, built at Sun, was broken in China in 1989.</p>	9273686	Aker Philly
36	MAUNAWILI	2004	Container ship	Matson Navigation	30,000	Active	<p>Previous Maunawili, built at Sun, was broken in 1986 in Taiwan.</p>	9268538	Kvaerner / Philly

	Name	Yr	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
37	NATIONAL GLORY	1998	Container ship	Nat Shpng America	13,770	Active	Involved in collision with general cargo ship in Germany in late 2010; dented above waterline. Has had two repairs since, the latest in March 2012. Seems to get hit a lot with inspections and does not have a good record. National Shipping of America (Tory Presti based in SFO) has a website that makes it appear that it is Jones Act to run some vessels from Houston to Puerto Rico. However, they only have the one ship and it seems hooked into APL which is listed as operator/manager.	8302246	Gdania, Poland
38	R.J. PFEIFFER	1992	Container ship	Matson Navigation	28,555	Active		9002037	NASSCO
39	MAERSK RHODE ISLAND	2002	Chemical & Oil Carrier	Moller AP	34,826	Reflagged	August 2012 AP Moller reflagged to Marshall Islands.	9236975	Guangzhou, Peoples Republic of China
40	OVERSEAS AMBERMAR	2002	Chemical & Oil Carrier	OSG Ship Mngt. (GR)	35,970	Reflagged	September 2008, OSG reflagged to Marshall Islands	9231626	Jinhae Shipyard, S Korea
41	OVERSEAS LUXMAR	1998	Chemical & Oil Carrier	OSG Ship Mngt. (GR)	45,999	Reflagged	October 2012, OSG reflagged to Marshall Islands.	9129940	Samho, S Korea
42	OVERSEAS MAREMAR	1998	Product Carrier	OSG Ship Mngt. (GR)	47,225	Reflagged	November 2012, OSG reflagged to Marshall Islands.	9165293	Onomichi, Hiroshima, Japan
43	ALLIANCE NEW YORK	2005	Pure Car Carrier	Liberty Maritime	15,880	Active	Group Owner: Hoegh & Co., a Norwegian company. August 2010, name change to Prestige New York	9295830	Daewoon, South Korea
44	COURAGE	1991	Pure Car Carrier	Interocean American	29,213	Active	September 2010, Group Owner changes to WILSHIP, a Norwegian company. December 2012 inspection in Antwerpen had 7 defects.	8919922	Hitachi Zosen, Japan
45	FREEDOM	1997	Pure Car Carrier	Pacific-Gulf Marine	19,884	Active	August 2010, Group Owner: TOTE. Two 2012 inspections (Aqaba and Livorno) had no defects.	9129706	Sumitono, Japan

	Name	Yr	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
46	GREEN BAY	2007	Pure Car Carrier	Internat. Shipholding	18,090	Active	Group Owner unknown; Registered Owner: The Green Bay Vessel Trust. Initial Group Owner was International Shipholding, but it changed to Unknown in March 2012.	9339818	Toyahashi, Japan
47	GREEN COVE	1994	Pure Car Carrier	Central Gulf Lines	16,178	Reflagged	October 2012, International Shipholding sold to NYK Line of Japan and vessel reflagged to Panama. Current name is Shohjin. Also in October 2012, International Shipholding bought the (IMO # 9181560) and flagged into US under the Green Cove name. This vessel a 1999 Shin Kurashima, Japan build.	9073701	Kanasashi, Japan
48	GREEN DALE	1999	Pure Car Carrier	Waterman Steamship	15,894	Active	Group Owner since April 2009: International Shipholding. Acquired from NYK Lines, Japan.	9181376	Kanasashi, Japan
49	GREEN LAKE	1998	Pure Car Carrier	Central Gulf Lines	22,799	Active	Group Owner since August 2001: International Shipholding. Acquired from NYK Lines, Japan.	9158288	Shin Kurashima, Japan
50	GREEN POINT	1994	Pure Car Carrier	Central Gulf Lines	14,930	Active	Group Owner since June 1996: International Shipholding. Acquired from NYK Lines, Japan.	9056296	Mitsubishi, Japan
51	GREEN RIDGE	1998	Pure Car Carrier	LMS Shipmanagement	21,523	Active	Group Owner since October 2005: International Shipholding. Acquired from NYK Lines, Japan.	9177428	Imabari, Japan
52	HONOR	1996	Pure Car Carrier	Interocean American	19,884	Active	1996 Group Owner: WILSHIP, a Norwegian company. 2012 Inspection in Aqaba, 3 defects, one fixed before departure.	9126297	Sumitomo, Japan
53	INTEGRITY	1992	Pure Car Carrier	Interocean American	29,152	Active	Group Owner since September 2010: WILSHIP, a Norwegian company.	8919934	Hitachi Zosen, Japan
54	OVERSEAS JOYCE	1987	Pure Car Carrier	OSG Overseas Ship.	16,141	Reflagged	Group Owner is unknown, but reflagged to Marshall Islands in November 2011 and flagged to Panama in October 2012, renamed GMT ASTRO.	8606056	Hitachi Zosen, Japan

	Name	Yr	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
55	PATRIOT	1987	Pure Car Carrier	Pacific-Gulf Marine	15,681	Reflagged	2008 was subject of "magic pipe" contamination (name FIDELO). Walenius (a Norwegian company) becomes Group Owner in 1997. WILSHIP is listed as group owner in June 2012 when it is reflagged to Korea and renamed Morning Marvel.	8602775	Oshima, Japan
56	RESOLVE	1994	Pure Car Carrier	Wilmington Trust Co.	20,082	Active	2002 Group Owner Pacific-Gulf Marine, September 2009 Group Owner WILSHIP.	9080297	Sumitomo, Japan
57	AMERICAN TERN	1990	General Cargo	Osprey S/mngt.	17,328	Broken	Group Owner 2006: Neptune Orient Lines, a Singaporean company. December 2011: Name changed to TERN, Flagged by Tuvalu, Status changed to Broken Up, Broken Up by Prakesh Re-Rolling Pvt Ltd in India for \$502 per LDT (7,222 LDT) \$3,625,444 total	8908088	Schiffswerft Neptun, Germany
58	APL CHINA	1995	Container ship	APL Limited	66,520	Active	July 2007 Group Owner, Neptune Orient, a Singaporean company.	9074389	HDW, Germany
59	APL KOREA	1995	Container ship	APL Limited	66,520	Active	July 2009 Group Owner, Neptune Orient, a Singaporean company.	9074535	Daewoo, South Korea
60	APL PHILIPPINES	1996	Container ship	APL Limited	66,500	Active	July 2009 Group Owner, Neptune Orient, a Singaporean company.	9077276	Daewoo, South Korea
61	APL SINGAPORE	1995	Container ship	APL Limited	66,520	Active	July 2009 Group Owner, Neptune Orient, a Singaporean company.	9074547	Daewoo, South Korea
62	APL THAILAND	1995	Container ship	APL Limited	66,520	Active	July 2009 Group Owner, Neptune Orient, a Singaporean company.	9077123	HDW, Germany
63	CHARLESTON EXPRESS	2002	Container ship	Hapag-Lloyd Cont.	40,478	Active	May 2008 Group Owner, Hapag-Lloyd, a German company.	9243162	CSBC, Taiwan

	Name	Yr	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
64	CP NAVIGATOR	1987	Container ship	Hapag-Lloyd Cont.	44,966	Broken	Initial Group Owner: Sea Crews II, a year later, changes to Unknown; 1997 becomes CP Ships Inc. and in May 2006 changes to CP Ships UK Ltd. August 2007 reflagged to Bermuda. February 2010 Group Owner changes to Wilmington Trust. April 2010: Name changed to LILLY 3, Flagged by St Kitts & Nevis, Status changed to Broken Up, Ship Manager Hapag-Lloyd AG, Broken Up by Unknown Shipbreakers, India in India	8413289	Mitsui Tamano, Japan
65	HORIZON EAGLE	2007	Container ship	Frontline Ltd.	39,000	Reflagged	October 2007 Group Owner: Ship Finance International (NYSE listed & off-shore in Bermuda). April 2012 Unknown Group Owner, reflagged to Marshall Islands and renamed Sfl Eagle. June 2012 name change to OCL International. In April 2012 Horizon returned to SFL: Eagle, Falson, Hawk, and Hunter and Tiger.	9314997	Hyundai, S Korea
66	HORIZON FALCON	2007	Container ship	Frontline Ltd.	39,000	Reflagged	August 2008 Group Owner: Ship Finance International NYSE listed (off-shore in Bermuda). April 2012, reflagged to Marshall Islands. Sea-web has name has always been SFL Falcon.	9315927	Hyundai, S Korea
67	HORIZON HAWK	2007	Container ship	Frontline Ltd.	39,382	Reflagged	October 2007 Group Owner: Ship Finance International (NYSE listed & off-shore in Bermuda). April 2012 reflagged to Marshall Islands and renamed SFL Hawk.	9303819	Hyundai, S Korea
68	HORIZON HUNTER	2006	Container ship	Horizon Lines, LLC	39,382	Reflagged	October 2007 Group Owner: Ship Finance International (NYSE listed & off-shore in Bermuda). April 2012 reflagged to Marshall Islands and renamed SFL Hunter.	9303807	Hyundai, S Korea
69	MAERSK ALABAMA	1998	Container ship	Maersk Line	17,375	Active	Flagged to US in 2004. Seems to always be fighting pirates in the Red Sea. Group Owner Maersk is Danish company.	9164263	CSBC, Taiwan
70	MAERSK ARKANSAS	1998	Container ship	Maersk Line	17,375	Active	Flagged to US in 2004. Group Owner Maersk is Danish company.	9164251	CSBC, Taiwan

	Name	Yr	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
71	MAERSK CAROLINA	1998	Contain rship	Maersk Line	62,229	Active	Flagged to US in 2002. Group Owner Maersk is Danish company.	9155133	Hyundai, S Korea
72	MAERSK IOWA	2006	Contain rship	Maersk Line	59,000	Active	Flagged to US in 2007. Group Owner Maersk is Danish company.	9298686	Hyundai, S Korea
73	MAERSK GEORGIA	1997	Contain rship	Maersk Line	62,242	Active	Flagged to US in 2002. Group Owner Maersk is Danish company.	9155119	Hyundai, S Korea
74	MAERSK MISSOURI	1998	Contain rship	Maersk Line	62,226	Active	Flagged to US in 2002. Group Owner Maersk is Danish company.	9155119	Hyundai, S Korea
75	MAERSK MONTANA	2006	Contain rship	Maersk Line	59,000	Active	Flagged to US in 2007. Group Owner Maersk is Danish company.	9305312	Hyundai, S Korea
76	MAERSK OHIO	2006	Contain rship	Maersk Line	59,000	Active	Flagged to US in 2007. Group Owner Maersk is Danish company.	9298698	Hyundai, S Korea
77	MAERSK VIRGINIA	2002	Contain rship	Maersk Line	62,007	Active	Flagged to US in 2003. Group Owner Maersk is Danish company. NOTE: Maersk also lists the following post-85 build general/cargo container ships as being under US Flag: Maersk California ('92 build IMO 8820195); Maersk Idaho ('00 build IMO 9193264); Maersk Illinois ('11 build IMO 9469778); Maersk Kentucky ('99 build IMO 9193240); Maersk Michigan ('03 build IMO 9255244); Maersk Peary ('04 build IMO 9278492); Maersk Texas ('11 build IMO 9469780); Maersk Utah ('06 build IMO 9305300); Maersk Wisconsin ('00 build IMO 9193252); Maersk Wyoming ('96 build IMO 9105932)	9235531	Hyundai, S Korea
78	PHILADELPHIA EXPRESS	2003	Contain rship	Hapag-Lloyd Cont.	40,478	Active	Flagged to US in 2006. Group Owner Hapag-Lloyd is German company.	9243203	CSCB, Taiwan
79	PRESIDENT ADAMS	1988	Contain rship	APL Limited	54,655	Active	Group Owner since 2009 is Neptune Orient, a Singaporean company. This President Adams was flagged to US in 1989, replacing the previous President Adams, a '66 Newport News build, which was transferred to the US Navy and renamed Cape Girardeau.	8616934	Bremer Vulcan, Germany

	Name	Yr	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
80	PRESIDENT JACKSON	1988	Containere rship	APL Limited	54,665	Active	Group Owner since 2009 is Neptune Orient, a Singaporian company. This President Jackson was flagged to US in 1988, replacing the previous President Jackson, a '68 Newport News build, which was transferred to MARAD and renamed the Cape Gibson. In 2009 it was transferred to Texas A&M and is currently in laid-up status.	8616300	HDW, Germany
81	PRESIDENT POLK	1988	Containere rship	APL Limited	53,613	Active	Group Owner since 2009 is Neptune Orient, a Singaporian company. This President Polk was flagged to US in 1988, replacing the previous President Polk, a '65 NASSCO build, which was transferred to MARAD and renamed the Grand Canyon State.	8616922	Bremer Vulcan, Germany
82	PRESIDENT TRUMAN	1988	Containere rship	APL Limited	53,613	Active	Group Owner since 2009 is Neptune Orient, a Singaporian company. This President Truman was flagged to US in 1988, replacing the previous President Truman, a '62 Todd San Pedro build, which was transferred to MARAD and renamed the Diamond State.	8616283	HDW, Germany
83	SEA-LAND CHARGER	1997	Containere rship	Maersk Line	59,840	Active	Flagged to US in 2004. Maersk Line is a subsidiary of AP Moller, a Danish company	9143001	IHI Kure, Japan
84	SEA-LAND COMET	1995	Containere rship	Maersk Line	59,840	Active	Flagged to US in 2004. Maersk Line is a subsidiary of AP Moller, a Danish company	9106182	IHI Chita, Japan
85	SEA-LAND INTREPID	1997	Containere rship	Maersk Line	59,840	Active	Flagged to US in 2004. Maersk Line is a subsidiary of AP Moller, a Danish company	9143025	IHI Kure, Japan
86	SEA-LAND LIGHTNING	1997	Containere rship	Maersk Line	59,840	Active	Flagged to US in 2004. Maersk Line is a subsidiary of AP Moller, a Danish company	9143037	IHI Kure, Japan

	Name	Yr	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
87	SEA-LAND METEOR	1996	Container ship	Maersk Line	59,840	Active	Flagged to US in 2004. Maersk Line is a subsidiary of AP Moller, a Danish company. NOTE: Maersk lists the following Sea-Land post-1985 Container ships as being under US flag presently: Sea-Land Eagle ('97 build IMO 9143013); Sea-Land Mercury ('95 build IMO 9106194); Sea-Land Champion ('95 build IMO 9143001); Sea-Land Racer ('96 build IMO 9116890).	9106209	IHI Chita, Japan
88	ST. LOUIS EXPRESS	2002	Container ship	Hapag-Lloyd Cont.	40,478	Active	2010 Group Owner: Wilmington Trust. Flagged into US in 2006.	9243186	CSBC, Taiwan
89	WASHINGTON EXPRESS	2003	Container ship	Hapag-Lloyd Cont.	40,478	Active	2010 Group Owner: Wilmington Trust. Flagged into US in 2006.	9243198	CSBC, Taiwan
90	YORKTOWN EXPRESS	2002	Container ship	Hapag-Lloyd Cont.	40,478	Active	Group Owner: Hapag-Lloyd AG, a German company. Flagged into US in 2006.	9243174	CSBC, Taiwan
91	LIBERTY EAGLE	2004	Dry Bulk	Liberty Maritime	51,812	Active	Flagged in in 2004.	9278753	Oshima, Japan
92	LIBERTY GLORY	2001	Dry Bulk	Liberty Maritime	50,601	Active	Flagged in in 2001.	9228136	Oshima, Japan

	Name	Yr	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
93	LIBERTY GRACE	2001	Dry Bulk	Liberty Maritime	50,601	Active	<p>Flagged in in 2001. US-flag bulk carrier operator Liberty Maritime is buying a contract from Central Gulf Lines to build a 52,200 DWT dry bulk ship at Japan's Oshima Shipyard and will place the ship into a US-flag food aid shipment programme. Liberty has asked the US Maritime Administration for a waiver from US shipping laws that require foreign-built ships to wait three years before being placed in the food aid trades. MarAd has already provided waivers to Liberty to build two ships, Liberty Grace and Liberty Glory, in Japan and use them to carry US government food aid. US shipping companies and MarAd are promoting a change to US laws so that foreign-built ships can carry US government cargoes one year after construction, but US shipbuilders have successfully fought the effort. Liberty operates seven US-flag bulk carriers.</p> <p>NOTE: LIBERTY added the following vessels that are not listed here: Liberty Pride ('09 build IMO 9448114); Liberty Promise ('10 build IMO 9448425) and a Liberty Desire which is in service/commission for 2013 (IMO 9600657).</p>	9228148	Oshima, Japan
94	LIBERTY SPIRIT	1986	Dry Bulk	Liberty Maritime	64,151	Broken	<p>November 2012, Liberty reflagged to the Marshall Islands. January 2013: Status changed to Broken Up, Broken Up by Baijnath Melaram in India for \$437 per LDT (11,132 LDT) \$4,864,684 total.</p>	8500549	Hyundai, S Korea

	Name	Yr	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
95	LIBERTY STAR	1986	Dry Bulk	Liberty Maritime	64,059	Broken	March 2011, Liberty reflagged to the Marshall Islands. December 2012: PSC Inspected, Status changed to Broken Up, Broken Up by Jiangyin Xiagang Changjiang of Jiangyin, Jiangsu in China, People's Republic Of for \$394 per LDT (11,379 LDT) \$4,483,326 total.	8510647	Hyundai, S Korea
96	LIBERTY SUN	1986	Dry Bulk	Liberty Maritime	64,060	Broken	December 2012, Liberty reflagged to the Marshall Islands. March 2013: Status changed to Broken Up, Broken Up by Jiangyin Xiagang Changjiang of Jiangyin, Jiangsu in China, People's Republic Of for \$413 per LDT (11,132 LDT) \$4,597,516 total	8500551	Hyundai, S Korea
	<b>Projected Newbuilds</b>								
1	N/B ATLANTIC MARINE ALABAMA (1)	2010	Chemical & Oil Carrier	AHL Shipping Co.	49,000		yes		
2	N/B ATLANTIC MARINE ALABAMA (2)	2010	Chemical & Oil Carrier	AHL Shipping Co.	49,000		yes		
3	N/B ATLANTIC MARINE ALABAMA (3)	2009	Chemical & Oil Carrier	AHL Shipping Co.	49,000		yes		
4	N/B KVAERNER PHILADELPHIA (1)	2011	Chemical & Oil Carrier	Aker American Shpg.	45,000		yes		
5	N/B KVAERNER PHILADELPHIA (2)	2010	Chemical & Oil Carrier	Aker American Shpg.	45,000		yes		
6	OVERSEAS BOSTON	2008	Chemical & Oil Carrier	Aker American Shpg.	45,000		yes		
7	OVERSEAS JACKSON	2009	Chemical & Oil Carrier	Aker American Shpg.	45,000		yes		

	Name	Yr	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
8	OVERSEAS NEW YORK	2008	Chemical & Oil Carrier	Aker American Shpg.	45,000		yes		
9	OVERSEAS NIKISKI	2008	Chemical & Oil Carrier	Aker American Shpg.	45,000		yes		
10	OVERSEAS PORT ARTHUR	2009	Chemical & Oil Carrier	Aker American Shpg.	45,000		yes		
11	OVERSEAS TAMPA	2008	Chemical & Oil Carrier	Aker American Shpg.	45,000		yes		
12	OVERSEAS TEXAS CITY	2008	Chemical & Oil Carrier	Aker American Shpg.	45,000		yes		
13	N/B GEN. DYNAMICS NASSCO SAN DIEGO (1)	2009	Product Carrier	U.S. Shipping Ptnrs.	49,000		yes		
14	N/B GEN. DYNAMICS NASSCO SAN DIEGO (2)	2009	Product Carrier	U.S. Shipping Ptnrs.	49,000		yes		
15	N/B GEN. DYNAMICS NASSCO SAN DIEGO (3)	2011	Product Carrier	U.S. Shipping Ptnrs.	49,000		yes		
16	N/B GEN. DYNAMICS NASSCO SAN DIEGO (4)	2009	Product Carrier	U.S. Shipping Ptnrs.	49,000		yes		
17	N/B GEN. DYNAMICS NASSCO SAN DIEGO (5)	2010	Product Carrier	U.S. Shipping Ptnrs.	49,000		yes		
18	N/B GEN. DYNAMICS NASSCO SAN DIEGO (6)	2010	Product Carrier	U.S. Shipping Ptnrs.	49,000		yes		
19	N/B GEN. DYNAMICS NASSCO SAN DIEGO (7)	2010	Product Carrier	U.S. Shipping Ptnrs.	49,000		yes		

	Name	Yr	Vessel Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
20	N/B GEN. DYNAMICS NASSCO SAN DIEGO (8)	2011	Product Carrier	U.S. Shipping Ptnrs.	49,000		yes		
21	N/B GEN. DYNAMICS NASSCO SAN DIEGO (9)	2010	Product Carrier	U.S. Shipping Ptnrs.	49,000		yes		
22	N/B DAEWOO S.B. OKPO (40)	2010	Pure Car Carrier	Liberty Maritime	19,000		no		
23	N/B DAEWOO S.B. OKPO (41)	2010	Pure Car Carrier	Liberty Maritime	19,000		no		
24	N/B JIANGSU NEW YANGZIJIANG YANGZIJIANG (22)	2010	Bulk Carrier	Liberty Maritime	92,500		no		
25	N/B JIANGSU NEW YANGZIJIANG YANGZIJIANG 760 (2)	2010	Bulk Carrier	Liberty Maritime	92,500		no		

Name	Vessel Yr	Type	Owner	Dwt	Status	Group Owner or other information	IMO #	Build
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Note on MSP: THIRTEEN new vessels will join the lucrative Maritime Security Program operated by the US Maritime Administration under an expanded scheme that increases the fleet from 47 to 60 vessels. Vessels in the programme, authorised in 1996, must give first allegiance to transporting goods for the US military and are compensated for that pledge. The re-authorised scheme includes annual funding for 2006-08 of \$156M, which increases to \$174M in 2009-11, and to \$186M for 2012-15. Of 142 applicant vessels, MarAd chose the following ships: three tankers operated by Overseas Shipholding Group: Maersk Rapier, Maersk Regent and Maersk Richmond; four ro-ros operated by Fidelio: Takasago, Resolve, Otello and Aida; two further ro-ros: Hercules Leader and Splendid Ace, operated by Central Gulf Lines and Liberty Global Logistics respectively; two geared container vessels operated by Lykes Lines: Lykes Motivator and TMM Yucatan; and two heavy-lift vessels, Industrial Challenger and Industrial Chief, operated by Patriot Shipping. Only US-flagged vessels qualify for the programme.

NOTE: Maersk Rhode Island (IMO 9236975) is a 2002 Chinese built (Guangzhou Shipyard, PRC) product tanker that Maersk flagged in from Denmark in 2002. Originally named Maersk Ramsgate, the vessel was reflagged out to Marshall Islands in August 2012.

## Bethlehem Steel Sparrows Point Yard

LR/IMO_S#	Name_of_Ship	Built	Callsign	Deadweight	Flag	Status
8641719	PHILADELPHIA	1984-03		48852	United States Of A	Broken Up
8640674	BALTIMORE	1983-02		48067	United States Of A	Broken Up
8756100	WELL SERVICES RIG 10	1982-12		0	Unknown	Broken Up
8751796	HERCULES 2000	1982-06		0	Unknown	Broken Up
7390076	KADRI	1977-11	9MEY5	266590	Malaysia	Broken Up
7390064	ALASKAN JEWEL	1977-04		266590	Panama	Broken Up
7390052	ASTRO BETA	1976-08	SZHY	264078	Greece	Broken Up
7390040	ASTRO ALPHA	1976-05		246000	Greece	Broken Up
7390038	ASTRO GAMMA	1975-10		268315	Greece	Broken Up
7366300	FAIRBANKS	1974-08	WGWB	122520	United States Of A	Broken Up
7366295	JUNEAU	1974-05	KSBG	122249	United States Of A	Broken Up
7329998	OVERSEAS JUNEAU	1973-12	WWND	122409	United States Of A	Broken Up
7320394	TT PAUL	1973-06	J8B3132	91393	St Vincent & The G	Broken Up
7318896	VENTURE 1	1973-06	ELVD8	122249	Liberia	Broken Up
7226914	CHEVRON MISSISSIPPI	1972-10	WXBR	71336	United States Of A	Broken Up
7218967	CHEVRON CALIFORNIA	1972-07	WCGN	71339	United States Of A	Broken Up
7205934	SAG RIVER	1972-05	WLDF	70215	United States Of A	Broken Up
7117149	PRUDHOE BAY	1971-12	KPFD	71873	United States Of A	Broken Up
7109013	FAVOR	1971-08	ELTN7	71589	Liberia	Broken Up
7034311	OVERSEAS ARCTIC	1971-02	KLEZ	63000	United States Of A	Broken Up
7022124	HMI ASTRACHEM	1970-09	KEOC	37702	United States Of A	Broken Up
7002071	NULAN	1970-08	J8B2898	27107	St Vincent & The G	Broken Up
7022760	GOLDEN GATE	1970-06	KIOH	63141	United States Of A	Broken Up
6913259	MANUKAI	1970-02		27107	Panama	Broken Up
7025487	OVERSEAS ALASKA	1970-00	WEHV	63000	United States Of A	Broken Up
6924595	CHAMPION	1969-10	KIGP	38482	United States Of A	Broken Up
6905276	LEADER	1969-06	KMLD	38414	United States Of A	Broken Up
6909961	OMI WABASH	1969-06	WGWC	38460	United States Of A	Broken Up
6901969	TT POWER	1969-03	WGWA	37166	United States Of A	Broken Up
6823492	VIVIAN	1969-01	KA AZ	38421	United States Of A	Broken Up
6814180	OVERSEAS VALDEZ	1968-07	WOVS	38421	United States Of A	Broken Up
6810005	OVERSEAS ALICE	1968-06	WOVL	38421	United States Of A	Broken Up
6603397	SANTA ADELA	1966-00	KNCS	13910	United States Of A	Broken Up
6523028	SANTA JUANA	1966-00	KFFJ	13915	United States Of A	Broken Up
6618213	TRINITY	1966-00	WRGL	38359	United States Of A	Broken Up
6510198	MONTANA	1965-00	J8GP5	26547	St Vincent & The G	Broken Up
5422409	PATRIOT STATE	1964-03	WHBH	9382	United States Of A	Broken Up
6404832	GEORGI	1964-00		26755	St Vincent & The G	Broken Up
6418754	KEYSTONE RHODE ISL	1964-00	WFDW	19992	United States Of A	Broken Up
6026795	BHASKAR	1963-07		14515	St Vincent & The G	Broken Up
5424691	CAPE CLEAR	1963-06	KBNC	12824	United States Of A	Broken Up
5322037	CAPE COD	1963-06	KEAY	12824	United States Of A	Broken Up
5402423	CAPE CHARLES	1963-03	WLCW	12887	United States Of A	Broken Up
5418161	MARYLAND	1963-03	KADG	26976	United States Of A	Broken Up
5357173	MASSACHUSETTS	1963-00	KAAD	19683	United States Of A	Broken Up
5312408	SANTA MAGDALENA	1963-00	KA AH	9526	United States Of A	Broken Up

## Bethlehem Steel Sparrows Point Yard

LR/IMO_S#	Name_of_Ship	Built	Callsign	Deadweight	Flag	Status
5312460	SANTA MARIA	1963-00	KAFC	8900	United States Of A	Broken Up
5312642	SANTA MARIANA	1963-00	WSNA	9526	United States Of A	Broken Up
5225681	TANWAR	1962-11	KAXP	11684	United States Of A	Broken Up
5324803	SHIRLEY LYKES	1962-08	WJDH	14526	United States Of A	Broken Up
5052058	BRINTON LYKES	1962-06	WLAO	14515	United States Of A	Broken Up
5206960	LESLIE LYKES	1962-02	WHTU	14759	United States Of A	Broken Up
5246568	NANCY LYKES	1961-09	WCUU	14530	United States Of A	Broken Up
5238274	MINOLE	1961-08	KGSM	49534	United States Of A	Broken Up
5333660	SOLON TURMAN	1961-03	WNAJ	14759	United States Of A	Broken Up
5137949	COASTAL MANATEE	1961-00	KGXM	29525	United States Of A	Broken Up
5230234	OVERSEAS JOYCE	1961-00	WGNJ	50642	United States Of A	Broken Up
5171036	VELMA LYKES	1961-00	WLAH	14530	United States Of A	Broken Up
5137913	NEW RIVER	1960-08	KAQL	39483	United States Of A	Broken Up
5062302	CAPISTERIA	1960-07	5MDE	50885	Liberia	Broken Up
5137810	CHABLIS	1960-00	WEMS	31300	United States Of A	Broken Up
5137901	THE MONSEIGNEUR	1959-12	KAQN	39483	United States Of A	Broken Up
5213133	LOVELLIA	1959-10	5MBK	50885	Liberia	Broken Up
5137858	PRIDE II	1959-03	WJHK	30845	United States Of A	Broken Up
5357161	AYER BIRU	1959-00	ELJO3	47187	Liberia	Broken Up
5137731	MONTRACHET	1959-00	KIMH	28448	United States Of A	Broken Up
5051872	TEXACO BRIGHTON	1959-00		49321	Panama	Broken Up
5137779	SS WILLIAMS CLARK	1958-08	KAQK	39385	United States Of A	Broken Up
5392886	WORLD BANNER	1958-07	5LVC	34514	Liberia	Broken Up
5137860	AMERICAN OSPREY	1958-03	KARC	34723	United States Of A	Broken Up
5368471	TEXACO TRINIDAD	1958-00		49516	Panama	Broken Up
5357496	TEXACO WISCONSIN	1958-00	WIGK	35328	United States Of A	Broken Up
5137872	TROPIC SUN	1957-12	KLHC	35280	United States Of A	Broken Up
5003186	ADORATION	1957-01		42095	Greece	Broken Up
5166483	AMBER SEA	1957-00	V3SB7	33540	Belize	Broken Up
5073155	CHARLES	1956-12	3FYY7	39366	Panama	Broken Up
5073131	HERMITAGE	1956-07	KEHO	35337	United States Of A	Broken Up
5287342	PUNTA PIEDRAS	1956-01	LQPP	7634	Argentina	Broken Up
5073143	ST. EMILION	1956-00	WIJT	35156	United States Of A	Broken Up
5267990	BALTIMORE TRADER	1955-08	KASJ	58813	United States Of A	Broken Up
5116983	WASHINGTON	1954-12	KEMA	16451	United States Of A	Broken Up
5116957	LION OF CALIFORNIA	1954-07	KFBL	16451	United States Of A	Broken Up
5278901	AMERICAN ACCORD	1954-00	KFEZ	15452	United States Of A	Broken Up
5278913	AMERICAN ALLIANCE	1954-00	KFEM	15772	United States Of A	Broken Up
5031523	ANGELINA	1954-00	KAKL	17881	United States Of A	Broken Up
5265215	OVERSEAS EVELYN	1954-00	KFGL	30389	United States Of A	Broken Up
5265174	OVERSEAS ROSE	1954-00	KFGR	30416	United States Of A	Broken Up
5186158	KEYSTONER	1953-12	J8IU6	18720	St Vincent & The G	Broken Up
5265227	OVERSEAS ALEUTIAN	1953-11	KFGK	40477	United States Of A	Broken Up
5215739	COVE RANGER	1953-10	KIHW	29775	United States Of A	Broken Up
5186160	KEYTANKER	1953-06		19238	United States Of A	Broken Up
5267885	BIRCH COULIE	1953-02	KLDJ	27482	United States Of A	Broken Up

## Bethlehem Steel Sparrows Point Yard

LR/IMO_S#	Name_of_Ship	Built	Callsign	Deadweight	Flag	Status
5203774	ANGEL PARK	1953-01	D7XP	53313	Korea, South	Broken Up
5278963	AMERICAN ACE	1953-00	KFCV	15452	United States Of A	Broken Up
5278937	AMERICAN LEADER	1953-00	KFEJ	15772	United States Of A	Broken Up
5233951	MICHAEL L	1953-00	ELIH	18584	Liberia	Broken Up
5137896	STOLT MERRICK	1952-08		18299	Panama	Broken Up
5125245	GAGE LUND	1952-02		30156	Liberia	Broken Up
5312472	INTREPID	1952-00	WIAE	18508	United States Of A	Broken Up
5174698	JOHNSTOWN	1952-00	WE2311	23525	United States Of A	Broken Up
5297969	ROBERT WATT MILLER	1951-04		30640	Liberia	Broken Up
5272098	PAUL PIGOTT	1951-02		30640	Liberia	Broken Up
5287304	COMPASS DRILLER	1951-00		0	Panama	Broken Up
5028708	ATHOLL MCBEAN	1950-10		30640	Liberia	Broken Up
6069838	CHEVRON TRANSPORT	1950-06		0	Liberia	Broken Up
5263164	OLYMPIC THUNDER	1950-05	5LRL	42229	Liberia	Broken Up
5262976	SAGITTARIUS	1950-03		30486	Liberia	Broken Up
5338335	UNION DEFENDER	1950-02	6ZQM	26407	Liberia	Broken Up
5000330	A. N. KEMP	1950-00		30640	Liberia	Broken Up
5287160	GLOMAR TENDER III	1950-00	HO3346	0	Panama	Broken Up
8835217	STATE OF MAINE	1990-09	WCAH	0	United States Of A	In Service/Cor
8834407	GOLDEN BEAR	1989-03	NMRY	6974	United States Of A	In Service/Cor
8750962	HERCULES 214	1982-01	A8ZH4	0	Liberia	In Service/Cor
8755455	HERCULES 204	1981-05		0	United States Of A	In Service/Cor
8750015	ABAN II	1981-00	HO2471	0	Panama	In Service/Cor
7617905	HORIZON ENTERPRISE	1980-07	KRGB	31423	United States Of A	In Service/Cor
7617890	HORIZON PACIFIC	1979-12	WSRL	31213	United States Of A	In Service/Cor
7366312	HORIZON PRODUCER	1974-04	WJBJ	25651	United States Of A	In Service/Cor
7739856	MCFARLAND	1966-00	AEGB	9754	United States Of A	In Service/Cor
5102865	MICHIPICOTEN	1952-06	CFG8060	23491	Canada	In Service/Cor
8754334	HERCULES 2002	1982-04		0	Unknown	Laid-Up
7224306	HORIZON CONSUMER	1973-11	WCHF	25651	United States Of A	Laid-Up
8639259	NEW JERSEY	1995-06		5300	United States Of A	No Longer Me
8639065	NEW YORK	1986-06		4600	United States Of A	No Longer Me
8639053	COLUMBIA HOUSTON	1986-02		6800	United States Of A	No Longer Me
8641472	MOBILE	1984-04		47247	United States Of A	No Longer Me
8641496	NEW YORK	1982-11	WVDG	48067	United States Of A	No Longer Me
8750297	BARUNA I	1970-01	YDNB	3908	Indonesia	No Longer Me
8888678	MARABELLA	1968-00		0	Trinidad & Tobago	No Longer Me
8765577	SEA STORAGE	1953-01	5LZZ	0	Liberia	No Longer Me
5336351	LEWIS J KUBER	1952-00	WE5197	22353	United States Of A	No Longer Me
8641123	GROTON	1982-02		48067	Unknown	To Be Broken
8641290	JACKSONVILLE	1982-01		48067	Unknown	To Be Broken
6817883	MISSION BUENAVENTI	1968-10	WNGI	38851	United States Of A	To Be Broken
5137767	CAPTAIN H. A. DOWNI	1957-10	KAQJ	40017	United States Of A	To Be Broken
7114173	PUERTO RICAN	1971-10		35240	United States Of A	Total Loss
6921311	OMI CHARGER	1969-10	KMLK	38414	United States Of A	Total Loss
5014331	AMERICAN EAGLE	1959-00	WMJG	33696	United States Of A	Total Loss

Bethlehem Steel Sparrows Point Yard

LR/IMO_S#	Name_of_Ship	Built	Callsign	Deadweight	Flag	Status
5357343	TEXACO OKLAHOMA	1958-02		35635	United States Of A	Total Loss
5392903	WORLD BOND	1957-04	5LKD	33807	Liberia	Total Loss
5287196	GLOMAR TENDER I	1956-00		0	Panama	Total Loss
5109459	EUGENIE LIVANOS	1954-06		31685	Liberia	Total Loss
5186172	KEYTRADER	1954-06		18906	United States Of A	Total Loss
5287213	CARORA	1952-01	YVFQ	7678	Venezuela	Total Loss
5240904	MONTE	1952-00	T2PL2	6558	Tuvalu	Total Loss
5310515	PISCES	1950-02	5MDY	29060	Liberia	Total Loss
6420056	CHESAPEAKE	1964-10	KNFE	50826	United States Of A	U.S. Reserve F
5002170	CAPE CHALMERS	1963-03	WLCP	11473	United States Of A	U.S. Reserve F
6329044	PETERSBURG	1963-03	WJDC	50706	United States Of A	U.S. Reserve F

US EPA ARCHIVE DOCUMENT

## Bethlehem Steel Sparrows Point Yard

LR/IMO_S#	Name_of_Ship	Built	Callsign	Deadweight	Flag	Status
8641719	PHILADELPHIA	1984-03		48852	United States Of A	Broken Up
8640674	BALTIMORE	1983-02		48067	United States Of A	Broken Up
8756100	WELL SERVICES RIG 10	1982-12		0	Unknown	Broken Up
8751796	HERCULES 2000	1982-06		0	Unknown	Broken Up
7390076	KADRI	1977-11	9MEY5	266590	Malaysia	Broken Up
7390064	ALASKAN JEWEL	1977-04		266590	Panama	Broken Up
7390052	ASTRO BETA	1976-08	SZHY	264078	Greece	Broken Up
7390040	ASTRO ALPHA	1976-05		246000	Greece	Broken Up
7390038	ASTRO GAMMA	1975-10		268315	Greece	Broken Up
7366300	FAIRBANKS	1974-08	WGWB	122520	United States Of A	Broken Up
7366295	JUNEAU	1974-05	KSBG	122249	United States Of A	Broken Up
7329998	OVERSEAS JUNEAU	1973-12	WWND	122409	United States Of A	Broken Up
7320394	TT PAUL	1973-06	J8B3132	91393	St Vincent & The G	Broken Up
7318896	VENTURE 1	1973-06	ELVD8	122249	Liberia	Broken Up
7226914	CHEVRON MISSISSIPPI	1972-10	WXBR	71336	United States Of A	Broken Up
7218967	CHEVRON CALIFORNIA	1972-07	WCGN	71339	United States Of A	Broken Up
7205934	SAG RIVER	1972-05	WLDF	70215	United States Of A	Broken Up
7117149	PRUDHOE BAY	1971-12	KPFD	71873	United States Of A	Broken Up
7109013	FAVOR	1971-08	ELTN7	71589	Liberia	Broken Up
7034311	OVERSEAS ARCTIC	1971-02	KLEZ	63000	United States Of A	Broken Up
7022124	HMI ASTRACHEM	1970-09	KEOC	37702	United States Of A	Broken Up
7002071	NULAN	1970-08	J8B2898	27107	St Vincent & The G	Broken Up
7022760	GOLDEN GATE	1970-06	KIOH	63141	United States Of A	Broken Up
6913259	MANUKAI	1970-02		27107	Panama	Broken Up
7025487	OVERSEAS ALASKA	1970-00	WEHV	63000	United States Of A	Broken Up
6924595	CHAMPION	1969-10	KIGP	38482	United States Of A	Broken Up
6905276	LEADER	1969-06	KMLD	38414	United States Of A	Broken Up
6909961	OMI WABASH	1969-06	WGWC	38460	United States Of A	Broken Up
6901969	TT POWER	1969-03	WGWA	37166	United States Of A	Broken Up
6823492	VIVIAN	1969-01	KA AZ	38421	United States Of A	Broken Up
6814180	OVERSEAS VALDEZ	1968-07	WOVS	38421	United States Of A	Broken Up
6810005	OVERSEAS ALICE	1968-06	WOVL	38421	United States Of A	Broken Up
6603397	SANTA ADELA	1966-00	KNCS	13910	United States Of A	Broken Up
6523028	SANTA JUANA	1966-00	KFFJ	13915	United States Of A	Broken Up
6618213	TRINITY	1966-00	WRGL	38359	United States Of A	Broken Up
6510198	MONTANA	1965-00	J8GP5	26547	St Vincent & The G	Broken Up
5422409	PATRIOT STATE	1964-03	WHBH	9382	United States Of A	Broken Up
6404832	GEORGI	1964-00		26755	St Vincent & The G	Broken Up
6418754	KEYSTONE RHODE ISLAND	1964-00	WFDW	19992	United States Of A	Broken Up
6026795	BHASKAR	1963-07		14515	St Vincent & The G	Broken Up
5424691	CAPE CLEAR	1963-06	KBNC	12824	United States Of A	Broken Up
5322037	CAPE COD	1963-06	KEAY	12824	United States Of A	Broken Up
5402423	CAPE CHARLES	1963-03	WLCW	12887	United States Of A	Broken Up
5418161	MARYLAND	1963-03	KADG	26976	United States Of A	Broken Up
5357173	MASSACHUSETTS	1963-00	KAAD	19683	United States Of A	Broken Up
5312408	SANTA MAGDALENA	1963-00	KA AH	9526	United States Of A	Broken Up

## Bethlehem Steel Sparrows Point Yard

LR/IMO_S#	Name_of_Ship	Built	Callsign	Deadweight	Flag	Status
5312460	SANTA MARIA	1963-00	KAFC	8900	United States Of A	Broken Up
5312642	SANTA MARIANA	1963-00	WSNA	9526	United States Of A	Broken Up
5225681	TANWAR	1962-11	KAXP	11684	United States Of A	Broken Up
5324803	SHIRLEY LYKES	1962-08	WJDH	14526	United States Of A	Broken Up
5052058	BRINTON LYKES	1962-06	WLAO	14515	United States Of A	Broken Up
5206960	LESLIE LYKES	1962-02	WHTU	14759	United States Of A	Broken Up
5246568	NANCY LYKES	1961-09	WCUU	14530	United States Of A	Broken Up
5238274	MINOLE	1961-08	KGSM	49534	United States Of A	Broken Up
5333660	SOLON TURMAN	1961-03	WNAJ	14759	United States Of A	Broken Up
5137949	COASTAL MANATEE	1961-00	KGXM	29525	United States Of A	Broken Up
5230234	OVERSEAS JOYCE	1961-00	WGNJ	50642	United States Of A	Broken Up
5171036	VELMA LYKES	1961-00	WLAH	14530	United States Of A	Broken Up
5137913	NEW RIVER	1960-08	KAQL	39483	United States Of A	Broken Up
5062302	CAPISTERIA	1960-07	5MDE	50885	Liberia	Broken Up
5137810	CHABLIS	1960-00	WEMS	31300	United States Of A	Broken Up
5137901	THE MONSEIGNEUR	1959-12	KAQN	39483	United States Of A	Broken Up
5213133	LOVELLIA	1959-10	5MBK	50885	Liberia	Broken Up
5137858	PRIDE II	1959-03	WJHK	30845	United States Of A	Broken Up
5357161	AYER BIRU	1959-00	ELJO3	47187	Liberia	Broken Up
5137731	MONTRACHET	1959-00	KIMH	28448	United States Of A	Broken Up
5051872	TEXACO BRIGHTON	1959-00		49321	Panama	Broken Up
5137779	SS WILLIAMS CLARK	1958-08	KAQK	39385	United States Of A	Broken Up
5392886	WORLD BANNER	1958-07	5LVC	34514	Liberia	Broken Up
5137860	AMERICAN OSPREY	1958-03	KARC	34723	United States Of A	Broken Up
5368471	TEXACO TRINIDAD	1958-00		49516	Panama	Broken Up
5357496	TEXACO WISCONSIN	1958-00	WIGK	35328	United States Of A	Broken Up
5137872	TROPIC SUN	1957-12	KLHC	35280	United States Of A	Broken Up
5003186	ADORATION	1957-01		42095	Greece	Broken Up
5166483	AMBER SEA	1957-00	V3SB7	33540	Belize	Broken Up
5073155	CHARLES	1956-12	3FYY7	39366	Panama	Broken Up
5073131	HERMITAGE	1956-07	KEHO	35337	United States Of A	Broken Up
5287342	PUNTA PIEDRAS	1956-01	LQPP	7634	Argentina	Broken Up
5073143	ST. EMILION	1956-00	WIJT	35156	United States Of A	Broken Up
5267990	BALTIMORE TRADER	1955-08	KASJ	58813	United States Of A	Broken Up
5116983	WASHINGTON	1954-12	KEMA	16451	United States Of A	Broken Up
5116957	LION OF CALIFORNIA	1954-07	KFBL	16451	United States Of A	Broken Up
5278901	AMERICAN ACCORD	1954-00	KFEZ	15452	United States Of A	Broken Up
5278913	AMERICAN ALLIANCE	1954-00	KFEM	15772	United States Of A	Broken Up
5031523	ANGELINA	1954-00	KAKL	17881	United States Of A	Broken Up
5265215	OVERSEAS EVELYN	1954-00	KFGL	30389	United States Of A	Broken Up
5265174	OVERSEAS ROSE	1954-00	KFGR	30416	United States Of A	Broken Up
5186158	KEYSTONER	1953-12	J8IU6	18720	St Vincent & The G	Broken Up
5265227	OVERSEAS ALEUTIAN	1953-11	KFGK	40477	United States Of A	Broken Up
5215739	COVE RANGER	1953-10	KIHW	29775	United States Of A	Broken Up
5186160	KEYTANKER	1953-06		19238	United States Of A	Broken Up
5267885	BIRCH COULIE	1953-02	KLDJ	27482	United States Of A	Broken Up

## Bethlehem Steel Sparrows Point Yard

LR/IMO_Sf	Name_of_Ship	Built	Callsign	Deadweight	Flag	Status
5203774	ANGEL PARK	1953-01	D7XP	53313	Korea, South	Broken Up
5278963	AMERICAN ACE	1953-00	KFCV	15452	United States Of A	Broken Up
5278937	AMERICAN LEADER	1953-00	KFEJ	15772	United States Of A	Broken Up
5233951	MICHAEL L	1953-00	ELIH	18584	Liberia	Broken Up
5137896	STOLT MERRICK	1952-08		18299	Panama	Broken Up
5125245	GAGE LUND	1952-02		30156	Liberia	Broken Up
5312472	INTREPID	1952-00	WIAE	18508	United States Of A	Broken Up
5174698	JOHNSTOWN	1952-00	WE2311	23525	United States Of A	Broken Up
5297969	ROBERT WATT MILLER	1951-04		30640	Liberia	Broken Up
5272098	PAUL PIGOTT	1951-02		30640	Liberia	Broken Up
5287304	COMPASS DRILLER	1951-00		0	Panama	Broken Up
5028708	ATHOLL MCBEAN	1950-10		30640	Liberia	Broken Up
6069838	CHEVRON TRANSPORT	1950-06		0	Liberia	Broken Up
5263164	OLYMPIC THUNDER	1950-05	5LRL	42229	Liberia	Broken Up
5262976	SAGITTARIUS	1950-03		30486	Liberia	Broken Up
5338335	UNION DEFENDER	1950-02	6ZQM	26407	Liberia	Broken Up
5000330	A. N. KEMP	1950-00		30640	Liberia	Broken Up
5287160	GLOMAR TENDER III	1950-00	HO3346	0	Panama	Broken Up
8835217	STATE OF MAINE	1990-09	WCAH	0	United States Of A	In Service/Commission
8834407	GOLDEN BEAR	1989-03	NMRY	6974	United States Of A	In Service/Commission
8750962	HERCULES 214	1982-01	A8ZH4	0	Liberia	In Service/Commission
8755455	HERCULES 204	1981-05		0	United States Of A	In Service/Commission
8750015	ABAN II	1981-00	HO2471	0	Panama	In Service/Commission
7617905	HORIZON ENTERPRISE	1980-07	KRGB	31423	United States Of A	In Service/Commission
7617890	HORIZON PACIFIC	1979-12	WSRL	31213	United States Of A	In Service/Commission
7366312	HORIZON PRODUCER	1974-04	WJBJ	25651	United States Of A	In Service/Commission
7739856	MCFARLAND	1966-00	AEGB	9754	United States Of A	In Service/Commission
5102865	MICHIPICOTEN	1952-06	CFG8060	23491	Canada	In Service/Commission
8754334	HERCULES 2002	1982-04		0	Unknown	Laid-Up
7224306	HORIZON CONSUMER	1973-11	WCHF	25651	United States Of A	Laid-Up
8639259	NEW JERSEY	1995-06		5300	United States Of A	No Longer Meets IHSF Cr
8639065	NEW YORK	1986-06		4600	United States Of A	No Longer Meets IHSF Cr
8639053	COLUMBIA HOUSTON	1986-02		6800	United States Of A	No Longer Meets IHSF Cr
8641472	MOBILE	1984-04		47247	United States Of A	No Longer Meets IHSF Cr
8641496	NEW YORK	1982-11	WVDG	48067	United States Of A	No Longer Meets IHSF Cr
8750297	BARUNA I	1970-01	YDNB	3908	Indonesia	No Longer Meets IHSF Cr
8888678	MARABELLA	1968-00		0	Trinidad & Tobago	No Longer Meets IHSF Cr
8765577	SEA STORAGE	1953-01	5LZZ	0	Liberia	No Longer Meets IHSF Cr
5336351	LEWIS J KUBER	1952-00	WE5197	22353	United States Of A	No Longer Meets IHSF Cr
8641123	GROTON	1982-02		48067	Unknown	To Be Broken Up
8641290	JACKSONVILLE	1982-01		48067	Unknown	To Be Broken Up
6817883	MISSION BUENAVENTI	1968-10	WNGI	38851	United States Of A	To Be Broken Up
5137767	CAPTAIN H. A. DOWNI	1957-10	KAQJ	40017	United States Of A	To Be Broken Up
7114173	PUERTO RICAN	1971-10		35240	United States Of A	Total Loss
6921311	OMI CHARGER	1969-10	KMLK	38414	United States Of A	Total Loss
5014331	AMERICAN EAGLE	1959-00	WMJG	33696	United States Of A	Total Loss

## Bethlehem Steel Sparrows Point Yard

LR/IMO_S#	Name_of_Ship	Built	Callsign	Deadweight	Flag	Status
5357343	TEXACO OKLAHOMA	1958-02		35635	United States Of A	Total Loss
5392903	WORLD BOND	1957-04	5LKD	33807	Liberia	Total Loss
5287196	GLOMAR TENDER I	1956-00		0	Panama	Total Loss
5109459	EUGENIE LIVANOS	1954-06		31685	Liberia	Total Loss
5186172	KEYTRADER	1954-06		18906	United States Of A	Total Loss
5287213	CARORA	1952-01	YVFQ	7678	Venezuela	Total Loss
5240904	MONTE	1952-00	T2PL2	6558	Tuvalu	Total Loss
5310515	PISCES	1950-02	5MDY	29060	Liberia	Total Loss
6420056	CHESAPEAKE	1964-10	KNFE	50826	United States Of A	U.S. Reserve Fleet
5002170	CAPE CHALMERS	1963-03	WLCP	11473	United States Of A	U.S. Reserve Fleet
6329044	PETERSBURG	1963-03	WJDC	50706	United States Of A	U.S. Reserve Fleet

## Bethlehem Steel Sparrows Point Yard

LR/IMO_Sf	Name_of_Ship	Built	Callsign	Deadweight	Flag	Status
8641719	PHILADELPHIA	1984-03		48852	United States Of A	Broken Up
8640674	BALTIMORE	1983-02		48067	United States Of A	Broken Up
8756100	WELL SERVICES RIG 10	1982-12		0	Unknown	Broken Up
8751796	HERCULES 2000	1982-06		0	Unknown	Broken Up
7390076	KADRI	1977-11	9MEY5	266590	Malaysia	Broken Up
7390064	ALASKAN JEWEL	1977-04		266590	Panama	Broken Up
7390052	ASTRO BETA	1976-08	SZHY	264078	Greece	Broken Up
7390040	ASTRO ALPHA	1976-05		246000	Greece	Broken Up
7390038	ASTRO GAMMA	1975-10		268315	Greece	Broken Up
7366300	FAIRBANKS	1974-08	WGWB	122520	United States Of A	Broken Up
7366295	JUNEAU	1974-05	KSBG	122249	United States Of A	Broken Up
7329998	OVERSEAS JUNEAU	1973-12	WWND	122409	United States Of A	Broken Up
7320394	TT PAUL	1973-06	J8B3132	91393	St Vincent & The G	Broken Up
7318896	VENTURE 1	1973-06	ELVD8	122249	Liberia	Broken Up
7226914	CHEVRON MISSISSIPPI	1972-10	WXBR	71336	United States Of A	Broken Up
7218967	CHEVRON CALIFORNIA	1972-07	WCGN	71339	United States Of A	Broken Up
7205934	SAG RIVER	1972-05	WLDF	70215	United States Of A	Broken Up
7117149	PRUDHOE BAY	1971-12	KPFD	71873	United States Of A	Broken Up
7109013	FAVOR	1971-08	ELTN7	71589	Liberia	Broken Up
7034311	OVERSEAS ARCTIC	1971-02	KLEZ	63000	United States Of A	Broken Up
7022124	HMI ASTRACHEM	1970-09	KEOC	37702	United States Of A	Broken Up
7002071	NULAN	1970-08	J8B2898	27107	St Vincent & The G	Broken Up
7022760	GOLDEN GATE	1970-06	KIOH	63141	United States Of A	Broken Up
6913259	MANUKAI	1970-02		27107	Panama	Broken Up
7025487	OVERSEAS ALASKA	1970-00	WEHV	63000	United States Of A	Broken Up
6924595	CHAMPION	1969-10	KIGP	38482	United States Of A	Broken Up
6905276	LEADER	1969-06	KMLD	38414	United States Of A	Broken Up
6909961	OMI WABASH	1969-06	WGWC	38460	United States Of A	Broken Up
6901969	TT POWER	1969-03	WGWA	37166	United States Of A	Broken Up
6823492	VIVIAN	1969-01	KA AZ	38421	United States Of A	Broken Up
6814180	OVERSEAS VALDEZ	1968-07	WOVS	38421	United States Of A	Broken Up
6810005	OVERSEAS ALICE	1968-06	WOVL	38421	United States Of A	Broken Up
6603397	SANTA ADELA	1966-00	KNCS	13910	United States Of A	Broken Up
6523028	SANTA JUANA	1966-00	KFFJ	13915	United States Of A	Broken Up
6618213	TRINITY	1966-00	WRGL	38359	United States Of A	Broken Up
6510198	MONTANA	1965-00	J8GP5	26547	St Vincent & The G	Broken Up
5422409	PATRIOT STATE	1964-03	WHBH	9382	United States Of A	Broken Up
6404832	GEORGI	1964-00		26755	St Vincent & The G	Broken Up
6418754	KEYSTONE RHODE ISL	1964-00	WFDW	19992	United States Of A	Broken Up
6026795	BHASKAR	1963-07		14515	St Vincent & The G	Broken Up
5424691	CAPE CLEAR	1963-06	KBNC	12824	United States Of A	Broken Up
5322037	CAPE COD	1963-06	KEAY	12824	United States Of A	Broken Up
5402423	CAPE CHARLES	1963-03	WLCW	12887	United States Of A	Broken Up
5418161	MARYLAND	1963-03	KADG	26976	United States Of A	Broken Up
5357173	MASSACHUSETTS	1963-00	KAAD	19683	United States Of A	Broken Up
5312408	SANTA MAGDALENA	1963-00	KA AH	9526	United States Of A	Broken Up

## Bethlehem Steel Sparrows Point Yard

LR/IMO_Sf	Name_of_Ship	Built	Callsign	Deadweight	Flag	Status
5312460	SANTA MARIA	1963-00	KAFC	8900	United States Of A	Broken Up
5312642	SANTA MARIANA	1963-00	WSNA	9526	United States Of A	Broken Up
5225681	TANWAR	1962-11	KAXP	11684	United States Of A	Broken Up
5324803	SHIRLEY LYKES	1962-08	WJDH	14526	United States Of A	Broken Up
5052058	BRINTON LYKES	1962-06	WLAO	14515	United States Of A	Broken Up
5206960	LESLIE LYKES	1962-02	WHTU	14759	United States Of A	Broken Up
5246568	NANCY LYKES	1961-09	WCUU	14530	United States Of A	Broken Up
5238274	MINOLE	1961-08	KGSM	49534	United States Of A	Broken Up
5333660	SOLON TURMAN	1961-03	WNAJ	14759	United States Of A	Broken Up
5137949	COASTAL MANATEE	1961-00	KGXM	29525	United States Of A	Broken Up
5230234	OVERSEAS JOYCE	1961-00	WGNJ	50642	United States Of A	Broken Up
5171036	VELMA LYKES	1961-00	WLAH	14530	United States Of A	Broken Up
5137913	NEW RIVER	1960-08	KAQL	39483	United States Of A	Broken Up
5062302	CAPISTERIA	1960-07	5MDE	50885	Liberia	Broken Up
5137810	CHABLIS	1960-00	WEMS	31300	United States Of A	Broken Up
5137901	THE MONSEIGNEUR	1959-12	KAQN	39483	United States Of A	Broken Up
5213133	LOVELLIA	1959-10	5MBK	50885	Liberia	Broken Up
5137858	PRIDE II	1959-03	WJHK	30845	United States Of A	Broken Up
5357161	AYER BIRU	1959-00	ELJO3	47187	Liberia	Broken Up
5137731	MONTRACHET	1959-00	KIMH	28448	United States Of A	Broken Up
5051872	TEXACO BRIGHTON	1959-00		49321	Panama	Broken Up
5137779	SS WILLIAMS CLARK	1958-08	KAQK	39385	United States Of A	Broken Up
5392886	WORLD BANNER	1958-07	5LVC	34514	Liberia	Broken Up
5137860	AMERICAN OSPREY	1958-03	KARC	34723	United States Of A	Broken Up
5368471	TEXACO TRINIDAD	1958-00		49516	Panama	Broken Up
5357496	TEXACO WISCONSIN	1958-00	WIGK	35328	United States Of A	Broken Up
5137872	TROPIC SUN	1957-12	KLHC	35280	United States Of A	Broken Up
5003186	ADORATION	1957-01		42095	Greece	Broken Up
5166483	AMBER SEA	1957-00	V3SB7	33540	Belize	Broken Up
5073155	CHARLES	1956-12	3FYY7	39366	Panama	Broken Up
5073131	HERMITAGE	1956-07	KEHO	35337	United States Of A	Broken Up
5287342	PUNTA PIEDRAS	1956-01	LQPP	7634	Argentina	Broken Up
5073143	ST. EMILION	1956-00	WIJT	35156	United States Of A	Broken Up
5267990	BALTIMORE TRADER	1955-08	KASJ	58813	United States Of A	Broken Up
5116983	WASHINGTON	1954-12	KEMA	16451	United States Of A	Broken Up
5116957	LION OF CALIFORNIA	1954-07	KFBL	16451	United States Of A	Broken Up
5278901	AMERICAN ACCORD	1954-00	KFEZ	15452	United States Of A	Broken Up
5278913	AMERICAN ALLIANCE	1954-00	KFEM	15772	United States Of A	Broken Up
5031523	ANGELINA	1954-00	KAKL	17881	United States Of A	Broken Up
5265215	OVERSEAS EVELYN	1954-00	KFGL	30389	United States Of A	Broken Up
5265174	OVERSEAS ROSE	1954-00	KFGR	30416	United States Of A	Broken Up
5186158	KEYSTONER	1953-12	J8IU6	18720	St Vincent & The G	Broken Up
5265227	OVERSEAS ALEUTIAN	1953-11	KFGK	40477	United States Of A	Broken Up
5215739	COVE RANGER	1953-10	KIHW	29775	United States Of A	Broken Up
5186160	KEYTANKER	1953-06		19238	United States Of A	Broken Up
5267885	BIRCH COULIE	1953-02	KLDJ	27482	United States Of A	Broken Up

## Bethlehem Steel Sparrows Point Yard

LR/IMO_Sf	Name_of_Ship	Built	Callsign	Deadweight	Flag	Status
5203774	ANGEL PARK	1953-01	D7XP	53313	Korea, South	Broken Up
5278963	AMERICAN ACE	1953-00	KFCV	15452	United States Of A	Broken Up
5278937	AMERICAN LEADER	1953-00	KFEJ	15772	United States Of A	Broken Up
5233951	MICHAEL L	1953-00	ELIH	18584	Liberia	Broken Up
5137896	STOLT MERRICK	1952-08		18299	Panama	Broken Up
5125245	GAGE LUND	1952-02		30156	Liberia	Broken Up
5312472	INTREPID	1952-00	WIAE	18508	United States Of A	Broken Up
5174698	JOHNSTOWN	1952-00	WE2311	23525	United States Of A	Broken Up
5297969	ROBERT WATT MILLER	1951-04		30640	Liberia	Broken Up
5272098	PAUL PIGOTT	1951-02		30640	Liberia	Broken Up
5287304	COMPASS DRILLER	1951-00		0	Panama	Broken Up
5028708	ATHOLL MCBEAN	1950-10		30640	Liberia	Broken Up
6069838	CHEVRON TRANSPORT	1950-06		0	Liberia	Broken Up
5263164	OLYMPIC THUNDER	1950-05	5LRL	42229	Liberia	Broken Up
5262976	SAGITTARIUS	1950-03		30486	Liberia	Broken Up
5338335	UNION DEFENDER	1950-02	6ZQM	26407	Liberia	Broken Up
5000330	A. N. KEMP	1950-00		30640	Liberia	Broken Up
5287160	GLOMAR TENDER III	1950-00	HO3346	0	Panama	Broken Up
8835217	STATE OF MAINE	1990-09	WCAH	0	United States Of A	In Service/Commission
8834407	GOLDEN BEAR	1989-03	NMRY	6974	United States Of A	In Service/Commission
8750962	HERCULES 214	1982-01	A8ZH4	0	Liberia	In Service/Commission
8755455	HERCULES 204	1981-05		0	United States Of A	In Service/Commission
8750015	ABAN II	1981-00	HO2471	0	Panama	In Service/Commission
7617905	HORIZON ENTERPRISE	1980-07	KRGB	31423	United States Of A	In Service/Commission
7617890	HORIZON PACIFIC	1979-12	WSRL	31213	United States Of A	In Service/Commission
7366312	HORIZON PRODUCER	1974-04	WJBJ	25651	United States Of A	In Service/Commission
7739856	MCFARLAND	1966-00	AEGB	9754	United States Of A	In Service/Commission
5102865	MICHIPICOTEN	1952-06	CFG8060	23491	Canada	In Service/Commission
8754334	HERCULES 2002	1982-04		0	Unknown	Laid-Up
7224306	HORIZON CONSUMER	1973-11	WCHF	25651	United States Of A	Laid-Up
8639259	NEW JERSEY	1995-06		5300	United States Of A	No Longer Meets IHSF Criteria
8639065	NEW YORK	1986-06		4600	United States Of A	No Longer Meets IHSF Criteria
8639053	COLUMBIA HOUSTON	1986-02		6800	United States Of A	No Longer Meets IHSF Criteria
8641472	MOBILE	1984-04		47247	United States Of A	No Longer Meets IHSF Criteria
8641496	NEW YORK	1982-11	WVDG	48067	United States Of A	No Longer Meets IHSF Criteria
8750297	BARUNA I	1970-01	YDNB	3908	Indonesia	No Longer Meets IHSF Criteria
8888678	MARABELLA	1968-00		0	Trinidad & Tobago	No Longer Meets IHSF Criteria
8765577	SEA STORAGE	1953-01	5LZZ	0	Liberia	No Longer Meets IHSF Criteria
5336351	LEWIS J KUBER	1952-00	WE5197	22353	United States Of A	No Longer Meets IHSF Criteria
8641123	GROTON	1982-02		48067	Unknown	To Be Broken Up
8641290	JACKSONVILLE	1982-01		48067	Unknown	To Be Broken Up
6817883	MISSION BUENAVENTI	1968-10	WNGI	38851	United States Of A	To Be Broken Up
5137767	CAPTAIN H. A. DOWNI	1957-10	KAQJ	40017	United States Of A	To Be Broken Up
7114173	PUERTO RICAN	1971-10		35240	United States Of A	Total Loss
6921311	OMI CHARGER	1969-10	KMLK	38414	United States Of A	Total Loss
5014331	AMERICAN EAGLE	1959-00	WMJG	33696	United States Of A	Total Loss

## Bethlehem Steel Sparrows Point Yard

LR/IMO_S#	Name_of_Ship	Built	Callsign	Deadweight	Flag	Status
5357343	TEXACO OKLAHOMA	1958-02		35635	United States Of A	Total Loss
5392903	WORLD BOND	1957-04	5LKD	33807	Liberia	Total Loss
5287196	GLOMAR TENDER I	1956-00		0	Panama	Total Loss
5109459	EUGENIE LIVANOS	1954-06		31685	Liberia	Total Loss
5186172	KEYTRADER	1954-06		18906	United States Of A	Total Loss
5287213	CARORA	1952-01	YVFQ	7678	Venezuela	Total Loss
5240904	MONTE	1952-00	T2PL2	6558	Tuvalu	Total Loss
5310515	PISCES	1950-02	5MDY	29060	Liberia	Total Loss
6420056	CHESAPEAKE	1964-10	KNFE	50826	United States Of A	U.S. Reserve Fleet
5002170	CAPE CHALMERS	1963-03	WLCP	11473	United States Of A	U.S. Reserve Fleet
6329044	PETERSBURG	1963-03	WJDC	50706	United States Of A	U.S. Reserve Fleet

## Bethlehem Steel - Beaumont Yard

LR/IMO_S#	Name_of_Ship	Built	Deadwe Flag	Status
8754437	RANGER VII	1982-03	51 Vanuatu	Broken Up
8754310	RANGER V	1981-11	0 United States C	Broken Up
8754322	RANGER VI	1981-09	0 United States C	Broken Up
8752465	HERCULES 2005	1981-02	0 Unknown	Broken Up
8752831	HERCULES 800	1978-12	1625 Unknown	Broken Up
8754293	ENGICON PRODUCER I	1974-12	0 Unknown	Broken Up
8750558	ODIN NEPTUNE	1974-12	12775 Unknown	Broken Up
8755443	WEST THETA	1973-08	0 Panama	Broken Up
8756203	NOBLE RIG 59	1967-06	0 United States C	Broken Up
8763816	TIM MCCONN	1964-06	0 Unknown	Broken Up
8752673	MR. GUS II	1957-00	0 United States C	Broken Up
8755895	OCEAN ZEPHYR II	1974-07	0 Panama	Continued Existence In Doubt
8753029	AUNTIE JULIE THE MATRIAL	1969-11	0 United States C	Continued Existence In Doubt
6817833	TRINTOC MARABELLA	1968-06	3678 Unknown	Continued Existence In Doubt
8755493	INDIA	1967-00	0 Nigeria	Continued Existence In Doubt
8750027	BO HAI ZI LI HAO	1979-06	0 China, People's	Converting/Rebuilding
8751954	HERCULES 265	1982-11	0 United States C	In Service/Commission
8755546	HERCULES 253	1982-10	1307 Liberia	In Service/Commission
8750778	HERCULES 263	1982-07	0 Liberia	In Service/Commission
8751198	HERCULES 212	1982-03	0 Liberia	In Service/Commission
8752908	HERCULES 202	1981-12	0 United States C	In Service/Commission
8756514	WELL SERVICES RIG 110	1981-03	0 Liberia	In Service/Commission
8754695	GRIJALVA	1980-07	0 Mexico	In Service/Commission
8751904	HERCULES 208	1980-06	0 Unknown	In Service/Commission
8752348	MARC LORENCEAU	1980-03	0 Nigeria	In Service/Commission
8756526	HERCULES 200	1979-06	0 Liberia	In Service/Commission
8755390	HERCULES 205	1979-01	0 Liberia	In Service/Commission
8751887	MALEO PRODUCER	1979-01	0 Indonesia	In Service/Commission
8755522	HERCULES 251	1978-04	0 Liberia	In Service/Commission
8751849	SPARTAN RIG 208	1977-10	0 Panama	In Service/Commission
8754994	HERCULES 254	1976-06	0 Liberia	In Service/Commission
8752556	OCEAN AMBASSADOR	1975-11	0 Marshall Island	In Service/Commission
8751837	HERCULES 256	1975-08	0 Liberia	In Service/Commission
8755613	SONGA VENUS	1975-06	0 Marshall Island	In Service/Commission
8751825	SPARTAN RIG 303	1974-10	0 United States C	In Service/Commission
8756215	HERCULES 300	1974-05	0 Liberia	In Service/Commission
8753378	ATLANTIC ZEPHYR	1973-05	0 Panama	In Service/Commission
8753237	TCHATAMBA-A	1971-12	0 Bahamas	In Service/Commission
8752295	SORAYA	1970-07	0 Unknown	In Service/Commission
7016620	VERNA TRADER	1970-03	3678 Panama	In Service/Commission
8751813	SPARTAN RIG 202	1970-01	0 United States C	In Service/Commission
6701462	NORTHERN EAGLE	1967-01	2690 United States C	In Service/Commission
8752532	VEER PREM	1966-07	0 Panama	In Service/Commission
8751942	HERCULES 2003	1981-10	0 United States C	Laid-Up
8751930	HERCULES 2502	1981-08	0 United States C	Laid-Up
8752893	HERCULES 209	1981-07	0 Liberia	Laid-Up

## Bethlehem Steel - Beaumont Yard

LR/IMO_S#	Name_of_Ship	Built	Deadwe	Flag	Status
8750003	HERCULES 207	1981-06	1254	Liberia	Laid-Up
8756502	WELL SERVICES RIG 152	1980-12	1193	Liberia	Laid-Up
8750572	HERCULES 153	1980-11	1244	Liberia	Laid-Up
8751916	NABORS RIG 659	1980-08	0	Marshall Island	Laid-Up
8751899	HERCULES 211	1980-02	0	United States C	Laid-Up
8755405	HERCULES 206	1980-00	0	Liberia	Laid-Up
8755534	HERCULES 252	1978-10	0	Liberia	Laid-Up
8751851	OCEAN LEGEND	1976-11	0	Vanuatu	Laid-Up
8756318	J. W. MCLEAN	1974-06	0	Marshall Island	Laid-Up
8759164	SEA MAMMOTH	1967-08	0	Bahrain	Laid-Up
8637249	MAUNA KEA	1988-07	6837	United States C	No Longer Meets IHSF Criteria
8641654	OSG 252	1972-01	30933	United States C	No Longer Meets IHSF Criteria
8641408	OSG 244	1971-05	29042	United States C	No Longer Meets IHSF Criteria
8641599	OSG 254	1970-12	30741	United States C	No Longer Meets IHSF Criteria
8637500	MARYLAND	1970-07	0	United States C	No Longer Meets IHSF Criteria
8753287	OCEAN STAR	1969-09	0	Bahamas	No Longer Meets IHSF Criteria
6815586	CHEPO	1968-05	3678	Panama	No Longer Meets IHSF Criteria
8758720	THE BIG DIGGER	1967-06	0	United States C	No Longer Meets IHSF Criteria
8646953	ENERGY 6504	1958-12	7781	United States C	No Longer Meets IHSF Criteria
8756837	DB-99	1956-03	0	Unknown	No Longer Meets IHSF Criteria
8751679	HERCULES 101	1980-04	0	United States C	To Be Broken Up
8751708	PRIDE WYOMING	1976-03	0	Panama	Total Loss
8766959	J. STORM II	1971-10	0	United States C	Total Loss
7216218	PARI PASSU	1954-11	0	United States C	Total Loss