

FOIA MARKER

This is not a textual record. This is used as an administrative marker by the William J. Clinton Presidential Library Staff.

Collection/Record Group: Clinton Presidential Records
Subgroup/Office of Origin: Council on Environmental Quality
Series/Staff Member: Kathleen (Katie) McGinty
Subseries:

OA/ID Number: 4299
FolderID:

Folder Title:
Water Soluble Plastics

Stack:	Row:	Section:	Shelf:	Position:
S	61	7	1	3



DEPARTMENT OF THE NAVY
OFFICE OF THE ASSISTANT SECRETARY
(Research, Development and Acquisition)
WASHINGTON, D.C. 20350-1000

11 3 AUG 1993

The Honorable Joseph I. Lieberman
United States Senate
Washington DC 20510

Dear Senator Lieberman:

Thank you for your letter to the White House's Office of Environmental Policy concerning Ms. Stephanie Thibeault's interest in water soluble plastics. I am responding for the Secretary of the Navy.

The Navy has a number of proactive initiatives regarding the control and removal of plastics in marine environments. I understand that you will be responding to Ms. Thibeault with inputs from several federal agencies. Therefore, I have prepared a draft response for you to incorporate in your final answer.

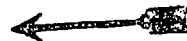
As always, if I may be of any further assistance, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, reading "Edward C. Whitman", is written over a horizontal line.

Edward C. Whitman

cc: Kathleen A. McGinty
Director, White House
Office on Environmental
Policy



Enclosure

Stephanie Thibeault
143 Hickory Street
Norwich, CT 06360

Dear Ms. Thibeault:

Your April 23rd letter to Senator Lieberman about water soluble plastic materials was forwarded to the Navy. Like many other people and organizations, the Navy shares your concern about the effects of discarded plastic on the environment and wildlife. I would like to answer some of your questions at least from the Navy's perspective.

So that you can better understand what the Navy has done, I would like to give you a little background information. Throughout the world, major nations have signed the International Convention for the Prevention of Pollution by Ships (otherwise referred to as MARPOL 73/78). The Marine Plastic Pollution Research and Control Act (MPPRCA) was enacted by the United States Congress in 1987 in order to implement Annex V of the MARPOL treaty. This law prohibits the discharge of all plastics at sea and applies to all ships, including those belonging to the Navy.

In order to comply with the law and contribute to the preservation of the environment, the Navy has implemented many plastic waste management initiatives, such as the adoption of non-plastic items and packaging materials, reduction of plastic packaging to the minimum amount necessary, and the development of shipboard waste processing equipment. For example, the Navy is committed to holding its plastic trash on board its ships so that it can be taken off and properly disposed of when the ships enter port. We have been developing a machine called a Plastics Processor, which will heat, melt, and compress all plastic waste on a ship into small blocks. These plastic blocks can be safely stored on the ship and returned to port for disposal or recycling.

In another effort, the Navy sponsors a Plastics Removal in Marine Environments (PRIME) program in order to reduce the amount of plastic material going aboard Navy ships. This is called "source reduction". Some of PRIME's initiatives come from good ideas like yours, such as:

- * Environmentally sensitive cleaning products that are concentrated and packaged in water soluble pouches offer an excellent way to clean while reducing storage and container disposal problems. When placed in warm water the pouch dissolves and provides an economical biodegradable cleaner that contains no alcohol, phosphates, ammonia or solvents.
- * One hundred percent paper hot drink cups are now stocked for use on Navy ships to reduce the use of styrofoam.

- * New biodegradable "bioscrim" wiping towels composed of 100 percent noncotton cellulose material are used as alternatives to non-soluble rags and "Kimwipes" when cleaning up nonhazardous materials.
- * Alternate bulk filler material, such as 3-ply paper -- is being used in place of bubble wrap, foam cushioning and styrofoam peanuts.

We appreciate your information on the "peanuts" of marine-degradable material. The Navy has banned the use of all styrofoam peanuts, not only because they pollute the environment, but because any type of small loose fill can damage jet (and other) engines and cause general housekeeping problems. However, as you suggest, the material itself is of interest and the Navy has previously investigated samples of these from various manufacturers. We have told manufacturers that the Navy would be interested if the material could be formed in sizes for other applications besides loose fill. For example, the Navy is interested in an Army project to develop marine degradable materials for use in food packaging.

Research into water soluble plastic is an ongoing effort. The Navy had Research Triangle Institute conduct extensive research on degradable plastics from 1988 to 1992. Many technologies were reviewed and it was decided that blending natural readily-available polymers (such as corn starch, cotton, or cellulose) with a thermoplastic (such as polyethylene or polypropylene) would be the most cost-effective means to enhance the biodegradability of plastic. This research recognized the need to maintain the desirable properties of regular plastic (especially strength, resistance to tears and punctures, and flexibility), while achieving rapid degradation in the marine environment. In addition to these requirements for any new plastics, industry must be able to make these plastics without having to set up new expensive manufacturing capabilities.

Unfortunately, none of the commercially-available or specially-fabricated materials we examined currently meet the Navy's criteria for strength, flexibility, degradation time, cost, legal acceptability, and manufacturability. The most promising material looked at (although it still presented some significant problems) was regenerated cellulose, but it was found that it was also considered to be "plastic" under the terms of the law. The challenge is to develop materials which are as strong and protective as plastic, but are environmentally safe as well. The Navy is extremely cautious in developing and using any materials which, while biodegradable and apparently harmless on the surface, could have secondary and not readily ascertained harmful effects on marine life.

As you said in your letter, "...it's easier said than done." Our research over several years has certainly borne this out. Your enthusiasm for solving this problem is encouraging, and the Navy appreciates your input. While the challenges are large, the

Navy is determined to do whatever is necessary to carry out its missions in an environmentally responsible manner.

I hope that you maintain your interest in biodegradable materials in general -- there are many other problems out there which might one day be solved with appropriate environmentally-friendly materials.