SB

131

STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION

STEVE COWPER, GOVERNOR

February 27, 1987

POSITION PAPER

Bill No: SB 131

Contact: Amy D. Kyle
465-2600

Title: An Act regulating the role and use of TBT-based marine anti-fouling paints and coatings.

Department's Position

The Department supports the intent of the bill to prohibit sale and use of TBT-based paints and coatings. The Department is prepared to enforce a prohibition on the sale of the coatings.

Bill Analysis

The bill would prohibit the sale and use of TBT-based anti-fouling paint. Such coatings have been shown to release TBT into waters. TBT is a harmful and toxic substance. DEC supports the ban on introduction of the substance into waters of the state. (Since 1985, DEC has prohibited use of TBT as an anti-fouling agents in hatcheries, through conditions placed on state certifications of federal permits for hatcheries.)

The bill does not propose a specific role for any agency in enforcing a ban on sale or use of TBT-based coatings. Rather, the bill establishes general prohibitions.

Effect on the Agency

DEC understands that it is the intent of the bill's sponsors primarily to prohibit the sale of TBT in the state. DEC can play an active role in enforcing this prohibition through notification to retail outlets and marketplace inspections to confirm that the ban is complied with. TBT is a pesticide under the federal pesticide laws. The ban would be imposed and enforced as an extention of the state's pesticide program. A fiscal note for resources needed to enforce this aspect of the bill is being prepared.

The Department understands that the bill's sponsors do not intend that any additional activities be undertaken by DEC in response to the legislation in order to detect or take enforcement action under other provisions. In light of this understanding, no resources beyond those required to enforce the ban on sale are included in the fiscal note.

DENNIS D. KELSO
COMMISSIONER

SENATOR FRED F. ZHAROFF
ALASKA STATE LEGISLATURE

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MEMORANDUM

TO: Senator Tim Kelly
Chairman - Senate Labor and Commerce Committee

FROM: Senator Fred F. Zharoff

DATE: February 26, 1987

RE: House hearing on TBT bill

The House Resources Committee is holding a hearing tomorrow (Friday) at 8 a.m. on the House companion bill (HB 138) to Senate Bill 131, "An Act regulating the sale and use of TBT-based marine antifouling paints and coatings..."

The hearing will feature testimony, via teleconference, by Mary Morgan, consultant to the Pacific Fisheries Legislative Task Force, and by Dr. Bob Huggett of the Virginia Institute of Marine Science. Dr. Huggett probably is the nation's leading expert on the effects of TBT.

I wanted to bring this hearing to your attention so that you could have one of your staff people attend, if you wish, to obtain more background information about the use of TBT. SB 131, of course, is scheduled to be heard in your committee tomorrow at 2 p.m.

Mark! guess who?

SENATOR FRED F. ZHAROFF
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DURING SESSION:
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SECTIONAL ANALYSIS

SB 131 -- "An Act regulating the sale and use of TBT-based marine antifouling paints and coatings; and providing for an effective date."

Section 1

46.03.715: SALE AND USE OF TBT-BASED ANTIFOULING PAINT.

(a) Bans the sale and use of TBT-based antifouling paint in the state. Prohibits a person from importing into the state or selling, renting, or leasing in the state, or using in state water, any vessel or fishing gear or other item that is put into the water, if the vessel, gear, or item has already been treated with TBT paint.

(b) Persons who have already applied TBT paint to their boats, gear, or other items before the bill becomes law do not have to remove the paint, but they may not reapply the TBT paint. Fish pen nets that have been treated may continue to be used for five years after the bill becomes law.

(c) Exempts four classes of vessels from the TBT ban: (1) United States government vessels; (2) foreign vessels temporarily in state water; (3) vessels of 5,000 gross tons or more, which covers commercial ships other than commercial fishing and processing vessels; and (4) passenger vessels of 3,000 gross tons, which covers the vast majority of cruise ships. The purpose of these exemptions is to avoid running afoul of federal preemption, in the case of U.S. government vessels, and to avoid the practical problems of trying to prohibit TBT use on foreign vessels and on large commercial and cruise ships. Current statistics indicate that 70 percent of the TBT paint is used on small recreational vessels and 28 percent on commercial ships.

(d) Definition of "TBT-based" and "vessel".

Section 2 Effective date.

The injunction, penalty, and liability provisions of AS 46.03.760, 46.03.765, 46.03.780, and 46.03.790 would automatically apply to violations under this bill because the new statute is a part of AS 46.03 (Water, Air, Energy, and Environmental Conservation).

Source: Pacific Fisheries Legislative Task Force

TRIBUTYLTINS/TBT

Tributyltins (TBT) have been called the most toxic compounds ever deliberately introduced by societies into natural waters.[1] A growing body of scientific research indicates that TBT may seriously affect non-target organisms and have unknown effects on humans who eat marine organisms containing TBT or are exposed to it in the workplace.

In the United States, many bodies of water have concentrations of TBT that have reached levels which may cause lethal and sublethal effects in non-target organisms. For example, TBT levels in San Diego Bay have been measured at levels which could cause lethal effects in fish, mollusks, crustaceans, and algae.[2]

TBT is used in antifouling paints and is primarily applied to boat and ship hulls to control the growth of fouling organisms such as barnacles, tubeworms, algae, bacteria, and sponges. These organisms increase hull friction and weight, which in turn increases fuel consumption by reducing vessel speed. The antifouling paints are also used to control fouling organisms on docks, buoys, and other marine structures. TBT has been used in antifouling paints for almost 10 years and replaced the copper-based antifouling paints. The paints with tributyltins last approximately 5-7 years, whereas the copper-based paints last approximately two years.

There are two types of antifouling paints containing TBT: copolymer paints and free association paints. The copolymer antifouling paints contain TBT which is chemically bonded to the paint polymer and is released through a chemical bond breaking process called hydrolysis. New TBT molecules are exposed and released by the gradual erosion of the paint as the vessel moves through the water. The release rate is slow except during the initial one month "conditioning" period and can be controlled by

altering the paint's water absorption characteristics. The free association paints contain TBT which is physically incorporated into the paint matrix; the TBT is released through diffusion as surface paint particles dissolve. This type of paint has a short time period of protection and is characterized by a high initial release.

Antifouling paints containing TBT are registered, in the United States, for use on aluminum, steel, fiberglass, wood and cement hulls.[3] These paints are used on commercial and recreational vessels and some military ships. However, the Navy is the major domestic user of antifouling paints. The Navy is planning to replace the copper-based paints it is currently using on its steelhulled vessels with antifouling paints containing TBT compounds. This Navy conversion would take approximately 5 years and add an additional 90,000 pounds of TBT active ingredients to the environment. Economically, if all the Navy ships are painted, it would annually save the Navy $150 million.[4] However, this cost does not include the cost to the marine environment.

Currently, there are 340 federally registered antifouling paints containing TBT active ingredients. U.S. domestic usage of TBT in antifouling paints range from 250,000 to 300,000 pounds.[5] In addition to antifouling paints, TBT compounds are registered for use as disinfectants, textile biocides, wood preservatives, paper and pulp mills, leather processing and as plastics stabilizers, etc. In the United States, total usage of TBT pesticides (for all uses) ranges from 730,000 to 860,000 pounds of active ingredients.[6]

In 1981 France banned the use of TBT paints on all vessels less than 80 feet in length because of shellfish deformations, particularly in Arcachon Bay.[7]

England researched and then combined their studies with France's experience and banned the use of free association paints and copolymer formulations with more than 7.5 percent TBT on January 1, 1986.[8] Germany and Switzerland have banned TBT paints for fresh water usage. Japan has banned the use of TBT compounds in household products such as house paints and textiles, but has not restricted its use in vessel antifouling paints.[9]

In the United States, Senators Cohen and Trible introduced Senate Resolution 272 in December 1985 calling for "public hearings to determine if further action is warranted with respect to the future use of TBT compounds" and "urging EPA to accelerate its investigation into the environmental and health effects of organotin bearing paints...." The resolution has been referred to the Senate Committee on Environment and Public Works.

On June 11, 1986 Congressman Parris introduced HR 5015, calling for a temporary ban on TBT-based paints on the hulls for commercial and recreational vessels until, " EPA has completed their ongoing studies to determine the safety of such paints and their impact on the aquatic environment.

Currently, only North Carolina has limited the input of TBT into its waters. North Carolina instituted regulations on January 1, 1985 to limit discharges from industries to 2 ppt for salt water and 8 ppt for fresh water.[10] These regulations were initiated because it was determined that hundreds of North Carolina companies were using TBT to control odor-causing bacteria in textiles or to control slime in piping. Some of the discharges from the textile mills were high enough to kill aquatic organisms.

On January 8, 1986, EPA commenced a special review of the nine most common TBT antifoulant paint formulations. EPA's support

document indicates that EPA is concerned about the acute and chronic toxicity potential of tributyltin compounds to nontarget aquatic organisms. Water samples have been found to contain TBT levels that may have direct effects on aquatic organism populations (mollusks). The TBT compounds may bioaccumulate in aquatic habitat and may pose a hazard to the food chain. Absorption of tributyltin compounds to sediment may have long-term toxicity effects on benthic browsing organisms such as crustaceans and snails. Contamination of estuarine areas at sublethal concentrations can influence the reproduction of several aquatic groups from fish to plankton, thus impacting the marine environment. The present use of tributyltin in antifouling paints presents a potential hazard to nontarget aquatic organisms.

The Pacific Fisheries Legislative Task Force, working in coordination with the Pacific Coast Federation of Fishermen's Associations, has passed three task force resolutions offered by Assemblyman Dan Hauser, the Task Force Vice Chairman, regarding TBT. The resolutions:

1. Urged and encouraged the Environmental Protection Agency to take the lead in creating a public information education brochure about TBT that could be distributed to every boat owner in America. The pamphlet concept is based on a similar project done in the United Kingdom entitled, Don't Foul Things Up. Short of a Congressional ban on the use of TBT, a nationwide public information awareness program is thought to be the next best alternative for controlling the amount of TBT introduced into the marine environment. It is thought by some scientists that this type of education program could reduce the amount of active TBT in the marine environment by 50%.[12]

2. Memorializes the Food and Drug Administration, the Environmental Protection Agency and the National Marine Fisheries Service to impose an immediate ban on all salmon imported into or produced in the United States in pens treated with TBT. This is important because TBT levels for safe human consumption have not been established. TBT was found in the flesh of salmon that were pen-reared in TBT-treated pens. Moreover, the study found that cooking does not remove the TBT from the fish.[13]

3. Memorializes Congress to enact an immediate ban on the use of TBT-based bottom paints on all military, commercial, and recreational vessels until such time, and if, methods of use of TBT-based bottom paints or derivatives of organotin paints are developed that pose no threat to the marine environment.

In addition to the resolutions passed by the task force, it is anticipated that the participating states may introduce state legislation to further regulate TBT usages in their states. Currently, efforts are underway to explore legislation to monitor dry docks, set water quality standards, ban or restrict the uses of TBT, or regulate the amount of TBT used in antifouling paints.

REFERENCES

1. Edward D. Goldberg, Environment, Vol. 28, No. 8, Page 17, October 1986.

2. Committee Advisory, U.S. House of Representatives Committee on Merchant Marine & Fisheries, Page 2, September 26, 1986.

3. EPA Tributyltin Support Document, Page III-1, December 1985.

4. Ibid.

5. EPA Tributyltin Support Document, Page III-2, December 1985.

6. Ibid.

7. EPA Tributyltin Support Document, Page II-22, December 1985.

8. Michael A. Champ, Oceans 86 Proceedings, Volume 4, Organotin Symposium, Page 1095, September 1986.

9. Ibid.

10. Peter J. Kuch, Oceans 86 Proceedings, Volume 4, Organotin Symposium, Page 1114, September 1986.

11. EPA Tributyltin Support Document, Page II-21, December 1985.

12. Phone conversation with Michael A. Champ.

13. Jeffrey W. Short & Frank P. Thrower, Oceans 86 Proceedings, Volume 4, Organotin Symposium, Page 1117, September 1986.

Reprinted From: Pacific Coast Federation of Fishermen's Associations newsletter

TRIBUTYLTIN CONTAMINATION OF PEN-REARED SALMON?*

Pen-reared salmon contaminated with tributyltin (TBT) are entering U.S. seafood markets according to a recent report released by the National Marine Fisheries Service's Auke Bay Laboratory. According to a report by Jeffery W. Short and Frank P. Thrower, salmon reared in sea pens treated with TBT, sold as aquaculture products and purchased in public markets were found to contain concentrations of 0.081-0.20 ug/g of TBT.

TBT has been described as the most toxic compound every deliberately introduced by society into natural waters. TBT, an organotin, is used as a wood preservative, an additive to bottom paints, and to treat netting used in salt water pens for rearing salmon. It can be toxic in levels as low as 5 parts per trillion (see FRIDAY, 17 October, pp. 5-7).

The most common pen-reared salmon products entering the U.S. market are the so-called "pan-sized" or "baby" coho, Oncorhynchus kisutch, harvested as juveniles from pens in places such as Puget Sound, and the Norwegian Salmon, an Atlantic salmon or salmon trout, Salmo salar or Salmo trutta, raised in salt water pens in fjords in Norway. The farmed salmon has proved popular with some restaurants and markets seeking to promote "fresh" fish year-round.

The research of Short and Thrower on TBT contamination of salmon began when they sought to determine the rate of mortality of salmon transferred into TBT-treated marine pens. According to them, TBT compounds "are emerging as the leading compounds in the effective control of marine fouling of sea pens, a serious problem in the salmon farming industry."

In their paper "Tri-N-Butyltin Caused Mortality of Chinook Salmon, Oncorhynchus tshawtscha, on Transfer to a TBT-Treated Marine Net Pen," Short and Thrower reported that, "TBT compounds are widely used in the salmon aquaculture industry....Salmon at aquaculture facilities are raised to market size in marine pens for 1 to 3 years, during which they gain most of their body mass. Nets must be periodically cleaned or chemically coated to retard fouling by marine organisms; fouling will reduce sea water exchange and result in fish kills. Antifoulants are much more economical than manual cleaning and are therefore preferred by the industry. Several antifoulant formulations are used to treat nets, but TBT compounds are among the most effective ingredients. These compounds have low solubility in seawater, are exceptionally toxic to marine fouling organisms, and can be formulated for slow release."

In their study, Short and Thrower used chinook salmon raised for one year in fresh water and acclimated to sea water for four months before testing. The chinook salmon died in all doses of TBT oxide tested, "but none died in the clean water control tank during or immediately after the bioassay. Only five salmon in the lowest exposure dose survived the bioassay; of these, three died within the next 24 hours in clean seawater," reported the researchers.

They went on to say that "juvenile salmon are very sensitive to TBT poisoning in sea water....TBT concentrations in salmon that died during the bioassay were nearly constant for all doses, suggesting that TBT continues to accumulate until a threshold concentration is reached in critical tissues and causes death....low doses of TBT can impair the immune system of rats, which suggests that salmon raised in TBT-treated marine net pens may be more susceptible to disease."

In this first report on TBT, Short and Thrower concluded that "juvenile chinook salmon are very sensitive to TBT poisoning in sea water, that they rapidly accumulate TBT to high concentration in tissues, and that lethal effects are dose and time dependent."

Recognizing that aquaculturists would not likely use high dosages of TBT that may be found in the flesh of pen-reared salmon in the marketplace that was exposed to lower amounts of TBT, (i.e., those that survived the pens). They purchased both Atlantic salmon (e.g., Norwegian) and coho salmon in addition to chinook; all the fish was advertised as farm (pen-reared) raised aquaculture fish. They found no traces of TBT in the chinook but concentrations in the muscle tissue of both coho and Atlantic salmon of organotins as TBT as high as 0.81 ug/g.

The purchases of the fish were from markets in Seattle and Portland. The results were published in their report "Accumulation of Butylins in Muscle Tissue of Chinook Salmon Reared in Sea Pens Treated with Tri-N-Butyltin." The following is Short and Thrower's summary in this report of their research:

> Rearing salmon in sea pens treated with antifoulant containing TBT compounds resulted in the accumulation of organotins in the muscle tissue of salmon. Organotins were detected in several fish from different countries purchased from the marketplace and advertised as products of aquaculture. Additionally, cooking was found to be ineffective in destroying or removing accumulated organotins. We believe this is the first evidence of entry of organotins into the human diet in the United States.

The report of TBT-laced pen-reared salmon is not the first indicating tainting of these aquaculture-bred fish. There have also been reports received by PCFFA that farmed salmon from Norway and Scotland may contain the artificial coloring agent, canthaxanthin, an agent added to the feeding stuffs of the pen-reared fish (see FRIDAY, 16 August 1985, pp. 10-11). Although canthaxathin is banned by the U.S. Food & Drug Administration, there is no evidence that PCFFA has received that the FDA is checking imported pen-reared salmon for traces of this substance used to give the fish their deep-red coloring.

The use of TBT as an additive to bottom paints has already been restricted in both France and Great Britain following the die-offs of shellfish beds attributed to TBT paints on vessel bottoms. The PCFFA Board of Directors at their 9-10 October meeting called for a ban on the use of TBT (see FRIDAY, 17 October, pp. 5-7).

In Great Britain, Environment Minister William Waldergrave announced last year that nation's intent to place new controls on paints with the TBT additive including a proposed ban on the use of those paints on vessels less than 12 meters long, and "free association" paints with high levels of orgontin were banned. The Government action was "prompted by complaints from the fisheries industry that such paints are responsible for declining catches," according to the 13 March 1985 issue of the International Environmental Reporter. France has imposed a complete ban on such paints.

According to that issue of IER, "research carried out by the British Ministry of Agriculture, Fisheries & Food, and the French Institute Scientifique et Technique des Pesches Maritime, the effects of organotin compounds, the active agents in anti-fouling paints, are especially acute where pleasure craft and fisheries share the same waters."

High levels of TBT have been found in most marinas along the California coast, indicating that action similar to that taken by Britain and France should be taken. Fortunately, TBT has a short half-life and, unlike toxics such as DDT, the beneficial affects of a ban could be seen within a short time on the marine environment.

* From PCFFA Friday, October 31, 1986

with my colleagues—to explore this issue further, and to result in some legislation that will help us curb the very rapidly declining farmland prices and the panic that that brings to the farm economy.

Mr. President, at this point I ask unanimous consent that the bill be printed in the RECORD.

There being no objection, the bill was ordered to be printed in the RECORD, as follows:

S. 427

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Farm Mortgage Guarantee Act of 1987".

SEC. 2. PURPOSE.

It is the purpose of this Act to encourage agricultural lenders to provide long term financing for the purchase of agricultural land by providing a secondary market for sound mortgages that are adequately secured by farm real estate and guaranteed by the Farmers Home Administration.

SEC. 3. FARM MORTGAGE GUARANTEES.

The Consolidated Farm and Rural Development Act is amended by adding after section 352 (7 U.S.C. 2000) the following new section:

"SEC. 353. FARM MORTGAGE GUARANTEE.

"(1) FARM REAL ESTATE LOANS.—The Secretary may purchase or repurchase under this section any qualifying farm real estate loan or an interest in the loan.

"(2) TERMS AND CONDITIONS.—The Secretary may make such purchases on such terms and conditions as the Secretary considers appropriate.

"(3) FEES AND CHARGES.—The Secretary may charge to sellers of loans under paragraph (1) such fees and charges as the Secretary determines to be necessary.

"(4) QUALIFYING FARM REAL ESTATE LOAN.—For the purposes of this section a loan is a qualifying farm real estate loan if—

"(A) the loan is initiated by an approved federally or State chartered commercial bank, savings and loan association, credit union, mutual savings bank, mortgage banker, cooperative lending agency, or other legally organized lending agency, including an institution of the Farm Credit System established under the Farm Credit Act of 1971 (12 U.S.C. 2001 et. seq.) or an insurance company;

"(B) the Secretary finds that the loan is secured by adequate collateral in the form of farm land to ensure low risk of loss of principal by the maker of the loan or the successor in interest of the maker;

"(C) the Secretary finds the borrower to have sufficient resources or cash flow to ensure a high probability that the borrower will be able to maintain payments in accordance with the terms of the loan contract; and

"(D) the loan meets such other requirements as the Secretary may impose.

"(b) LOAN GUARANTEE.—

"(1) SECURED LOANS.—the Secretary shall guarantee, with respect to principal and interest, any loan or interest in any loan purchased under subsection (a) on such terms and conditions as the Secretary finds to be prudent and that will assure an adequate market for the purchase of loans so guaranteed.

"(2) FMHA LOANS.—The Secretary may guarantee a farm real estate loan held by the Farmers Home Administration that meets the requirements of subsection (a)(4)(B) and (a)(4)(C) or any other farm real estate loan or interest in such loan that meets the requirements of subsection (a)(4).

"(c) FMHA LOAN SALES.—A loan or interest in such loan guaranteed under subsection (b) and held by the Farmers Home Administration may be offered for sale by the Secretary on such terms and conditions as the secretary finds appropriate.

"(d) SECURITIES BACKED BY LOANS.—The Secretary may sell, resell, purchase, and repurchase securities backed by loans or interests in loans guaranteed under this section.

"(e) LOAN AGENTS.—

"(1) SERVICING LOANS.—The Secretary may contract with any person to act as an agent to perform functions necessary for the ongoing servicing of a loan as the Secretary may direct.

"(2) OTHER FUNCTIONS.—The Secretary may contract with any person to act as an agent to perform functions necessary for the purchase, repurchase, sale, and resale of qualifying farm real estate loans or an interest in such loan as authorized by this section, or for the ongoing servicing of a loan or interest in a loan sold under the provisions of this section as the Secretary may direct.

"(f) FARM MORTGAGE REVOLVING FUND.—

"(1) ESTABLISHMENT.—There is established the Farm Mortgage Revolving Fund (hereinafter in this section referred to as the 'Revolving Fund') consisting of such amounts as may be appropriated or credited to the Revolving Fund.

"(2) REVOLVING FUND CREDITS.—The Secretary shall credit to the Revolving Fund—

"(A) all sums received by the Secretary from the sale of loans under this section;

"(B) any interest earned from the investment of a part of the Revolving Fund under paragraph (4);

"(C) all principal and interest payments received by the Secretary on loans being held for sale under this section; and

"(D) all fees and charges the Secretary directs to be charged to sellers or buyers of loans under this section that the Secretary finds should be credited to the Revolving Fund.

"(3) AVAILABILITY OF AMOUNTS.—Amounts from the Revolving Fund shall be available—

"(A) for the purchase or repurchase of loans or interests in loans under subsection (a);

"(B) for paying the costs of administering this section, including the cost of services authorized by subsection (e); and

"(C) for the purpose set forth in subsection (g)(4).

"(4) EXCESS DEMAND DEPOSITS.—If the Secretary determines that the Revolving Fund contains demand deposits in excess of current needs, the Secretary shall invest such excess in obligations whose principal and interest are guaranteed by the United States.

"(g) FARM REAL ESTATE INSURANCE FUND.—

"(1) ESTABLISHMENT.—There is established the Farm Real Estate Insurance Fund (hereinafter in this section referred to as the 'Insurance Fund').

"(2) APPROPRIATIONS.—There are authorized to be appropriated $100,000,000 to the Insurance Fund to be available without fiscal year limitation.

"(3) INSURANCE FUND CREDITS.—Except as provided in paragraph (5), the Secretary shall credit to the Insurance Fund—

"(A) all fees or charges the Secretary directs to be charged sellers or buyers of loans under this section that the Secretary finds should be credited to the Insurance Fund; and,

"(B) any interest earned from the investment of Insurance Fund amounts under paragraph (7).

"(4) TRANSFERS FROM REVOLVING FUND.—The Secretary shall transfer to the Insurance Fund such funds from the Revolving Fund as the Secretary determines are necessary to carry out paragraph (5).

"(5) DISCHARGING OBLIGATIONS.—Amounts from the Insurance Fund shall be available, as provided in advance by appropriations acts, for discharging obligations of the Secretary to guarantee loans under subsection (b)(1).

"(6) AMOUNTS PAID TO TREASURY.—The Secretary shall pay the amounts described in paragraph (3) into the general fund to the Treasury during any period if—

"(A) the amount in the Insurance Fund exceeds an amount equal to 5 percent of the aggregate value of loans and interests in loans for which a guarantee is in effect under subsection (c); and

"(B) until an amount equal to any amount appropriated under subsection (g)(2) to the Insurance Fund has been repaid.

"(7) INSURANCE FUND HOLDINGS.—The Insurance Fund shall be held in the form of demand deposits and obligations whose principal and interest are guaranteed by the United States.

"(h) LOANS NOT GUARANTEED.—No loan shall be guaranteed under this section if the loan amount exceeds 70 percent of the most probable price that a property securing the loan should bring as determined by the Secretary at the time the loan is guaranteed.

"(i) PROGRAM TERMINATION.—The authority of the Secretary to guarantee a loan under this section shall terminate on December 31, 1991, except that a guarantee made prior to that date shall remain in effect for the life of the loan.

"(j) REGULATIONS.—The Secretary of Agriculture shall promulgate regulations necessary to carry out this section.".

By Mr. TRIBLE (for himself, Mr. COHEN, and Mr. WARNER):

S. 428. A bill to enact the "Tributyltin-Based Antifouling Paint Control Act of 1987"; to the Committee on Environment and Public Works.

TRIBUTYLTIN-BASED ANTIFOULING PAINT CONTROL ACT

● Mr. TRIBLE. Mr. President, I introduce today legislation to suspend the use of highly toxic marine paints containing tributyltin [TBT] until the Environmental Protection Agency determines such paints do not pose an unacceptable hazard to the marine environment.

Today over 70 percent of the world's commercial and recreational ships are painted with the antifouling paint known generally as organotin. This antifouling paint, which contains biocide tributyltin [TBT], is extremely effective in eliminating barnacles and other fouling organisms on vessels. This leads to lower operating and maintenance costs and reduced fuel consumption.

TBT paints, however, may also have a lethal effect on marine and freshwater life. EPA is now conducting a special review of TBT compounds because the Agency has determined that this highly toxic substance may present "unreasonable risks to nontarget aquatic organisms such as mussels, clams, oysters, and fish."

I am deeply concerned about the harmful effects TBT paints pose to

marine life and public health and believe that it is important to act now and limit the use of these paints until EPA is able to complete its lengthy review process.

The United States lags far behind other nations in regulating this toxic compound. France, England, and Japan all have limits on the use of TBT. Germany and Switzerland have totally prohibited its fresh water use.

TBT paint can generallay be classified in two categories based on how the TBT compound is incorporated into the paint coating. In copolymer paints TBT is chemically integrated within the matrix and releases the TBT at a steady rate. Free association paints have TBT mixed in freely and tend to dump the toxic compound at a high rate when first put into the water. Everyone agrees that free association paints are bad, but some copolymer paints also leach at unacceptably high rates.

Therefore, this legislation suspends the use of all marine paints that release large concentrations of the toxic TBT compound—release rates greater than 0.5, ±20 percent micrograms per square centimeter per day as certified by EPA—regardless of how the TBT is incorporated into the paint matrix. The suspension will remain in effect until EPA determines which TBT paints pose an unacceptable hazard to the marine environment. The enactment of this legislation will immediately reduce the amount of TBT introduced into the marine environment and make the world safer for water life and people.

Mr. President, this is an emergency situation we face. TBT levels found in the Chesapeake Bay and other waterways around our country are alarmingly high. Something must be done now to reduce the levels of this highly toxic compound. This bill is supported by the Chesapeake Bay Foundation and the Environmental Policy Institute and is cosponsored by Senators COHEN and WARNER. I commend it to the attention of all my colleagues, and ask unanimous consent that the bill be printed in the RECORD.

There being no objection, the bill was ordered to be printed in the RECORD, as follows:

S. 428

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SHORT TITLE

SECTION 1. This Act may be cited as the "Tributyltin-Based Antifouling Paint Control Act of 1987".

DEFINITIONS

SEC. 2. As used in this Act, the term—

(1) "Administrator" means the Administrator of the Environmental Protection Agency;

(2) "steady-state release rate" means that rate measured after the initial 30-day exposure to seawater of a freshly painted surface, which remains constant over a four-week period at ±20%, as measured in accordance with procedures specified by the Administrator;

(3) "vessel" includes any ship, boat, watercraft or other marine structure (whether or not private, commercial, public, or military); and

(4) "person" means any individual, corporation, partnership, or other entity.

FINDINGS AND PURPOSE

SEC. 3(a) The Congress hereby finds that:

(1) more than 70 percent of the worldwide commercial shipping fleets and recreational boats are painted with an antifouling paint known generally as organotin;

(2) this antifouling paint, which contains the biocide tributyltin (TBT), is extremely effective in eliminating barnacles and other fouling organisms;

(3) the elimination of fouling growths on vessels is highly benefical for operating capability and leads to lower operating and maintenance costs and substantial fuel consumption reductions;

(4) laboratory studies and data show that TBT is highly toxic and potentially lethal to marine and

freshwater organisms at very minute levels and the Environmental Protection Agency has determined that their continued use may present unreasonable risks to nontarget aquatic organisms such as mussels, clams, oysters, and fish; and

(5) organotin paints which release organotin at steady-rates not greater than 0.5 micrograms per square centimeter per day are available from United States paint manufacturers, and provide long-term protection from fouling, while significantly reducing the impact on the environment.

(b) The purpose of this Act, subject to section 4, is to immediately reduce the quantities of tributyltin in the marine environment by prohibiting the use of antifouling paints containing tributyltin which have a release rate greater than 0.5, ±20% micrograms per square centimeter per day as certified by the Administrator of the Environmental Protection Agency.

PROHIBITION

SEC. 4. (a)(1) The use by any person in the United States of paints containing tributyltin as an antifouling paint for the painting of any vessel is prohibited if such paints have a steady-state release greater than 0.5, ±20% micrograms per square centimeter per day as certified by the Administrator. Any person who uses, or permits, authorizes, or orders the use of, any such paint shall be in violation of this section and subject to a civil penalty in accordance with section 5 of this Act.

(2) The Administrator shall determine the steady-state release rates at which organotin paints do not pose an unacceptable hazard to the marine environment and shall publish such rates in the Federal Register.

(b) On and after the date on which such rates referred to in subsection (a) of this section have been published in the Federal Register, the prohibition set forth in subsection (a) of this section shall not be applicable to the use of any such paint which is in compliance with such rates so published.

CIVIL PENALTIES

SEC. 5. (a) Any person who uses, or permits, authorizes, or orders the use of, any paint in violation of subsection (a) of section 4 shall be liable to the United States for a civil penalty in an amount not to exceed $5,000 for each such violation. Each day such a violation continues shall, for purposes of this section, constitute a separate violation of subsection (a) of section 4.

(b) A civil penalty for a violation of subsection (a) of section 4 shall be assessed by the Secretary of the Interior (hereinafter referred to in this section as the "Secretary") by an order made on the record after opportunity (provided in accordance with this section) for a hearing in accordance with section 554 of title 5, United States Code. Before issuing such an order, the Secretary shall give written notice to the person to be assessed a civil penalty under such order of the Secretary's proposal to issue such order and provide such person an opportunity to request, within 15 days of the date the notice is received by such person, such a hearing on the order.

(c) In determining the amount of a civil penalty, the Secretary shall take into account the nature, circumstances, extent, and gravity of the violation or violations and, with respect to the violator, ability to pay, effect on ability to continue to do business, economic benefit to violation resulting from such violation, any history of prior violations, the degree of culpability, and such other matters as justice may require.

(d) The Secretary may compromise, modify, or remit, with or without conditions, any civil penalty which may be imposed under this section. The amount of such penalty, when finally determined, or the amount agreed upon in compromise, may be deducted from any sums owing by the United States to the person charged.

(e) Any person who requested in accordance with subsection (b) a hearing respecting the assessment of a civil penalty and who is aggrieved by an order assessing a civil penalty may file a petition for judicial review of such order with the United States Court of Appeals for the District of Columbia Circuit or for any other circuit in which such person resides or transacts business. Such a petition may only be filed within the 30-day period beginning on the date the order making such asessment was issued.

(f) If any person fails to pay an assessment of a civil penalty—

(1) after the order making the assessment has become a final order and if such person does not file a petition for judicial review of the order in accordance with subsection (e), or

(2) after a court in an action brought under subsection (e) has entered a final judgment in favor of the Secretary,

the Attorney General shall recover the amount assessed (plus interest at currently prevailing rates from the date of the expiration of the 30-day period referred to in subsection (e) or the date of such final judgment, as the case may be) in an actior brought in any appropriate district court of the United States. In such an action, the validity, amount, and appropriateness of such penalty shall not be subject to review.●

● Mr. COHEN. Mr. President, my good friend and colleague from the State of Virginia, Senator TRIBLE, and I are introducing legislation today to prohibit the use of certain highly toxic marine paints containing the chemical tributyltin [TBT].

Organotin is an effective, tin-based antifouling compound used in paint. TBT is the active ingredient in organotin-bearing paints. It is used to keep ship hulls free from barnacles, sea grasses, and other fouling organisms that may damage or increase friction on the hull. The increased friction requires more power and hence more fuel to maintain ship speed. Increased fuel consumption means higher operating costs. Navy officials estimate that fleetwide use of TBT copolymer paints would save $150 million per year in fuel costs and $5 million in

maintenance once the entire fleet is so treated. TBT is superior to copper-based paints that were used in the past because it extends the duration of the antifouling action. A majority of the worldwide commercial shipping fleets and pleasure craft are painted with organotin-bearing paints.

While there may be substantial economic benefits derived from the use of TBT based antifouling paints, there are potentially severe environmental and human risks. The Environmental Protection Agency [EPA], the Navy, the Virginia Institute of Marine Science, the States of Maine, Maryland, Virginia, Florida, North Carolina, and California, and several environmental groups have voiced such concerns. Others are joining the debate daily.

The principal concern is not whether organotin-bearing paints kill the organisms that foul a ship's hull. Rather, concern centers on whether the organotins leach out of the paints into the water at rates and toxicity levels that contaminate or kill nontarget aquatic organisms such as clams, shrimp, oysters, crabs, lobsters, and fish.

Last year, Senator TRIBLE and I introduced a sense of the Senate resolution urging the EPA to accelerate its investigation into the environmental and health effects of organotin-bearing paints. While organotin-bearing paints are presently registered with the EPA as pesticide antifouling compounds, many of these compounds were registered for use over 25 years ago. More recent studies raise new and troubling questions about the acute and chronic toxicity of these compounds even at extremely low concentrations, and their potential transmission into the food chain.

Biological damage by organotin leaching from boat bottoms has been noted in other countries. In 1982, France banned the use of TBT on boats under 25 meters—80 feet—in length. French scientists noted that oysters in and around boat moorings and marinas were found to have abnormal shell growth, reduced reproduction rates, and mutations in oyster larvae. Evidence of these abnormalities was no longer present following the prohibition.

In 1985, William Waldegrave, England's Junior Environmental Minister, stated that he had "seldom been faced with clearer scientific evidence of the need for environmental action—and fast; that the apparent tendency of organotin-bearing paints to stunt the growth of Britain's pacific oyster is just the visible tip of a potentially massive environmental iceberg." England is now regulating the use of TBT. In addition, Japan has regulated the use of TBT, and Germany and Switzerland have prohibitions on freshwater use.

Mr. President, preliminary findings seem to confirm the suspicion that contamination levels that are adverse to our marine resources may be present at some marinas and shipyards in this country. Very high levels of TBT were recorded in the Chesapeake Bay last summer. These high readings have led many scientists to conclude that we must, without delay, take whatever steps are necessary to reduce the levels of TBT being introduced into our marine environment.

Mr. President, a large part of my strong concern about the dangers involved in this compound relate to Maine, a State with a long coastline, thousands of boats, and tens of thousands of individuals and families whose livelihood depends on a clean and productive marine environment. Few States would be as adversely affected by any unhealthy side effects of this organotin-bearing paint as Maine, and the interests of my State and all coastal States are clearly at stake here. Any coastal area with recreational, commercial, or naval activities has the potential for being so affected.

I applaud EPA's efforts to determine the potentially harmful effects these highly toxic pesticides of the organotin family of compounds may have on estuarine marine life and public health. I strongly urge the EPA's Office of Pesticide Programs to continue its special review to determine as quickly as possible how much TBT is present in our oceans, bays, rivers, and marinas, and what level of TBT concentration is dangerous to our Nation's marine resources and public health.

EPA's review is well underway, but far from complete. The legislation we are introducing today is urgently needed. It would significantly reduce the impact of TBT on the environment by suspending the use of antifouling paints containing TBT that have unacceptable release rates as certified by the Administrator of the EPA. The suspension would remain in effect until such time as the EPA completes its special review and certifies steady-State release rates generated by organotin paints which do not pose an unacceptable hazard to the marine environment.

I urge my colleagues to join Senator TRIBLE and me in supporting this legislation.●

By Mr. DURENBERGER:

S. 429. A bill to amend the Tax Reform Act of 1986 to delay for 2 years the exception for certain technical personnel from certain rules for determining whether an individual is an employee or independent contractor for employment tax purposes; to the Committee on Finance.

EMPLOYMENT TAX DETERMINATION

● Mr. DURENBERGER. Mr. President, I am today introducing legislation that would delay for 2 years the effective date of section 1706 of the Tax Reform Act of 1986. This legislation is vitally important to the thousands of technical service personnel whose status as employees or independent contractors is currently in limbo.

Section 1706 of the Tax Reform Act was adopted without a single minute of debate in the Senate Finance Committee or on the Senate floor. Indeed, some might contend that section 1706 was a mere afterthought which was included in the Tax Reform Act solely for the purpose of raising revenue to pay for a wholly unrelated amendment. Yet in the process, we have caused unwarranted confusion and certainty for engineers, designers, drafters, computer programmers, systems analysts, and other technical services personnel.

Mr. President, the classification of a worker as an independent contractor or employee has generally been determined under certain common law tests. But in 1978, Congress created a safe harbor for certain workers, including technical service personnel, when an employer had a reasonable basis for treating someone as an independent contractor. Even though the Senate Finance Committee never considered the issue, the Tax Reform Act eliminated the safe harbor for technical service personnel.

My legislation would delay for 2 years the implementation of section 1706. This would enable the Senate Finance and Ways and Means Committees to hold hearings on the classification of technical services personnel and make a reasoned decision as to how these workers should be classified.●

By Mr. METZENBAUM:

S. 430. A bill to amend the Sherman Act regarding retail competition; to the Committee on the Judiciary.

RESALE PRICE MAINTENANCE

● Mr. METZENBAUM. Mr. President, today I am introducing legislation to codify the well-established principle that vertical price fixing is per se illegal and to clarify the evidentiary standard for establishing the existence of vertical price-fixing agreements. I am pleased to be joined by Senator RUDMAN, SIMON, and BRADLEY as original cosponsors.

The bill would promote retail competition in two ways. First, it would codify current law that a vertical price-fixing conspiracy is per se illegal, that is, it is presumed to harm competition without the need for an elaborate analysis of economic effects. The principle was first articulated more than 75 years ago by the Supreme Court in *Dr. Miles Medical Co. v. John D. Park & Sons Co.*, 220 U.S. 373 (1911). While the Supreme Court has restated this proposition on many occasions, its integrity was undercut by the enactment of State fair trade laws and a Federal exemption from the antitrust laws for resale price maintenance.

Ultimately, however, in 1975, Congress repealed the antitrust exemptions for resale price maintenance, ending them legalized price-fixing, proclaiming that its action would