



U.S. Environmental Protection Agency

This document is one section from the Response to Public Comments Document regarding the “Draft National Guidance: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs,” published in August 2004. You can find the Response to Comments document in its entirety at <http://www.epa.gov/owow/oceans/habitat/artificialreefs/index.html>.

**Response to Public Comments Regarding the
“Draft National Guidance: Best Management
Practices for Preparing Vessels Intended to Create
Artificial Reefs”**

**Responses to Comment #s
EPA-HQ-OW-2004-0003-0026 (Continued)
To
EPA-HQ-OW-2004-0003-0027**

May 2006

**Response to Public Comments regarding the
Draft National Guidance: Best Management Practices for Preparing
Vessels Intended to Create Artificial Reefs
69 Fed. Reg. 46141 (August 2, 2004)**

Docket ID: EPA-HQ-OW-2004-0003. “Draft National Guidance: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs.” 69 Fed. Reg. 46141 (August 2, 2004).

Public Comment

Docket Document ID: EPA-HQ-OW-2004-0003-0026

Author Date: October 1, 2004

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Basel Action Network

Comment # O-I-59:

Stockholm Convention

The Stockholm Convention, which entered into force May 17, 2004, is a global treaty to protect human health and the environment from persistent organic pollutants (POPs). POPs are chemicals that remain intact in the environment for long periods, become widely distributed geographically, accumulate in the fatty tissue of living organisms and are toxic to humans and wildlife. POPs migrate globally and can cause damage wherever they travel. PCBs are POPs, and are in fact one type of several POPs slated for global elimination under the Stockholm Convention.¹⁹ The United States has not ratified the Stockholm Convention yet, but has signed it and indicated every intention of ratifying it.

Response to Comment # O-I-59:

The U.S. is a signatory to the Stockholm Convention, but has not yet ratified the treaty. For further discussion, see *Response to Comment #s O-I-57, O-I-60, and P-8*. The comment appears to be merely an assertion of the commenter’s own opinion rather than a comment on the draft BMP guidance. For this reason, no response is necessary.

Comment # O-I-60:

The Stockholm Convention among other things defines how the international community must manage POPs wastes. Article 6 (d) of the Stockholm Convention provides that each Party must:

Take appropriate measures so that such wastes, including products and articles upon becoming wastes, are:

X X X

1. *Disposed of in such a way that the persistent organic pollutant content is destroyed or irreversibly transformed so that they do not exhibit the characteristics of persistent organic pollutants or otherwise disposed of in an*

¹⁷ See at http://www.basel.int/techmatters/popguid_may2004_wcc.pdf.

¹⁸ Annex VIII, entry A3180, Basel Convention.

¹⁹ Annex A, Stockholm Convention on Persistent Organic Pollutants.

environmentally sound manner when destruction or irreversible transformation does not represent the environmentally preferable option or the persistent organic pollutant content is low, taking into account international rules, standards, and guidelines, including those that maybe developed pursuant to paragraph 2, and relevant global and regional regimes governing the management of hazardous wastes;

The Stockholm Convention is unequivocal in its mandate that POPs content of substances, such as PCBs, must be destroyed or irreversibly transformed, or if the POPs content is low or destruction or irreversible transformation is not an environmentally sound option to undertake environmentally sound management options for the POPs wastes.

Response to Comment # O-I-60:

EPA has decided not to make any changes to the BMP guidance document in response to BAN's comments regarding the Stockholm Convention. The BMP guidance document references the TSCA regulatory requirements for PCBs. This is a stringent set of requirements that, as applied to reefing, would require removal of liquid PCBs, removal and proper disposal of materials containing PCBs regulated for disposal, and materials containing PCBs as a result of spills. However, as the BMP guidance recognizes, PCBs other than liquids may be difficult to locate and remove. The BMP guidance refers to the provisions in EPA's TSCA regulations allowing for case-by-case disposal permits to dispose of PCB bulk product waste and PCB remediation waste (materials containing PCBs as a result of spills). Such permits would be based on EPA's finding that the disposal would not pose an unreasonable risk of injury to human health or the environment. 40 CFR 761.62(c) and 761.61(c).

Although, as the commenter points out, guidance under the Basel Convention does not include ocean placement in its examples of environmentally sound disposal, the BMP guidance is not intended to be a comprehensive listing of all acceptable approaches.

Contrary to the commenter's assertion, the Stockholm Convention does not require removal of "all PCBs" from a vessel prior to reefing. While there may be complex issues regarding the extent of PCB removal in individual reefing projects, EPA would consider those issues in the context of individual approval decisions under TSCA. EPA believes that TSCA approval processes are adequate to effectuate any relevant U.S. obligations

under the Stockholm Convention and therefore does not believe that additional discussion of the Convention would be necessary or useful to the regulated community in the BMP guidance document.

Comment # O-I-61:

The Basel Convention as noted above has been tasked to work with the Stockholm Convention to determine the various environmentally sound options that can satisfy the mandate of the Stockholm Convention. And as previously highlighted, disposal at sea is *not* enumerated as an environmental option for dealing with PCBs nor does it meet the mandate of Article 6.

Response to Comment # O-I-61:

While guidelines developed under the Basel Convention are sometimes relevant to the environmentally sound management of waste wherever it may be, no guidelines have been issued that address the reefing of ships.

Any PCB disposal approved under TSCA would be based on a risk assessment, and EPA will not approve disposal that is not environmentally sound. Although, as the commenter points out, guidance under the Basel Convention does not include ocean placement in its examples of environmentally sound disposal, the BMP guidance is not intended to be a comprehensive listing of all acceptable approaches. For further discussion, see *Response to Comment # O-I-60*.

Comment # O-I-62:

The United States is a signatory to the Stockholm Convention, and is bound to respect and not undermine the Convention's provisions. Based on its international obligations, it is imperative for the United States to reconcile the Reefing Guidance with the requirements of the Stockholm Convention on the disposal of POPs, particularly PCBs in the vessels destined for reefing. The clearest way for the United States to accomplish this is by incorporating into the present draft of the Reefing Guidance a discussion of the legal requirements of the Stockholm Convention and elaborate the procedures for the *removal of all PCBs* on board the vessels prior to reefing. Such removed PCBs should then be subject to destruction technologies.

Response to Comment # O-I-62:

EPA has decided not to make changes to the BMP guidance in response to BAN's comments regarding the incorporation of a discussion pertaining to the legal requirements of the Stockholm Convention. EPA believes that TSCA approval processes are adequate to effectuate any relevant U.S. obligations under the Stockholm Convention and therefore does not believe that additional discussion of the Convention would be necessary or useful to the regulated community in the BMP guidance document. For further discussion, see *Response to Comment # O-I-60*.

London Convention and the 1996 Protocol

Comment # O-I-63:

The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter²⁰, otherwise known as the London Convention, entered into force in August 30, 1975. The United States *is* a party to this Convention.

The London Convention covers the deliberate disposal at sea of wastes or other matter from vessels, aircraft, and platforms. It controls and prevents marine pollution through several means: by prohibiting the dumping of certain hazardous materials; requiring special permits for the dumping of a number of other identified materials; and requiring a general permit for the sea dumping of other wastes or matter.

The disposal or dumping of vessels and platforms or other man-made structures at sea is generally prohibited under the London Convention.²¹ An exception to this prohibition is

²⁰ See at http://www.imo.org/Conventions/contents.asp?topic_id=258&doc_id=681#7. [hereinafter London Convention].

²¹ Art. 4 and Annex 1, London Convention.

13

when materials “capable of creating floating debris or otherwise contributing to pollution of the marine environment has been removed to the maximum extent”.²²

Parties to the Convention are urged to take appropriate measures within their territory to prevent and punish conduct in contravention of the provisions of this Convention,²³ and to “ensure by the adoption of appropriate measures that such vessels and aircraft owned or operated by it act in a manner consistent with the object and purpose of this Convention”.²⁴

Response to Comment # O-I-63:

The London Convention (LC) regulates “dumping,” which is a term of art specifically defined in LC Article III. Under the LC, the placement of vessels to create artificial reefs would not constitute dumping unless contrary to the aims of the LC. This is because Article III (1)(b)(ii) of the LC specifically provides that dumping does **not** include:

“placement of matter for a purpose other than the mere disposal thereof, provided that such placement is not contrary to the aims of this Convention.”

Creation of artificial reefs can fall within this exclusion, and it is the responsibility of the Party to determine if such placement would be contrary to the aims of the LC (see Report of 13th Consultative Meeting of Parties to the Convention on the Prevention of Marine

Pollution by Dumping of Wastes and Other Matter, LC 13/15 at paragraph 7.5). The BMP guidance document provides environmental best management practices through clean-up performance goals that are directed at the level of cleaning and/or removing materials of concern aboard vessels. The preparation of vessels in this manner will help ensure that their use as artificial reefs is environmentally sound. The purpose of creating an artificial reef is to benefit the environment by enhancing aquatic habitat and marine resources, as well as providing an additional option for conserving, managing, and/or developing fisheries resources. The BMP guidance document describes appropriate vessel preparation that could achieve such benefits as an artificial reef and avoid negatively impacting the environment with pollutants. The clean-up performance goals provided in the BMP guidance document, if implemented and complemented with strategic reef site selection, will maximize the opportunity for these vessels to benefit the environment as artificial reefs.

Placement of vessels to create artificial reefs involves not only a purpose other than mere disposal, but also clean-up and siting practices to safeguard the environment and enhance environmental benefits associated with reef creation. Thus, use of vessels to create artificial reefs following application of the BMP guidance document would be well within the dumping exception set forth in Article III (1)(b)(ii) of the LC. In addition, the LC is implemented in the U.S. through Title I of the MPRSA. The placement of artificial reefs falls within certain specific exceptions in that legislation, as explained further below in the *Response to Comment # O-I-67*.

Moreover, contrary to the comment, even outright “dumping” of vessels is not “generally prohibited” by the London Convention (LC). In particular, Annex I, paragraph 11(d) of the LC expressly contemplates the issuance of permits for vessel “dumping” and the Parties to the LC have developed waste assessment guidelines for that purpose. *Waste-Specific Guidelines For Vessels Proposed For Disposal At Sea* (available on-line at: <http://www.londonconvention.org/>). Those LC vessel disposal guidelines make clear that the language from LC Annex I paragraph 11(d) quoted in the comment (referring to removal of material capable of causing pollution to the marine environment “to the maximum extent”) is subject to practical considerations (see LC vessel dumping guidelines at paragraph 5.2: “**Within technical and economic feasibility** and taking into consideration the safety of workers, to the maximum extent, (1) vessels shall be cleaned of potential sources of pollution . . .” (emphasis added)).

The narrative clean-up performance goal for PCBs, as provided in the draft BMP guidance document, is directed at the removal of all solid material containing PCBs \geq 50 ppm unless a disposal permit has been granted under 40 CFR 761.62(c), as well as the removal of all liquid PCBs, which goes beyond paragraph 4.7 which merely states: “Removal of equipment containing liquid PCBs should be a priority.” It should be noted that the PCB narrative goal as presented in the final BMP guidance document has been revised and will read as follows:

“Remove all manufactured products containing greater than or equal to (\geq) 50 parts per million (ppm) of solid PCBs; remove all liquid PCBs regardless of

concentration; remove all materials contaminated by PCB spills where the concentration of the original PCB is ≥ 50 ppm.”

Comment # O-I-64:

In addition to its outstanding obligations under the London Convention, it is worth considering the United States’ further obligations under the London Convention’s 1996 Protocol.²⁵

The 1996 Protocol will supersede the Convention once the 1996 Protocol enters into force, and with this change, more stringent obligations are forthcoming. Although the 1996 Protocol provides a narrow possibility for the dumping of vessels, similar to the original London Convention, one of the most important provisions that impact the Reefing Guidance is that in the course of considering the dumping of vessels in the ocean, Contracting Parties must be mindful of the objectives of the Protocol and the General Obligations.

The objective of the 1996 Protocol is as follows:

Contracting Parties shall individually and collectively protect and preserve the marine environment from all sources of pollution and take effective measures, according to their scientific, technical and economic capabilities, *to prevent, reduce and where practicable eliminate pollution* caused by dumping or incineration at sea of wastes or other matter. Where appropriate, they shall harmonize their policies in this regard.²⁶ (Emphasis supplied)

The thrusts of the objectives are three-fold, prevent, reduce, and eliminate. These are the standards that should be brought to bear in the Reefing Guidance.

Response to Comment # O-I-64:

While the U.S. is a Party to the LC, the U.S. is not yet a party to the 96 Protocol. Thus, the U.S. is not legally bound by the various provisions of the 96 Protocol referred to by the commenter in this and subsequent comments. The U.S. is a signatory to the 96 Protocol, however, and as such, may not act so as to defeat the object and purposes of the Protocol.

In considering that issue, it is important to note that the 96 Protocol contains the same exclusion from “dumping” discussed in *Response to Comment # O-I-63* above (See 96 Protocol Article 1 (4.2.2)). In addition, the *Waste-Specific Guidelines For Vessels Proposed For Disposal At Sea* discussed in *Response to Comment # O-I-63* are intended to be consistent with either the LC 72 or the 96 Protocol (see paragraph 1.1 of those guidelines). Thus, for the reasons given in *Response to Comment # O-I-63*, creation of artificial reefs using vessels prepared under the BMP guidance document would not be “dumping” under the Protocol, nor would such artificial reef creation be inconsistent with the Protocol. It certainly would not defeat the Protocol’s object and purposes.

With respect to the commenter’s concerns regarding the 96 Protocol’s “prevent, reduce, eliminate” objectives, that provision applies specifically to dumping or incineration at sea, neither of which is involved in creation of artificial reefs. Additionally, it relates to

“pollution” -- itself a term of art defined in the 96 Protocol as the introduction of wastes or other matter “which results or is likely to result in” deleterious effects. 96 Protocol Article 1(10). There are a wide variety of domestic laws that protect our ocean and coastal waters, many of them tailored to address specific types of activities or materials. The creation of artificial reefs is regulated under a number of separate statutes, including the National Fishing Enhancement Act, section 10 of the Rivers and Harbors Act, section 404 of the CWA, and TSCA. Activities permitted under those statutes must comply with the requirements of the Coastal Zone Management Act, when applicable. Moreover, the vessels of the Navy to be used as artificial reefs must be prepared according to the BMP guidance document developed pursuant to the National Defense Authorization Acts for Fiscal Years 2003 and 2004. The clean-up practices identified in the BMPs, coupled with applicable domestic regulatory regimes such as those just presented and discussed elsewhere in this response to comment document, are intended to avoid deleterious effects or the likelihood of such effects.

We also wish to note that the commenter’s assertion that the 96 Protocol will “supersede” the LC upon the Protocol’s entry into force is not accurate. Such supersession would only occur as between Contracting Parties to both the LC and the 96 Protocol. See, 96 Protocol, Article 23.

Comment # O-I-65:

Supporting the objectives are the general obligations established in Article 3 of the Protocol. One of the important Party obligations is to take the *precautionary approach* whereby “appropriate preventative measures are taken when there is reason to believe that wastes or other matter introduced into the marine environment are likely to cause harm even when there is no conclusive evidence to prove a causal relation between inputs and their effects.”²⁷

Given what we have learned above about the fact that no reliable data exists to date with respect to transport and fate of PCBs in the marine environment from PCB in solid matrix materials found on board of obsolete vessels, it is clear that the precautionary approach applies in this instance.

Response to Comment # O-I-65:

The provisions regarding a “precautionary approach” appear in 96 Protocol Article 3(1), which applies to contracting parties “in implementing this Protocol.” The BMP guidance document is consistent with the 96 Protocol and U.S. obligations related to the Protocol, as explained in *Response to Comment # O-I-64* and elsewhere in this response to comments document. In addition, the precautionary approach referred to in this comment calls for “appropriate preventive measures” when there is reason to believe the introduction of matter is “likely” to cause harm. For the reasons noted in the *Response to Comment # O-I-64*, as well as *Response to Comment #s D-2, F-2, O-I-4, O-I-5, O-I-29* and elsewhere, placement of vessels to create artificial reefs following use of the BMP guidance document clean-up performance goals and the regulations under applicable domestic law is not “likely” to cause harm, and the BMP guidance document in any event contains appropriate

preventive measures in the form of guidance on removal of even potentially harmful material.

²² Annex 1, Section 11(d), London Convention.

²³ Art. VII (2), London Convention.

²⁴ Art. VII (4), London Convention.

²⁵ 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, *see* at http://www.imo.org/Conventions/contents.asp?topic_id=258&doc_id=681#7. [hereinafter 1996 Protocol].

²⁶ Art. II, 1996 Protocol.

²⁷ Art. III (1), 1996 Protocol.

Comment # O-I-66:

Further, the 1996 Protocol places responsibilities on polluters when it states that "the polluter should, in principle, bear the cost of pollution"²⁸ and it emphasizes that Contracting Parties should ensure that the Protocol should not simply result in pollution being transferred from one part of the environment to another.²⁹

Response to Comment # O-I-66:

The "polluter should pay" approach to which this comment refers appears in 96 Protocol Article 3(2), which provides a Party should "endeavor to promote practices" whereby those it authorizes to engage in "dumping" bear the cost of meeting pollution prevention and control requirements for the authorized activity. The BMP guidance document is consistent with the 96 Protocol and U.S. obligations related to the Protocol, as explained in *Response to Comment # O-I-64* and elsewhere in this response to comments document. In any event, the cost of vessel clean-up and placement already are in fact born by the Navy (in the case of decommissioned naval vessels) or the project sponsor placing the artificial reef (in the case of other obsolete vessels).

With regard to transfer of pollution from one part of the environment to another, the relevant 96 Protocol provision, which appears in Article 3(3), states that in implementing the Protocol, Parties shall act so as not to "transfer directly or indirectly damage or likelihood of damage from one part of the environment to another or transform one type of pollution into another." For the reasons given in *Response to Comment # O-I-64* and elsewhere in this response to comments document, we do not believe placement of vessels using the clean-up practices and site selection recommendations of the BMP guidance document would be inconsistent with the 96 Protocol.

Comment # O-I-67:

The London Convention and its 1996 Protocol, as international laws, are implemented in the United States through Title I of the Marine Protection, Research and Sanctuaries Act (MPRSA), which mandates that the EPA apply binding requirements of the London Convention to the extent

that this would not relax the MPRSA.³⁰ Notably, the MPRSA is not mentioned in the Reefing Guidance as one of several US legislations that may apply to vessel-reefing projects.

Response to Comment # O-I-67:

The 96 Protocol is not implemented by the MPRSA. The MPRSA does not currently address the 96 Protocol (see also *Response to Comment # O-I-64*).

The LC is implemented in the U.S. through Title I of the MPRSA. Specifically, the MPRSA addresses “dumping” as defined in Section 3(f), 33 U.S.C. § 1402(f), of the Act, and directs EPA in establishing or revising the ocean dumping criteria to “apply the standards and criteria binding upon the United States” under the LC, to the extent this would not result in relaxation of MPRSA requirements. 33 U.S.C. § 1412(a). The ocean dumping criteria issued by EPA fulfill this MPRSA requirement. 40 C.F.R. 220.1(b).

With regard to LC implementation and the MPRSA, as explained in *Response to Comment # O-I-63* and elsewhere, placement of artificial reefs using the clean-up performance goals and site selection recommendations presented in the draft BMP guidance document is not “dumping” subject to the LC or MPRSA. MPRSA regulates the transportation of material from the United States for the purpose of disposing it into ocean waters. “Dumping,” however, does not include the placement of structures or devices in the ocean for a purpose other than disposal (e.g., for fisheries enhancement, aids to navigation, or scientific research) provided that such placement is otherwise regulated by federal or State law or occurs pursuant to an authorized federal or state program.

The LC regulates “dumping,” which is a term of art specifically defined in LC Article III. Under the LC, the placement of vessels to create artificial reefs would not constitute dumping unless contrary to the aims of the LC. This is because Article III (1)(b)(ii) of the LC specifically provides that dumping does not include:

“placement of matter for a purpose other than the mere disposal thereof, provided that such placements is not contrary to the aims of this Convention.”

Creation of artificial reefs can fall within this exclusion, and it is the responsibility of the Party to determine if such placement would be contrary to the aims of the LC (see Report of 13th Consultative Meeting of Parties to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, LC 13/15 at paragraph 7.5).

Placement of vessels to create artificial reefs involves not only a purpose other than mere disposal, but also clean-up and siting practices to safeguard the environment and enhance environmental benefits associated with reef creation. Thus, use of vessels to create artificial reefs is not contrary to the aims of the LC, and would be well within the dumping exception set forth in Article III (1)(b)(ii) of the LC. In addition, the LC is implemented in the U.S. through Title I of the MPRSA and the placement of artificial reefs falls within certain specific exceptions in that legislation.

While the U.S. is a party to the LC, the U.S. is not yet a party to the 96 Protocol. Thus, the U.S. is not legally bound by the various provisions of the 96 Protocol.

In considering this issue, it is important to note that the 96 Protocol contains the same exclusion from “dumping” previously discussed above in regard to the London Convention. Thus, for the reasons stated above, creation of artificial reefs using vessels would not be “dumping” under the Protocol, nor would such artificial reef creation defeat the object and purposes of the 96 Protocol.

Comment # O-I-68:

Given the foregoing facts, we urge that the MPRSA be considered and included, and that US EPA and the US Maritime Administration revisit the Reefing Guidance and consider the implications of the United States’ obligations under the London Convention and its 1996 Protocol.

Response to Comment # O-I-68:

Matters related to the MPRSA, LC, and 96 Protocol have been addressed in the *Response to Comment #s O-I-63* through 67, and for the reasons given therein, we do not believe that a revisiting of the BMPs, as suggested, is warranted.

Comment # O-I-69:

Most immediately the EPA needs to study the legal implications of the term found in the London Convention “maximum extent” with respect to removal of hazardous materials. By any fair interpretation such strong language implies “to the extent possible”.

Thus EPA’s allowance of PCBs or any other toxic substance that *can* be removed prior to ocean disposal is insupportable even under the original London Convention to which the USA is a party. An explanation by the government must be provided as to why they fail to assert that *all* hazardous substances must be removed and risk based approaches to ocean disposal in our precious marine environment are in fact unsupportable.

Response to Comment # O-I-69:

The legal implications, LC interpretative guidance related to the “maximum extent” language (which applies in the context of ocean dumping of vessels), and the relationship of the LC to artificial reefing have already been addressed in *Response to Comment # O-I-63* above. Moreover, the commenter’s request that “*all*” hazardous substances be removed goes beyond both the text of the LC and the LC vessel dumping guidance issued thereunder. With regard to “risk-based approaches,” see *Response to Comment # O-I-72* below.

Comment # O-I-70:

Given the above information, regarding international law, MARAD and EPA’s proposed guidance allowing ocean disposal of PCB waste both below and above 50ppm, not only stands to violate the objective laid out in Sect. 3516 of the NDRA requesting the EPA to “recommend practices for the preparation of vessels for use as artificial reefs to ensure that vessels so prepared will be environmentally sound in their use as artificial reefs”, but stands to violate international law as well.

Response to Comment # O-I-70:

Regarding the comment on international law, refer to responses to comments above, in particular *Response to Comment #s O-I-53, O-I-55, O-I-57, O-I-60, O-I-63, O-I-64, and O-I-67*. In addition, the assertion that the BMP guidance would “allow ocean disposal” is fundamentally incorrect; the BMP guidance document provides technical guidance on clean-up and siting practices for artificial reefs and does not in any way authorize placement of vessels. For further discussion, see *General Response # O-I-0 To Basel Action Network Comments* and *Response to Comment # O-I-67*.

V. Conclusion

Comment # O-I-71:

As we have noted above, the practice of disposing of ships through the avenue of ocean disposal, even by claiming an “alternative use”, is not the most appropriate waste management practice available to the United States. Such dumping is in fact a form of disposal.

Response to Comment # O-I-71:

With regard to the comment pertaining to placement of vessels as reefs being ocean disposal, please refer to responses to comments above, in particular *Response to Comment #s O-I-1, O-I-5, O-I-11, O-I-15, O-I-17, O-I-18, and O-I-20*.

Comment # O-I-72:

Further, the Reefing Guidance fails to adequately protect the marine environment from hazardous substances and in particular one of the most infamous persistent organic pollutants - PCBs. The notion that PCBs (all of which are liquid in normal temperatures) in a solid or liquid matrix have

²⁸ Art. III (2), 1996 Protocol.

²⁹ Art. III (3), 1996 Protocol.

³⁰ Section 102 (a), Marine Protection, Research and Sanctuaries Act, 33 USC § 1401 et seq.

widely different environmental impacts is not supported by science, particularly when that science is appropriately guided by the precautionary principle. PCBs and their known endocrine disruptive

effects are active at extremely low levels. This fact combined with the risk of releasing PCBs in the marine environment when this risk can be avoided, makes it obvious that a risk based approach for the release of PCBs is not appropriate.

Response to Comment # O-I-72:

EPA has not made the determination that there is a no unreasonable risk to health or the environment from sinking a vessel containing regulated levels of PCBs as an artificial reef.

Comment # O-I-73:

Finally, as we note, and the Reefing Guidance fails utterly to describe, the use of the marine environment to dispose of PCBs is in contravention to international laws and norms some of which are immediately binding on the United States.

Response to Comment # O-I-73:

For the reasons set out in the responses to comments given above, the BMP guidance document does not contravene international laws and norms. In addition, as noted in our *General Response # O-I-0 to Basel Action Network Comments* and *Response to Comment # O-I-67*, the BMP guidance document in no way authorizes the use of the marine environment either for disposal of PCBs or placement of artificial reefs. Such use of the marine environment can only occur after all necessary regulatory authorizations are obtained.

Comment # O-I-74:

The final conclusions and thus our recommendations that should be adopted in this Reefing Guidance are as follows:

- 1. Disposal of obsolete vessels at sea should only be undertaken if recycling and resource recovery is not possible.**
- 2. If such recycling is not possible, all hazardous substances and wastes, including PCBs in any form and at any concentration level should be removed to the extent possible prior to ocean dumping of waste vessels.**

Response to Comment # O-I-74:

Neither Congress nor EPA intended that the BMP guidance document discuss vessel disposal options. A given vessel management option is unique to that particular vessel. The BMP guidance document does not attempt to make universal suggestions as to which management option is the most or least preferred.

The BMP guidance document discusses the preparation of vessels when employing the vessel management option of artificial reefing. This guidance identifies materials or categories of materials of concern that may be found aboard vessels. For each material or category of material, the BMP guidance provides a narrative clean-up performance goal

and information on methods for achieving those goals in preparation of the vessel prior to sinking.

Comment # O-I-75:

The fate of the oceans and the creatures that live in it are intricately linked with the lives of humans. At this point in time, we all have been slow and blissfully ignorant to realize the kind of devastation our race has brought upon the oceans. Fish stocks once in abundance are depleted, aquatic habitats destroyed, certain fish types, a valuable source of protein and sustenance for millions, are increasingly deemed inedible due to the toxins they bear such as mercury and PCBs.

We cannot afford to pretend in childish naiveté that our ocean environment is a limitless playground or dumping ground for our outgrown societal toys. The Reefing Guidance developed by the US Environment Protection Agency and the Maritime Administration must take our collective responsibility to heart. Serious measures are required to arrest a drastic problem; we owe this much to the environment and to the generations after us.

Response to Comment # O-I-75:

This comment expresses the opinions of the commenter on the importance of the marine environment and its current state. EPA shares the commenter's concern about the need to protect the marine environment. EPA believes use of the BMP guidance document and adherence to the existing regulatory regimes governing the placement of artificial reefs will help ensure not only protection of the marine environment, but its enhancement by the creation of artificial reef habitat.

END

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Docket ID: EPA-HQ-OW-2004-0003. “*Draft National Guidance: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs.*” 69 Fed. Reg. 46141 (August 2, 2004).

Public Comment

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Author Date: September 30, 2004

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Comment # O-II-1:

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

9 BASEL ACTION NETWORK, a project of
10 the Tides Center,
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13 SIERRA CLUB,
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16 Plaintiffs,

17 v.

18 MARITIME ADMINISTRATION, and Capt.
19 WILLIAM G. SCHUBERT, in his official
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22 Washington, DC 20590

23 ENVIRONMENTAL PROTECTION
24 AGENCY, and MARIANNE HORINKO, in
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28

Defendants.

Case No.: 03CV02000

DECLARATION OF PETER L. deFUR,
PH.D., IN SUPPORT OF PLAINTIFF'S
REQUEST FOR TEMPORARY
RESTRAINING ORDER AND
PRELIMINARY INJUNCTION

Date: October 1, 2003

Time: 9:30AM

Courtroom: 6

The Honorable Rosemary M. Collyer

1
2 I, Peter L. deFur, Ph.D., declare as follows:

3 Qualifications

4 1. I am a nationally recognized expert on ecological risk assessment
5 pertaining to endocrine disrupting chemicals and the generation, release, and discharge of toxic
6 chemicals. I have particular knowledge of and familiarity with contamination caused by
7 polychlorinated biphenyls (PCBs).

8 2. I am President of Environmental Stewardship Concepts, an independent private
9 consultant, and serve as a technical advisor to citizen organizations and government agencies. I
10 am an Affiliate Associate Professor in the Center for Environmental Studies at Virginia
11 Commonwealth University where I conduct research on environmental health and ecological risk
12 assessment. I am President of the Association for Science in the Public Interest (ASIP) and on
13 the board of the Science and Environmental Health Network (SEHN).

14 3. I was previously a senior scientist at the Environmental Defense Fund (now ED) in
15 Washington, D.C., and held faculty positions at two universities before that. I have extensive
16 experience in risk assessment and ecological risk assessment regulations, guidance and policy. I
17 served on the NAS/NRC Board on Environmental Studies and Toxicology and on various study
18 committees, including the Risk Characterization Committee that released its report, *Understanding*
19 *Risk* in June 1996. I served on numerous scientific reviews of EPA ecological and human health
20 risk assessments, including the assessment for the WTI incinerator in Ohio, EPA's Ecological Risk
21 Assessment Guidelines and EPA's Endocrine Disruptor Screening and Testing Advisory
22 Committee.

23 4. I received B.S. and M.A. degrees in Biology from the College of William and
24 Mary, in Virginia and a Ph.D. in Biology from the University of Calgary, Alberta. I was a
25 postdoctoral fellow in neurophysiology in the Department of Medicine at the University of
26 Calgary.

27 5. I conduct research on the identification of and effects of endocrine disrupting
28 chemicals, particularly in aquatic crustaceans. I also explore the effects of low oxygen conditions

1 on aquatic animals and systems in estuaries and coastal environments. In addition, I conduct
2 research on precautionary approaches to environmental regulations and on citizen involvement in
3 environmental programs, policies, and regulations

4 6. I was appointed to BEST of the National Academy of Sciences/National Research
5 Council in 1996. I am on the Advisory Committee to the Board of the Coalition to Restore Coastal
6 Louisiana and a peer reviewer for professional journals. I have published numerous peer reviewed
7 articles, invited perspectives and review articles for the public on subjects ranging from habitat
8 quality to wetlands, toxic chemical, and risk assessment. During the past ten years, I have been
9 extensively involved in scientific research, regulation and policy concerning the generation, release
10 and discharge of dioxin and related compounds. I have published numerous papers on regulation
11 and policy aspects of these compounds, considered in many ways prototype endocrine disruptors. I
12 have been extensively involved in the EPA reassessment of dioxin since 1991. I was a technical
13 advisor to the EPA Superfund Ombudsman office and am presently technical advisor for the Port
14 Angeles clean-up of the Rayonier mill site, for the cleanup of PCB's in the Housatonic River in MA
15 and CT, for the cleanup of PCB contaminated sediment in Seattle, WA and Port Angeles, WA, and
16 to citizens groups for the Rocky Mountain Arsenal superfund site.

17 7. I serve as a technical consultant to citizen organizations that are involved in
18 cleanup actions at contaminated sites around the country.

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21 Immediate Environmental Impacts of the Defendant's Proposed Actions

22 8. In November 1998, I presented a paper entitled "Toxic Chemicals: Can What
23 We Don't Know Harm Us?" at the conference "Health of the Bay — Health of People"
24 sponsored by The Center for a Livable Future of the Johns Hopkins School of Hygiene and
25 Public Health and the Chesapeake Bay Foundation. That paper was subsequently converted to
26 an article in which I shared authorship credit with Lisa Foersom. The article was eventually
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1 published in the year 2000 in the scholarly scientific journal *Environmental Research*.¹

2 9. The article contends and I still maintain that new and existing data on
3 environmental levels of chemicals, particularly PCBs, and their effects at low concentrations
4 provide evidence that toxic chemicals may threaten both human and nonhuman health in the
5 wider Chesapeake Bay system, most notably in Virginia's James River.

7 10. An initial assessment of the distribution and concentration of toxic chemicals in the
8 Chesapeake Bay region conducted by the U.S. Environmental Protection Agency in 1983 concluded
9 that such contamination constituted a threat to resources in specific areas of the Bay, particularly in
10 the James River.² A subsequent study conducted by Helz and Hugget in 1987 resulted in similar
11 findings.³

13 11. A reexamination of the contamination problem in 1997 and 1998 by Virginia
14 scientists led to further understanding of contamination in the James River. Found in sufficiently
15 high levels to warrant concern were PCBs.⁴

17 12. PCBs are particularly important as contaminants in that they do not necessarily have
18 an immediate toxic effect at levels in the general environment, yet may cause effects in fish,
19 wildlife, or humans or in isolated places. In aquatic ecosystems, PCBs are found primarily in
20 sediments because they are highly fat-soluble and not water-soluble. Humans are exposed
21 principally, but not exclusively through the food chain by eating animals, notably fish that have
22 accumulated PCBs from the sediments. In some cases, the concentrations of PCBs are increased
23 through food chain accumulation and biomagnification as one animal eats another that already
24 contains PCBs. The exposure of humans to PCBs in the Bay system that includes the James River

26 ¹ Peter L. deFur & Lisa Foersom, *Toxic Chemicals: Can What We Don't Know Hurt Us?*, 82 ENVIRONMENTAL
RESEARCH 114 (2000).

27 ² CHESAPEAKE BAY PROGRAM OFFICE, ENVIRONMENTAL PROTECTION AGENCY, CHESAPEAKE BAY: A FRAMEWORK
FOR ACTION (1983).

28 ³ G. Helz & R.J. Hugget, *Contaminants in Chesapeake Bay: The Regional Perspective*, in CONTAMINANT PROBLEMS
AND MANAGEMENT OF LIVING CHESAPEAKE BAY RESOURCES 270-297 (S.K. Majumdar et al. eds. 1987).

1 is from two major sources: 1) from eating seafood and other aquatic animals and 2) from inhaling
2 PCBs from the atmosphere.

3 13. Among the contributors of PCBs and other contaminants to the James River are
4 industrial and municipal discharges from large ships.

5 14. Should it occur, additional contamination of the James River with PCBs from
6 National Defense Reserve Fleet vessels in transport would likely cause extensive damage to the
7 James River ecosystem and pose a substantial threat to human health.

8 15. The effects of PCB's on human health and the environment are on reproduction,
9 development of the fetus or embryo, growth and development of the brain, the function of immune
10 systems, and PCB's can cause cancer. Some PCB's act through a mechanism that combines PCB's,
11 dioxins and furans in a common pathway, so that all the dioxins, furans and PCB's exert a single
12 action.

13 16. Children are particularly sensitive to the effects of PCB's, as recently reported in a paper
14 by S. Schantz et al. (2003)⁵ in which she summarized the effects of PCB's on children by analyzing
15 a series of large investigations on the subject conducted in the US and abroad. The conclusion is
16 that early exposure to even low levels of PCB's can cause impairment of the brain and of behavior.

17 17. Fish, birds, and marine mammals are especially sensitive to the effects of PCB's. Even
18 concentrations of less than a part per billion in eggs can impair the growth of these animals, or alter
19 the normal growth of the young. This topic has been the subject of a number of scientific reviews.⁶

20 18. In my professional opinion, the likelihood of an accident will substantially increase if
21 the aged ships are transported great distances on open oceans. The consequences of an accident can
22 be reasonably expected to be contamination of fish, birds, mammals with PCB's. This
23 contamination, if it occurs in the vicinity of the Chesapeake Bay or coastal waters, may harm
24 natural populations and contaminate fisheries to the point that human health would be at risk. This

26 ⁴ G. GARMAN ET AL., FISH TISSUE ANALYSIS FOR CHLORDECONE (KEPONE) AND OTHER CONTAMINANTS IN THE JAMES
RIVER, VIRGINIA (1998).

27 ⁵ S. Schantz et al., (2003). Effects of PCB exposure on Neuropsychological function in children. *Environmental Health
Perspectives* vol 111: 357-376.

1 sequence of events would demand the closing of Bay fisheries for commercial and recreational
2 activity, as has happened on the Hudson and Housatonic Rivers from PCB contamination.

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28 ⁶ Rice, C.P., P. W. O'Keefe and T.J. Kubiak. 20023. Sources, Pathways and Effects of PCB's Dioxins and
Dibenzofurans. Pp 501- 573 In: Hoffman, D.J., B.A. Rattner, G.A. Burton and J. Cairns, Jr. Handbook of
Ecotoxicology, 2nd Ed. Lewis Pub. Boca Raton FL.

Response to Comment # O-II-1:

The attached Declaration does not provide comments on the draft BMP guidance; therefore, no response is necessary.
