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Back-up S. 870, 871, 872: Ozone (S. 201/870-2/EPW [Senate Environmental and Public Works Committee] Bills and Bill Summaries/Comparisons)

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A. J. TAKACS
VICE PRESIDENT
GOVERNMENT RELATIONS

January 24, 1990

**PHOTOCOPY
PRESERVATION**

The Honorable Albert Gore, Jr.
United States Senate
Washington, DC 20510
FAX: 202-224-0580

Dear Al:

We are very concerned about certain provisions in S. 1630, which amends the Clean Air Act. As a corporate constituent in your State of Tennessee, we hope you can help us.

Provisions involving refrigerator design requirements, and, Federal preemption of states are crucial to us.

Attached is background data and recommended amending language:

1. Whirlpool Endorses AHAM Position on CFC-Related Provisions
2. Proposed Amendments to Section 519(b) and 509(c)(2)
3. Whirlpool's Statement of Support for Clean Air, with commentary of concerns.

If you agree with our recommendations, it would be most effective if your office could contact Senators Chaffee (Steve Shimberg) and Baucus to express support for our proposals.

If you would like more information, your office may contact me at 616-926-3219 (FAX: 616-926-3975).

Many thanks,

A handwritten signature in cursive script, appearing to read "Andy".

14.100/AJT/h
Attachments

(If this 5-page FAX was not received clearly, please contact our operator at 616-926-3078.)

**PHOTOCOPY
PRESERVATION**

WHIRLPOOL CORPORATION ENDORSES

**AHAM POSITION ON
CFC-RELATED PROVISIONS OF S. 1630**

The Association of Home Appliance Manufacturers (AHAM), which represents the manufacturers of virtually every refrigerator and freezer sold in the United States today, supports federal government efforts to recapture and recycle chlorofluorocarbons (CFCs).

Refrigerator/freezer manufacturers have relied on CFCs for the past 30 years as a basic refrigerant gas and, more recently, as a blowing agent for highly energy efficient foam insulation. CFCs have been the basis for a 75% energy efficiency increase over the past 10 years, while maintaining the reliability and low cost of these essential products.

As an industry, we are working with our government to solve the practical problem presented by the global challenge of stratospheric ozone depletion.

The appliance industry, with the Environmental Protection Agency and the Department of Energy, is actively attempting to find acceptable substitutes in order to develop new technologies for household refrigeration through the Appliance Industry/Government CFC Replacement Consortium, Inc.

In the meantime, we need CFCs to allow us to continue to produce safe, reliable, and energy efficient household refrigerators and freezers.

Before we can endorse the CFC-related provisions of S. 1630, several necessary amendments are required:

- * Strong federal preemption is required so we can continue to sell our products nationwide. Ozone depletion is an international problem best addressed through a coordinated federal response.
- * Elimination of the service aperture requirement. In the case of household appliances, an aperture is unnecessary to facilitate recapture of CFCs and could actually increase leakage of CFCs.

We ask for your support of the attached amendments to S. 1630.

AHAM's position applies solely to the CFC provisions of S. 1630, it does not imply any support of the HCFC amendments nor of other provisions of the Clean Air Act.

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**PROPOSED AMENDMENT TO
SECTION 519 OF S. 1630
"RELATIONSHIP TO OTHER LAWS"**

1. Amend Section 519(b) by adding at the end (before the period): "or subsection (d)."
2. Delete existing subsection (c) and substitute the following:

"(c) If a requirement relating to any substance, practice, process or activity is included in or promulgated pursuant to this title in order to prevent or abate any risk to the stratosphere, or ozone in the stratosphere or to reduce the extent of global climate change, no State or political subdivision thereof may adopt or attempt to enforce any requirement respecting the control of any such substance, practice, process, or activity to prevent or abate such risk or change, unless the requirement of the State or political subdivision is identical to such federal requirement."

3. Add new subsection (d):

"(d) No State or political subdivision thereof shall adopt any requirement prohibiting the production, sale, or use of any substance covered by this title, or restricting the quantity of such substance which may be produced, sold, or used, unless the requirement of the State or political subdivision is identical to a requirement that is included in or promulgated pursuant to this title."

**PROPOSED AMENDMENT TO
SECTION 509(c)(2) OF S. 1630**

1. Amend Section 509(c)(2) by deleting the words "equipped with a servicing aperture which will" and substituting "designed to" therefore so that the paragraph will read as follows:

"(2) any appliance, machine or other good containing a substance covered by this title in bulk shall not be manufactured or distributed in commerce unless it is designed to facilitate the recapture of such substance during service and repair of such item; and"

**PHOTOCOPY
PRESERVATION****WHIRLPOOL CONCERNS****REGARDING THE CLEAN AIR AMENDMENTS BILL (S. 1630)**

Whirlpool supports the intent of the Clean Air Bill (S. 1630), which is to promote a safe environment for all. We are a company with a strong track record of environmental stewardship, and we fully support well-conceived, cost-effective clean air legislation that promotes our nation's health and welfare. However, we are concerned this bill is being rushed through Congress without adequate deliberation or understanding. Our primary concerns focus on stratospheric ozone issues (Title VII) since these provisions most directly affect our products (refrigerators and freezers). However, other Titles are likely to have an impact on our manufacturing operations. Our individual concerns follow:

Title VII - Stratospheric Ozone

Three provisions which are harmful to consumers remain in this bill.

1. The requirement for a service aperture (on refrigerators and freezers) to recapture refrigerant during service is not needed. This aperture would increase the risk of leakage and service incidence for sealed system repairs. We request deletion of this requirement (see attached amendment language).
2. Current technologies do not provide adequate quality for use of recycled CFCs in refrigerator/freezer service work. Consumers may be forced to purchase new refrigerators/freezers in lieu of repair of sealed system failures occurring after 2000. Thus, there should be an exemption for continued use of CFC-12 for servicing purposes after the turn of the century.
3. The preemption language pertaining to state promulgation of new CFC laws is too weak. A variety of state laws affecting CFCs, with differing requirements, would make it virtually impossible to market refrigeration products on a nation-wide basis (see attached amendment language).

Title IV - Acid Rain

We believe that this Title could cost several million dollars in higher electricity cost to Whirlpool's production and administrative facilities. We also believe that Congress is advancing on this issue without the scientific conclusions of the 10-year long National Acid Precipitation Assessment Program (NAPAP). Congress should delay any action until the conclusions of NAPAP are released later this year. Other shortcomings of this Title relate to the fact that no complete cost benefits analysis exists, as well as the disproportionate compliance costs that will be incurred, mostly in midwestern states. Thus, at the very least, a cost-sharing mechanism should be incorporated into this Title to more equitably

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distribute the costs of acid rain compliance. Precedent for such cost-sharing on power projects has existed for years, particularly at federally-funded hydroelectric power units in western states.

Title III - Air Toxics

The addition of categories of compounds to the list of pollutants could increase cost and draw in substances that may not be toxic air pollutants. In order to avoid this risk, we recommend that the process for establishing source categories of major pollutants, as well as the process for adding or deleting from the list of hazardous air pollutants, be subject to a peer review committee comprised of scientists from academic, government and industry sectors. We also recommend that the language for establishing priorities when designating major source categories be maintained or strengthened.

Title V - Permits

The new permitting requirements mean continuous emission monitoring, and extensive paperwork. Although most states already have permitting programs, thousands of sources would be required to obtain new permits for no apparent reason. Because of the seeming lack of environmental benefits, and a marked increase in redundant administrative burdens, we request that this section be deleted.

Title VI - Enforcement

Penalties of 15 years imprisonment and fines of \$1,000,000 per day for each violation are outrageously excessive. Penalties for late payment of fees or failure to keep all required records are also severe. The net effect of provisions in this title will be to inhibit the brightest and most capable environmental engineers from assuming corporate management responsibilities in environmental compliance and engineering departments. We recommend considerable modification of this title to include caps on and reduction of civil and criminal penalties.

SUMMARY

In summary, S. 1630 has shortcomings. This bill will add new layers of bureaucracy, usurp some of the environmental authority of state governments, and increase costs to consumers. Whirlpool strongly supports the concepts of the Clean Air Amendments Bill. We have spent millions in the past, and will continue to direct resources toward the goal of pollution control and prevention. We ask your support for our recommendations, and request that all environmental measures in the bill be carefully weighed against the costs to our nation's economy, jobs and competitiveness.

9/25/89

Wed 10/4 at 4

M E M O R A N D U M

TO: Rick Adcock, Sen. Gore ✓
David Harwood, Sen. Wirth
Andy McElwaine, Sen. Heinz
Deborah Merrick, Sen. Bumpers
Paul Kerkhoven, Sen. Roth
Jeff Burnam, Sen. Lugar

FROM: Steve Shimberg, EPW/Chafee

SUBJECT: Senate debate on CFCs as part of reconciliation

In preparation for the long awaited and yet to be scheduled debate on the budget reconciliation bill, you may find the enclosed EPW bill and report to be useful background. A two page fact sheet by the environmental groups is also enclosed.

The CFC portion of the bill is expected to be the focal point for an extensive environmental debate when the bill comes to the floor. Your bosses' assistance is needed and will be greatly appreciated.

I will be calling you in the next few days to see if you are interested in meeting to help develop a strategy for defending the CFC regulatory control piece of the bill. If you know of other likely allies, please do not hesitate to suggest their names to me. At the same time, if you know of particular problems with the bill and have suggested changes that will make it easier for your boss to defend the whole package, please call. Thanks.

ANALYSIS OF THE STRATOSPHERIC OZONE AND CLIMATE PROTECTION ACT OF 1989

Current national and international controls on chlorofluorocarbons (CFCs) and related chemicals are inadequate to protect the ozone layer and the global climate. There is now a strong scientific consensus, widely accepted even in industry, that the offending chemicals must be phased out as rapidly as possible.

The United States is the world's largest producer, user, and emitter of these chemicals, responsible for nearly one third of the global total. As such, our country has a special responsibility both to clean up its own house and to demonstrate international leadership. Environmental organizations fully support diplomatic efforts to strengthen the Montreal Protocol. Those efforts, however, must be backed up by action here at home.

Enactment of the Stratospheric Ozone and Climate Protection Act is the first concrete action Congress can take to reduce the global threats of ozone depletion and the greenhouse effect. We urge its enactment, with two amendments described below, as part of reconciliation legislation this year.

The bill will accomplish six critical objectives:

1. Recouping Windfall Profits. It is intolerable that the very companies most responsible for damaging the ozone layer are reaping multi-billion dollar windfall profits off the measures intended to save it. The bill recoups those undeserved profits for the benefit of the public.

The price rises that are generating those profits are due to governmental limits on the supplies of these chemicals, imposed to protect the ozone layer. The producers have no right to these excess profits. They have plenty of incentives to develop alternative chemicals, using traditional sources of capital, without a special subsidy. For these reasons, the Bush Administration supports measures for windfall profit recoupment.

We support the proposed combination of a minimum excise fee, to raise \$400 million in the first year, and a fee based on windfall price increases, if larger.

We also support the trust fund directing a portion of the revenue to the development of promising new ozone-safe and energy-efficient technologies. The fund offers enormous potential to leverage technological progress that will protect the ozone layer and the climate both by reducing dependence on these chemicals and by cutting energy waste.

2. Phasing Out the Most Dangerous Chemicals. The bill provides for the total phase-out of CFCs and the other most dangerous chemicals. Recognizing how fast new and almost universally negative scientific data are coming in, and how fast alternatives are being developed, the bill requires EPA to review the situation every 18 months and mandate the earliest possible phase-out.

We urge the Senate to add methyl chloroform to the phase-out list as well. Because of the enormous volume of methyl chloroform emissions, EPA ranks it equal in importance with the chemicals slated for phase-out. At present, however, the bill treats methyl chloroform on a par with new substitutes for CFCs. Unless it is phased out, methyl chloroform will "crowd out" other, more valuable substitutes needed to efficiently replace the current CFCs.

The Senate also should amend the bill to set an earlier date than 2000 for the outer limit of the phase-out. Three major industrial nations - West Germany, Sweden, and Norway - are already committed to a virtually complete phase-out (at least 95% reduction) of CFCs by 1995. Their economies are as sophisticated and complex as ours. They have just as much need for coolants, insulating materials, and solvents as we do. If they can do it, the U.S. can too.

3. Making Feasible Near-Term Reductions. Major near-term reductions can be made in emissions of CFCs and other covered chemicals. Leading firms are pioneering recycling methods, leak reduction, and use of alternatives. But many firms and some whole sectors are failing to respond.

We support the bill's provisions to maximize recycling, prevent venting, eliminate patently frivolous uses, and provide for the earliest possible use of safe alternatives. We particularly applaud the bill's requirements for cutting CFC losses from auto air conditioners, which currently are responsible for *one-fourth* of all CFC emissions in the U.S.

4. Setting Responsible Limits on New Chemicals. Substitute chemicals are needed to replace current CFCs. However, some of the substitutes will still contribute significantly to ozone depletion and the greenhouse effect. If they grow indefinitely without restraint, they will slow down and perhaps even prevent recovery of the ozone layer.

We support the bill's limits on long-term growth of ozone-depleting substitute chemicals. These limits allow industry to plan for substantial growth while simultaneously promoting development of even better technical solutions.

5. Leveraging International Cooperation. The bill effectively spurs cooperation in the international process by other countries. It requires EPA to determine periodically whether other countries have ozone protection programs equivalent to ours. Imports of CFC-related products are barred from countries which do not.

The U.S. Trade Representative has ruled such measures legal and appropriate under international trade treaties.

We strongly support this measure as an effective way to assure fair treatment of our own companies and to leverage international cooperation in protecting the ozone layer.

6. Developing Control Strategies for Methane. Methane is a rapidly growing contributor to the greenhouse effect. Preliminary research indicates, however, that methane levels can be stabilized with practical control measures. This bill provides for the acquisition of key data on methane releases and for the development of an effective control strategy. These are essential provisions which we fully support.

American Council for an Energy-Efficient Economy
Environmental Defense Fund
Friends of the Earth / Environmental Policy Institute
National Audubon Society
National Council of Churches
National Wildlife Federation
Natural Resources Defense Council
Sierra Club
Union of Concerned Scientists

September 21, 1989

For further information contact:

David Doniger, NRDC, 783-7800

**SIDE-BY-SIDE COMPARISON OF PROVISIONS CONTAINED IN THE EPW
COMMITTEE PRINT, ATMOSPHERIC POLLUTION FEES, WITH
PROVISIONS IN S. 870, S. 871, S. 872, AND S. 201.**

**TITLE IV -- ENVIRONMENT AND PUBLIC WORKS
SUBTITLE A -- ATMOSPHERIC POLLUTION FEES**

**Part A: Control of Chlorofluorocarbons and Other
Manufactured Substances**

4005. LISTING OF REGULATED SUBSTANCES

S. 872 requires the Administrator of the Environmental Protection Agency to publish lists of manufactured substances that are known or may reasonably be anticipated to cause or contribute to ozone depletion in the upper atmosphere. The Committee Bill has similar provisions, with some differences in the particular compounds to be included on each list. Following is a summary of these differences (a=priority list; b=other regulated substances):

<u>Compound</u>	<u>S. 872</u>	<u>Committee Bill</u>
CFC-11	(a)	(a)
CFC-12	(a)	(a)
CFC-22	(b)	(b)
CFC-113	(a)	(a)
CFC-114	(b)	(a)
CFC-115	(b)	(a)
CFC-123	---	(b)
CFC-124	---	(b)
CFC-125	---	(b)
CFC-141b	---	(b)
CFC-142b	---	(a)
methyl chloroform	(b)	(b)
methylene chloride	(b)	---
carbon tetrachloride	(a)	(a)
halon-1211	(a)	(a)
halon-1301	(a)	(a)
halon-2402	---	(a)

Both S. 872 and the Committee Bill require the Administrator of the Environmental Protection Agency to assign an ozone depletion factor to each listed substance. The ozone-depletion factor (ODF) is a numerical value representing the ozone depletion potential of each manufactured substance, on a mass basis, as compared to CFC-11. The ODFs of both bills are comparable.

AMENDMENT. One technical amendment strikes HCFC-125 from the list of other regulated substances, list (b). HCFC-125 is not an HCFC but an HFC that does not contain chlorine and is not an ozone- depleting substance.

4007. PRODUCTION PHASE-OUT

S. 872 and the Committee Bill both require the phase-out of the production of ozone-depleting substances, but differ in the schedule for the phase-out and the compounds to be eliminated. Following is a summary of the compounds to be phased-out and the schedule for doing so in each bill:

S. 872:

*** Priority List (a)--**

Within 1 year: Production freeze at each manufacturer's 1986 production level;
Within 2 years: Reduce production to 75% of 1986 level;
Within 3 years: Reduce production to 50% of 1986 level;
Within 4 years: Total phase-out.

*** Other regulated substances (b)--**

Within 10 years: Total phase-out.

Committee Bill:

*** Priority list (a)--**

July 1, 1989: Freeze at each manufacturer's 1986 production level;
July 1, 1993: Reduce production to 80% of 1986 levels;
July 1, 1998: Reduce production to 50% of 1986 levels;
July 1, 2000: Total phase-out.

*** Other regulated substances (b)--**

the year 2010: emissions of all regulated substances to be reduced to 5% of 1986 levels (see Section 4013: this provision will be superceded by an amendment)

S. 872 prohibits the manufacture, distribution, and use of any ozone-depleting substance except in a totally enclosed manner. The Committee Bill calls for reducing emissions to the lowest level achievable. Both S. 872 and the Committee Bill require that the substance be disposed of in a way that ensures that the substance will not be released to the environment. They also require that ozone-depleting substances be removed from appliances, machines, or other goods before those goods are disposed of. Both bills state that any item containing an ozone-depleting chemical cannot be manufactured and distributed unless it is equipped with a servicing aperture which will facilitate the recapture of the chemical during service and repair.

Both bills require the establishment of standards and requirements for the use of ozone-depleting substances and prohibit the use, release, or disposal of any ozone-depleting substance in a fashion that permits the release of the substance to the atmosphere.

AMENDMENT: To Insert a New a Section on the Production Phase-out of Other Regulated Substances

Based on information presented in a recent UNEP report, it is concluded that, in addition to eliminating the CFCs currently regulated under the Montreal Protocol as rapidly as possible, additional controls on methyl chloroform, carbon tetrachloride and the HCFCs are required. (Consequently, Section 4013 is deleted. See below.)

As a result of atmospheric lag time, to avoid delaying the date by which chlorine levels are projected to return to 2 ppb, the production and use of each of these chemicals must be eliminated two and one-half lifetimes prior to such date. Using a year 2000 global elimination of all halocarbon emissions as the base case, current projections are that atmospheric chlorine concentrations will return to 2 ppb by the year 2075. Before this date, however, due to the increased use of relatively short-lived HCFCs that will occur, there will be a temporary increase in the total chlorine level of the atmosphere.

This amendment replaces the capping provisions of the Committee Bill controlling production and use of other regulated substances (Section 4013), including HCFCs, with a new approach. The previous approach was criticized as too stringent and too complicated to be workable. The new approach involves creating a phase-out schedule for other regulated substances including the (b) substances. In each case, the date of ban represents the year 2075 -- by which time atmospheric chlorine concentrations are to return to 2 ppb (the maximum allowable level if the Antarctic ozone

hole is to be repaired) -- minus 2.5 times the lifetime of the substance. For example:

<u>Substance</u>	<u>Year of Ban</u>
HCFC-22	2037
HCFC-123	2070
HCFC-124	2057
HCFC-141b	2055
HCFC-142b	2027
methyl chloroform	2060

Again, this formula is applied to all (b) substances in Section 4005. According to EPW, the new approach maintains a bias in favor of producing the shorter lived CFC substitutes and creates long-term incentive for developing substitutes which are in no way ozone-depleting. Moreover, the establishment of dates certain for the elimination of these substances will temper the impetus to construct excessive HCFC production capacity.

According to EPW, an important provision of this amendment requires ongoing monitoring with periodic reports to Congress on atmospheric levels of these substances. As scientific understanding of atmospheric chemistry is changing so quickly, it is certainly a possibility that the phase-out dates listed will have to be adjusted to reach the 2075 goal.

[ARE OTHER "OTHER REGULATED SUBSTANCES" NO LONGER PHASED-OUT IN ANY WAY??]

4008. PRODUCTION PHASE-OUT EXCEPTION FOR NATIONAL SECURITY

S. 872 and the Committee Bill allow the production and use of halon-1211 and halon-1301 as may be necessary to protect the national security interests of the United States. The Committee Bill extends this exception to halon-2402.

4009. NATIONAL RECYCLING AND DISPOSAL PROGRAM

S. 870 calls for the development of a national plan for ensuring the most effective means of achieving widespread reclamation, recycling, or regulated disposal of ozone-depleting substances.

The Committee Bill requires the development of regulations establishing standards for the recapture, recycling, and safe disposal of ozone-depleting substances.

AMENDMENT. One amendment to this section clarifies that limitation on venting or release of substances used as refrigerants in appliances or units does not extend to disposal of substances used as, for example, insulation in such appliances or units.

Another amendment clarifies that a described total ban on trade and use of all priority substances by the year 2000 does not apply to recycled substances or substances that are entirely consumed as raw materials or feedstocks in the production of other chemicals.

4010. MOBILE AIR-CONDITIONERS

The Committee Bill stipulates that all motor vehicle air conditioner servicers must use SAE approved extraction/reclamation equipment by January 1, 1992. It also prohibits the sale of "do-it-yourself" motor vehicle recharge refrigerant canisters as of January 1, 1991. Finally, no new cars having air conditioners using CFC-12 or a similarly harmful refrigerant may be sold or exported as of model year 1994 and January 1, 1994 respectively. There is, however, a clause whereby the EPA Administrator can ask Congress to move the date back on auto air conditioners if technological problems are encountered.

S. 870 begins regulating auto air conditioner servicing within eighteen months, to ensure that chlorofluorocarbons (CFCs) are recaptured and recycled, and not unnecessarily vented to the atmosphere. (About 30% of U.S. emissions of CFC-12 originate from auto air conditioners, and about three-quarters of those emissions occur during maintenance and recharging.) S. 870 also eliminates, within nine months, the sale of CFC-containing air conditioner recharge canisters smaller than 30 pounds. Finally, S. 870 requires, within nine months, that servicers recharging auto air conditioners with CFC-containing fluids first test the system for leaks and repair those leaks before recharging.

AMENDMENT. A proposed amendment would eliminate the 1994 deadline on total phase-out of all CFC-12-dependent auto air conditioning. Although a number of manufacturers have voluntarily agreed to comply with the intent of this provision, not all will be able to do so. Theoretically, such a specific use control is no longer that important in

light of the production phase-out, recycling requirements and market forces.

Further AMENDMENTS to this section postpone the date for elimination of small air conditioning canisters from 1991 to 1992, and remove the absolute ban from those persons who replace canisters for a fee. The amendments clarify that "refrigerants" do not include those refrigerants which have no ozone-depleting potential.

4011. FIRE EXTINGUISHERS FOR CONSUMER APPLICATIONS

S. 870 bans, within nine months, the sale and distribution of fire extinguishers containing halons or other ozone-depleting substances for routine consumer applications, except in cases where such fire extinguishers are required by federal law. Furthermore, S. 870 directs the Secretary of Defense to eliminate all emissions of halon-1211 and halon-1301 than presently occur during the testing of fire-extinguishing equipment and to investigate the feasibility of testing such equipment by alternative methods.

The Committee Bill calls for a ban, within twenty-four months, on the sale and distribution of fire extinguishers containing halons except for commercial applications. It calls for regulations, also within twenty-four months, to control the commercial use of these extinguishers. It also calls for the reduction to "the maximum extent practicable" of the release of harmful substances associated with training, testing, leakage, or accidental discharges from fire control equipment.

AMENDMENT. The two year ban on sale of halon fire extinguishers for non-commercial use is removed. As in the case of the Section 4010 Amendment, such a specific use control is no longer considered very important.

4012. NONESSENTIAL CONSUMER PRODUCTS CONTAINING CHLOROFLUOROCARBONS

The Committee Bill uses language identical to that in S. 870, except that the ban takes effect in one year and only "non-commercial" cleaning fluid for electronic and photographic equipment is covered.

S. 870 bans, within nine months, the sale and distribution of non-essential consumer products that are capable of releasing ozone-depleting substances into the

atmosphere. These products include chlorofluorocarbon-containing plastic party streamers and noise horns, chlorofluorocarbon-containing cleaning fluids for electronic and photographic equipment, and others.

AMENDMENT. The proposed amendment would limit the statutory prohibition on nonessential uses to priority list substances. It would also statutorily prohibit, effective January 1, 1994, use of other ozone depleting substances such as HCFCs for dispersant purposes, explicitly in pressurized dispensers and in most plastic foam products.

4013. LIMITATION ON OZONE DEPLETION POTENTIAL

S. 872 and the Committee Bill both establish production limits for substances covered by their respective titles. Such limits, in both cases, are based on the ozone depletion factor assigned to each substance and 1986 production levels.

S. 872 requires that within one year of enactment total ozone depletion shall not exceed 1986 levels. Within two years, total levels shall be reduced to 75%; within three years, to 50%; and within four years, to 5%. Within five years, it shall be unlawful for any person to produce any priority substance .

This Section of the Committee Bill is meant to supplement Section 4007 (the production phase-out). Besides establishing the scheduled production caps and reductions applicable to priority list substances (Section 4007), the Bill requires that production of all regulated substances be limited so as to yield not less than a 95% reduction in total ozone depletion potential by the year 2010.

AMENDMENT: To delete section 4013 altogether. According to EPW, this section was designed to allow limited growth in the production and use of HCFCs during the time in which non-ozone depleting alternatives were being developed. According to the Committee, HCFCs are damaging, but not as damaging as the CFCs for which they could be used to substitute. This section had represented somewhat of a concession to industry.

According to EPW, recently obtained evidence -- particularly from UNEP -- affirms that growth in usage of all ozone-depleting substances must be arrested. Thus, a New Section addressing such issue is inserted as an amendment following Section 4008 in this brief.

4014. CERTIFICATION OF EQUIVALENT PROGRAMS

S. 872 and the Committee Bill both require certification that foreign countries have equivalent phase-out programs in place before allowing products that contain or are manufactured with ozone-depleting substances to be imported into the United States. The Committee Bill goes one step further by directing the President to prevent the United States from transferring technology to, or investing money in, facilities that either produce or increase demand for priority list substances in countries not certified as having equivalent phase-out programs.

AMENDMENT. The proposed amendment makes the President's prohibition of technology transfer to, or investment in, the described foreign facilities conditional upon a determination by the President that substitute products or processes exist that do not contain or depend on such substances. In addition the President must consider whether the proposed transfer or investment will increase use of priority list substances.

Another AMENDMENT to Section 4014 modifies rules on trade sanctions. Instead of imposing sanctions against countries not legislating and implementing phase-out programs as stringent as that of the U.S. beginning within 12 months of enactment, sanctions will only be imposed on such countries beginning on July 1, 2000, a deadline comparable to one set forth in the Montreal Protocol.

4015. LABELING REQUIREMENTS

S. 870 requires that within six months of enactment, consumer products that contain, are produced with, or are produced from an ozone-depleting substance be labeled. These labels should warn the purchaser that the product's contents and/or manufacturing process pose(s) a danger to the stratospheric ozone layer, and that depletion of the ozone layer could lead to increased risk of skin cancer and damage to natural systems, including food production.

The labeling provisions in the Committee Bill are essentially the same, although in some respects they are not as strong. Labeling requirements are to come into effect twenty-one months after the date on which a substance is placed on either the priority or the other regulated substance list. Unlike that in S. 870, the warning stops after stating only that the product's contents and/or manufacturing process pose(s) a danger to the ozone layer. The Committee warning does not list any potential consequences of ozone layer depletion.

AMENDMENT: According to the amendment, beginning January 1, 1991 and following every two years thereafter, the Administrator shall determine whether there exist substitute products or processes for those chemicals listed as priority substances. The Administrator shall require a warning label only for those substances for which this determination is positive.

This amendment limits the labeling requirement in two important ways. First, only products that depend on priority list substances are covered. The Administrator is authorized to require labels for products that depend on other ozone depleting or greenhouse chemicals but is not required to do so. Second, the requirement to label is limited to instances in which consumer choice might be affected (that is a choice between two similar products; not a choice of whether or not to buy). If consumers have no option in a purchase situation but to buy an ozone-depleting product, no label is required.

The original labeling requirement is further weakened by the fact that, for home appliances for which energy labels are already required, the new labeling requirement may be satisfied simply by adding the appropriate language to the energy label.

4016. SAFE ALTERNATIVES POLICY

S. 872 establishes the policy that ozone-depleting substances to be phased out will be replaced, to the maximum extent possible, by chemicals, product substitutes, or alternative manufacturing processes that reduce overall risks to public health and the environment.

S. 872 calls on the Administrator to review and report on the alternatives being considered. Specifically, the Administrator is directed to identify and describe these substances or alternatives, assess their risks to public health and the environment, and list the earliest date by which each alternative could become available. Additionally, the Administrator shall require all producers of these alternatives to provide the EPA with all available health and safety studies on the alternative they intend to produce, and to notify the EPA no less than 60 days before the plan to introduce the alternative into commercial use.

The Committee's statement of policy on safe alternatives is exactly the same as that contained in S. 872.

As in S. 872, the Administrator is directed in the Committee Bill to recommend Federal research programs and

other activities to assist in the identification of safe alternatives. Moreover, in the Committee Bill, he is directed to conduct studies of Federal procurement practices to promote transition by the national government to safer alternatives, and of possible initiatives to promote transfer to alternatives nationally and internationally. The administrator is offered the same provisions as in S. 872 to regulate the manufacture of alternatives.

Part B: Methane Assessment

S. 201 directs the Administrator of the EPA, the National Oceanic and Atmospheric Administration and the National Air and Space Administration to produce a series of reports on:

- the contribution of methane to global climate change;
- sources and sinks of methane;
- methods of controlling methane emissions; and
- the interaction of methane with other atmospheric gases.

The objective of this part of the Committee bill is to identify and analyze options to reduce the risks of tropospheric ozone formation and global climate change by reducing methane emissions enough to keep atmospheric concentrations from increasing; and promoting additional analyses of all potential sources and sinks of global methane. The national goal of the Committee bill is to reduce methane emissions in the U.S. and other countries.

S. 201 also contains directions to amend the Solid Waste Disposal Act by inserting much stricter regulations controlling air pollution, primarily methane, from solid waste disposal facilities. All new sewage treatment facilities are to be designed, maintained and operated in such a way as to minimize methane emissions. Moreover, all already existing sewage treatment facilities are to be modified so as to minimize methane emissions.

According to the Committee Bill, only the EPA is required to submit any reports to Congress. These shall include:

- a report on measures that could reduce methane emissions and that are economically justified with or without consideration of environmental benefits;
- reports including inventories of emissions associated with the following activities in the U.S.: natural gas and

coal extraction, transportation, distribution, storage, and use; management of solid waste; agriculture; biomass burning; and other activities deemed significant by the Administrator;

- a plan that could be implemented to stop the growth in atmospheric concentrations of methane from sources in the U.S. and an analysis of U.S. programs that could be used to induce developing countries to implement measures that will reduce methane emissions;

- reports on methane emissions from other countries and on the potential for preventing an increase in atmospheric concentrations of methane from foreign sources;

- reports on methane emissions from natural sources.

The Committee Bill offers no amendments to the Solid Waste Disposal Act.

AMENDMENT. More in accordance with S. 201, all required studies shall be carried out in consultation and coordination with the Administrators of the National Aeronautics and Space Administration and the National Oceanic and Atmospheric Administration, as well as the heads of other relevant federal agencies and departments.

Part C: Offset Of Government Expenses Associated with Implementation of Regulatory Controls and Implementation of Production, Importation, and Distribution Fees on Ozone-Depleting Chemicals

4029-4032. FEE IMPOSITIONS AND SUPPORTING PROVISIONS

The Committee Bill imposes a fee on the production and importation of ozone-depleting chemicals. An ozone depletion potential is assigned to each of the substances, and a fee is set based on the chemical's potential for depleting stratospheric ozone.

The fee imposed by the Committee Bill is to be absorbed by the chemical manufacturers, keeping the price of ozone-depleting chemicals stable. The fee is adjustable, to capture any windfall profits that producers realize as supplies drop during the phaseout period, and thus prevent the manufacturers from inflating the price of the chemicals being phased out.

S. 871 amends the Internal Revenue Code of 1986 to impose a manufacturers' excise tax on certain chemicals that deplete the stratospheric ozone layer. The amount of

the tax is adjusted for each chemical, depending on the chemical's potential for depleting stratospheric ozone.

The tax imposed by S. 871 can be passed on to purchasers of ozone-depleting chemicals, raising the price of the chemicals; thus, market forces are used to decrease the demand for the more dangerous chemicals. The increased price due to the tax effectively "internalizes" the environmental costs into the costs of the product (similar to the logic of those who would call for a carbon dioxide tax to reduce greenhouse gas emissions). If the price is not raised, no incentive is provided for consumers to demand the less-dangerous chemicals. The higher price also makes the environmentally safer substitutes more economically competitive with some traditionally very-low-cost ozone-depleting chemicals, and will eventually provide users with the incentive to recapture and recycle the most dangerous ozone-depleting chemicals.

The tax does not provide for adjustment to capture windfall profits. Companies are expected to use such profits -- to the extent that they occur -- in order to finance research and development of alternatives. Because the traditional products are being phased out, the companies should require those revenues to finance a substantial research and development effort.

4033. TRUST FUND

The Committee Bill establishes an Ozone Layer and Climate Protection Trust Fund consisting of all taxes received under the manufacturers' excise tax.

The Committee Bill is somewhat more specific as to how such money is to be appropriated. Up to \$100 million shall be available each year, subject to appropriations, for grants related to alternatives to chemical that contribute to ozone depletion or global climate change. The trust Fund shall also be available, as provided in appropriation Acts, to implement the Montreal Protocol and this Act. The balance of these monies are to remain in the Trust Fund and the interest earned shall be available, subject to appropriations, to the EPA: one half for abatement and control activities, and one half for research and development activities.

S. 871 similarly provides that there be established an Ozone Layer Conservation Trust Fund consisting of one-half of the taxes received under the manufacturers' excise tax. The trustees of this fund shall include the Secretaries of the Departments of the Treasury and of Energy, and the administrator of the EPA.

The Administrator shall, within six months of enactment deliver a plan of how money from this fund shall be spent. This strategic plan shall include expenditures for research, development and promotion of safe and appropriate alternatives to ozone-depleting chemicals and processes to be used both domestically and internationally. The plan includes a specific requirement that newly developed and safe air-conditioning products be given preference in government purchasing.

AMENDMENT. This amendment clarifies the type of work for which the trust fund may be used. Specifically, the amendment calls for cooperative projects by all relevant agencies, including NASA and NOAA, to study alternative fluorocarbon environmental acceptability and to finance technology transfers and other forms of assistance to any developing country that is a party to the Montreal Protocol.

AMENDMENTS TO COMMITTEE BILL SECTIONS NOT COMPARED TO EITHER S. 870, S. 871, S. 872, OR S. 201.

An Amendment to Section 4004 defines "produce" in such a way as to "not include the manufacture of substances that are used and entirely consumed in the manufacture of other chemicals." According to EPW, this provision is added as a consequence of the fact that many priority list chemicals are necessary raw materials or feedstocks for the production of new, less potent ozone depleting chemicals such as hydrochlorofluorocarbons.

An Amendment to Section 4021 tracks language included in the Clean Air Act and adds a waiver provision modeled after section 209(b) of that same act.

SIDE-BY-SIDE COMPARISON OF SOME PROVISIONS CONTAINED IN S. 870, S. 871, and S. 872, TO COMPARABLE PROVISIONS IN S. 333, S.491, AND S.503

The following is a comparison of some major provisions contained in S. 870, S. 871, and S. 872, to comparable provisions contained in S. 333, S. 491, and S. 503.

1. Comparison of S. 870 to S. 333, S. 491, and S.503.

MOBILE AIR-CONDITIONERS

S. 870 begins regulating auto air conditioner servicing within eighteen months, to ensure that chlorofluorocarbons (CFCs) are recaptured and recycled, and not unnecessarily vented to the atmosphere. (About 30% of U.S. emissions of CFC-12 originate from auto air conditioners, and about three-quarters of those emissions occur during maintenance and recharging.) S. 870 also eliminates, within nine months, the sale of CFC-containing air conditioner recharge cannisters smaller than 30 pounds. Finally, S. 870 requires, within nine months, that servicers recharging auto air conditioners with CFC-containing fluids first test the system for leaks and repair those leaks before recharging.

S. 333, S. 491, and S. 503 do not have comparable provisions.

FIRE EXTINGUISHERS FOR CONSUMER APPLICATIONS

S. 870 bans, within nine months, the sale and distribution of fire extinguishers containing halons or other ozone-depleting substances for routine consumer applications, except in cases where such fire extinguishers are required by federal law.

S. 333, S. 491, and S. 503 do not have comparable provisions.

NONESSENTIAL CONSUMER PRODUCTS CONTAINING CHLOROFLUOROCARBONS

S. 870 bans, within nine months, the sale and distribution of non-essential consumer products that are capable of releasing ozone-depleting substances into the

atmosphere. These products include chlorofluorocarbon-containing plastic party streamers and noise horns, chlorofluorocarbon-containing cleaning fluids for electronic and photographic equipment, and others.

S. 333, S. 491, and S. 503 do not have comparable provisions.

LABELING REQUIREMENTS

S. 870 requires the labeling of consumer products that contain, are produced with, or are produced from an ozone-depleting substance. These labels would warn the purchaser that the product's contents or manufacturing process pose a danger to the stratospheric ozone layer, and that depletion of the ozone layer could lead to increased risk of skin cancer and damage to natural systems, including food production.

The labeling provisions in S. 333 and S. 491 are similar.

CHLOROFLUOROCARBON AND HALON RECLAMATION PLAN

S. 870 calls for the development of a plan for ensuring the most effective means of achieving widespread reclamation, recycling, or regulated disposal of ozone-depleting substances.

S. 491 requires the development of regulations establishing standards for the recapture, recycling, and safe disposal of ozone-depleting substances.

2. Comparison of S. 871 to S. 503.

MANUFACTURERS' EXCISE TAX ON CHEMICALS THAT DEplete THE OZONE LAYER

S. 871 amends the Internal Revenue Code of 1986 to impose a manufacturers' excise tax on certain chemicals that deplete the stratospheric ozone layer. The amount of the tax is adjusted for each chemical, depending on the chemical's potential for depleting stratospheric ozone.

The tax imposed by S. 871 can be passed on to purchasers of ozone-depleting chemicals, raising the price of the chemicals; thus, market forces are used to decrease the demand for the more dangerous chemicals. The increased price due to the tax effectively "internalizes" the

environmental costs into the costs of the product (similar to the logic of those who would call for a carbon dioxide tax to reduce greenhouse gas emissions). If the price is not raised, no incentive is provided for consumers to demand the less-dangerous chemicals. The higher price also makes the environmentally safer substitutes more economically competitive with some traditionally very-low-cost ozone-depleting chemicals, and will eventually provide users with the incentive to recapture and recycle the most dangerous ozone-depleting chemicals.

The tax does not provide for adjustment to capture windfall profits. Companies are expected to use such profits -- to the extent that they occur -- in order to finance research and development of alternatives. Because the traditional products are being phased out, the companies should require those revenues to finance a substantial research and development effort.

S. 503 imposes a fee on the production and importation of ozone-depleting chemicals. An ozone depletion potential is assigned to each of the substances, and a fee is set based on the chemical's potential for depleting stratospheric ozone.

The fee imposed by S. 503 is to be absorbed by the chemical manufacturers, keeping the price of ozone-depleting chemicals stable. The fee is adjustable, to capture any windfall profits that producers realize as supplies drop during the phaseout period, and thus prevent the manufacturers from inflating the price of the chemicals being phased out.

OZONE LAYER CONSERVATION TRUST FUND

S. 871 provides for annually putting one-half of the revenues from the manufacturers' excise tax into an Ozone Layer Conservation Trust Fund. This would equal \$200 million in the first year, rising to \$750 million in the fifth year; the remainder of revenues from the manufacturers' excise tax would go to the Treasury. Expenditures from the Trust Fund would provide for government-industry cooperation in research, development, and market incentives for non-ozone-depleting chemical and technological alternatives to ozone-depleting substances. In addition, the federal government would investigate the means by which it might assist United States manufacturers of such technological alternatives in exporting the alternatives for applications in developing and developed countries. S. 871 also incorporates several provisions

modeled on past government-industry cooperative efforts to build new industries, such as block federal purchases of new technologies meeting specified performance standards.

S. 503 provides for annually putting up up to \$100 million of the fee revenues into a trust fund to provide grants to producers and users for developing substitutes and alternatives to products now manufactured by ozone-depleting chemicals, with the rest going to the Treasury. S. 503 does not provide for the creation of markets for alternative technologies, but instead focuses on providing funding for research. Thirty percent of the trust funds are dedicated to funding research into substitutes for ozone-depleting chemicals and, 70% to support research into alternative products that are produced without ozone-depleting chemicals.

By putting the tax and fee revenues into a trust fund, both S. 871 and S. 503 ensure that a portion of the funds collected from the sale of ozone-depleting substances are used to support efforts for finding alternatives to technologies based on these substances.

3. Comparison of S. 872 to S. 333 and S. 491.

LISTING OF REGULATED SUBSTANCES

S. 872 requires the Administrator of the Environmental Protection Agency to publish lists of manufactured substances that are known or may reasonably be anticipated to cause or contribute to ozone depletion in the upper atmosphere. S. 333 and S. 491 have similar provisions, with some differences in the particular compounds to be included on each list. Following is a summary of these differences:

<u>Compound</u>	<u>S. 872</u>	<u>S. 333</u>	<u>S. 491</u>
CFC-11	yes	yes	yes
CFC-12	yes	yes	yes
CFC-22	yes	yes	yes
CFC-113	yes	yes	yes
CFC-114	yes	yes	yes
CFC-115	yes	yes	yes
CFC-123	no	no	yes
CFC-124	no	no	yes
CFC-125	no	no	yes
CFC-141	no	no	yes
CFC-142	no	no	yes
methyl chloroform	yes	yes	yes
methylene chloride	yes	yes	yes
carbon tetrachloride	yes	yes	yes
halon-1211	yes	yes	yes
halon-1301	yes	yes	yes
halon-2402	no	no	yes

Although S. 491 regulates a number of substances, only those noted below are actually phased out.

S. 872, S. 333, and S. 491 require the Administrator of the Environmental Protection Agency to assign an ozone depletion factor to each listed substance. The ozone-depletion factor is a numerical value representing the ozone depletion potential of each manufactured substance, on a mass basis, as compared to CFC-11.

PRODUCTION PHASEOUT

S. 872, S. 333, and S. 491 all require the phaseout of the production of ozone-depleting substances, but differ in the schedule for the phaseout and the compounds to be eliminated. Following is a summary of the compounds to be phased out and the schedule for doing so in each bill:

<u>Compound</u>	<u>S. 872</u>	<u>S. 333</u>	<u>S. 491</u>
CFC-11	5 years	1996	1997
CFC-12	5 years	1996	1997
CFC-22	10 years	2000	n/a
CFC-113	5 years	1996	1997
CFC-114	10 years	2000	1997
CFC-115	10 years	2000	1997
methyl chloroform	10 years	1996	1997
methylene chloride	10 years	2000	n/a
carbon tetrachloride	5 years	2000	n/a
halon-1211	5 years	1996	1997
halon-1301	5 years	1996	1997
halon-2402	n/a	n/a	1997

MANUFACTURE AND DISPOSAL

S. 872 and S. 333 prohibit the manufacture, distribution, and use of any ozone-depleting substance except in a totally enclosed manner, and require that the substance be disposed of in a way that ensures that the substance will not be released to the environment. They also require that ozone-depleting substances be removed from appliances, machines, or other goods before those goods are disposed of.

S. 491 requires the establishment of standards and requirements for the use of ozone-depleting substances and prohibits the use, release, or disposal of any ozone-depleting substance in a fashion that permits the release of the substance to the atmosphere.

LIMITATION ON OZONE DEPLETION POTENTIAL

S. 872, S. 333, and S. 491 place limits on the total ozone depletion potential of the substances produced by any person. This limit on total ozone depletion potential is gradually lowered to zero within ten years after enactment in the case of S. 872, and by 2000 in the case of S. 333. S. 491 requires a 95 percent reduction in the total ozone depletion potential by 1997.

PRODUCTION PHASE-OUT EXCEPTION FOR NATIONAL SECURITY

S. 872 and S. 333 allow the production and use of halon-1211 and halon-1301 as may be necessary to protect the national security interests of the United States. S. 491 extends this exception to halon-2402.

CERTIFICATION OF EQUIVALENT PROGRAMS

S. 872, S. 333, and S. 491 all require certification that foreign countries have equivalent phaseout programs in place before allowing products that contain or are manufactured with ozone-depleting substances to be imported into the United States.

SAFE ALTERNATIVES POLICY

S. 872 establishes the policy that the ozone-depleting substances to be phased out will be replaced, to the maximum extent possible, by chemicals, product substitutes, or alternative manufacturing processes that reduce overall risks to public health and the environment. It also calls on the Environmental Protection Agency to review and report on the alternatives being considered, and assess their risks to public health and the environment. The requirement of such an assessment assures that alternatives to ozone-depleting substances are not more risky to human health and the environment than the substances they are replacing.

S. 333 and S. 491 do not have comparable provisions.

SIDE-BY-SIDE COMPARISON OF PROVISIONS CONTAINED IN THE EPW COMMITTEE PRINT, ATMOSPHERIC POLLUTION FEES, WITH PROVISIONS IN S. 870, S. 871, S. 872, AND S. 201.

**TITLE IV -- ENVIRONMENT AND PUBLIC WORKS
SUBTITLE A -- ATMOSPHERIC POLLUTION FEES**

**Part A: Control of Chlorofluorocarbons and Other
Manufactured Substances**

4005. LISTING OF REGULATED SUBSTANCES

S. 872 requires the Administrator of the Environmental Protection Agency to publish lists of manufactured substances that are known or may reasonably be anticipated to cause or contribute to ozone depletion in the upper atmosphere. The Committee Bill has similar provisions, with some differences in the particular compounds to be included on each list. Following is a summary of these differences (a=priority list; b=other regulated substances):

<u>Compound</u>	<u>S. 872</u>	<u>Committee Bill</u>
CFC-11	(a)	(a)
CFC-12	(a)	(a)
CFC-22	(b)	(b)
CFC-113	(a)	(a)
CFC-114	(b)	(a)
CFC-115	(b)	(a)
CFC-123	---	(b)
CFC-124	---	(b)
CFC-125	---	(b)
CFC-141b	---	(b)
CFC-142b	---	(a)
methyl chloroform	(b)	(b)
methylene chloride	(b)	---
carbon tetrachloride	(a)	(a)
halon-1211	(a)	(a)
halon-1301	(a)	(a)
halon-2402	---	(a)

Both S. 872 and the Committee Bill require the Administrator of the Environmental Protection Agency to assign an ozone depletion factor to each listed substance. The ozone-depletion factor (ODF) is a numerical value representing the ozone depletion potential of each manufactured substance, on a mass basis, as compared to CFC-11. The ODFs of both bills are comparable.

AMENDMENT. One technical amendment strikes HCFC-125 from the list of other regulated substances, list (b). HCFC-125 is not an HCFC but an HFC that does not contain chlorine and is not an ozone-depleting substance.

4007. PRODUCTION PHASE-OUT

S. 872 and the Committee Bill both require the phase-out of the production of ozone-depleting substances, but differ in the schedule for the phase-out and the compounds to be eliminated. Following is a summary of the compounds to be phased-out and the schedule for doing so in each bill:

S. 872:

*** Priority List (a)--**

Within 1 year: Production freeze at each manufacturer's 1986 production level;
Within 2 years: Reduce production to 75% of 1986 level;
Within 3 years: Reduce production to 50% of 1986 level;
Within 4 years: Total phase-out.

*** Other regulated substances (b)--**

Within 10 years: Total phase-out.

Committee Bill:

*** Priority list (a)--**

July 1, 1989: Freeze at each manufacturer's 1986 production level;
July 1, 1993: Reduce production to 80% of 1986 levels;
July 1, 1998: Reduce production to 50% of 1986 levels;
July 1, 2000: Total phase-out.

*** Other regulated substances (b)--**

the year 2010: emissions of all regulated substances to be reduced to 5% of 1986 levels (see Section 4013: this provision will be superceded by an amendment)

S. 872 prohibits the manufacture, distribution, and use of any ozone-depleting substance except in a totally enclosed manner. The Committee Bill calls for reducing emissions to the lowest level achievable. Both S. 872 and the Committee Bill require that the substance be disposed of in a way that ensures that the substance will not be released to the environment. They also require that ozone-depleting substances be removed from appliances, machines, or other goods before those goods are disposed of. Both bills state that any item containing an ozone-depleting chemical cannot be manufactured and distributed unless it is equipped with a servicing aperture which will facilitate the recapture of the chemical during service and repair.

Both bills require the establishment of standards and requirements for the use of ozone-depleting substances and prohibit the use, release, or disposal of any ozone-depleting substance in a fashion that permits the release of the substance to the atmosphere.

AMENDMENT: To Insert a New a Section on the Production Phase-out of Other Regulated Substances

Based on information presented in a recent UNEP report, it is concluded that, in addition to eliminating the CFCs currently regulated under the Montreal Protocol as rapidly as possible, additional controls on methyl chloroform, carbon tetrachloride and the HCFCs are required. (Consequently, Section 4013 is deleted. See below.)

As a result of atmospheric lag time, to avoid delaying the date by which chlorine levels are projected to return to 2 ppb, the production and use of each of these chemicals must be eliminated two and one-half lifetimes prior to such date. Using a year 2000 global elimination of all halocarbon emissions as the base case, current projections are that atmospheric chlorine concentrations will return to 2 ppb by the year 2075. Before this date, however, due to the increased use of relatively short-lived HCFCs that will occur, there will be a temporary increase in the total chlorine level of the atmosphere.

This amendment replaces the capping provisions of the Committee Bill controlling production and use of other regulated substances (Section 4013), including HCFCs, with a new approach. The previous approach was criticized as too stringent and too complicated to be workable. The new approach involves creating a phase-out schedule for other regulated substances including the (b) substances. In each case, the date of ban represents the year 2075 -- by which time atmospheric chlorine concentrations are to return to 2 ppb (the maximum allowable level if the Antarctic ozone

hole is to be repaired) -- minus 2.5 times the lifetime of the substance. For example:

<u>Substance</u>	<u>Year of Ban</u>
HCFC-22	2037
HCFC-123	2070
HCFC-124	2057
HCFC-141b	2055
HCFC-142b	2027
methyl chloroform	2060

Again, this formula is applied to all (b) substances in Section 4005. According to EPW, the new approach maintains a bias in favor of producing the shorter lived CFC substitutes and creates long-term incentive for developing substitutes which are in no way ozone-depleting. Moreover, the establishment of dates certain for the elimination of these substances will temper the impetus to construct excessive HCFC production capacity.

According to EPW, an important provision of this amendment requires ongoing monitoring with periodic reports to Congress on atmospheric levels of these substances. As scientific understanding of atmospheric chemistry is changing so quickly, it is certainly a possibility that the phase-out dates listed will have to be adjusted to reach the 2075 goal.

[ARE OTHER "OTHER REGULATED SUBSTANCES" NO LONGER PHASED-OUT IN ANY WAY??]

4008. PRODUCTION PHASE-OUT EXCEPTION FOR NATIONAL SECURITY

S. 872 and the Committee Bill allow the production and use of halon-1211 and halon-1301 as may be necessary to protect the national security interests of the United States. The Committee Bill extends this exception to halon-2402.

4009. NATIONAL RECYCLING AND DISPOSAL PROGRAM

S. 870 calls for the development of a national plan for ensuring the most effective means of achieving widespread reclamation, recycling, or regulated disposal of ozone-depleting substances.

The Committee Bill requires the development of regulations establishing standards for the recapture, recycling, and safe disposal of ozone-depleting substances.

AMENDMENT. One amendment to this section clarifies that limitation on venting or release of substances used as refrigerants in appliances or units does not extend to disposal of substances used as, for example, insulation in such appliances or units.

Another amendment clarifies that a described total ban on trade and use of all priority substances by the year 2000 does not apply to recycled substances or substances that are entirely consumed as raw materials or feedstocks in the production of other chemicals.

4010. MOBILE AIR-CONDITIONERS

The Committee Bill stipulates that all motor vehicle air conditioner servicers must use SAE approved extraction/reclamation equipment by January 1, 1992. It also prohibits the sale of "do-it-yourself" motor vehicle recharge refrigerant canisters as of January 1, 1991. Finally, no new cars having air conditioners using CFC-12 or a similarly harmful refrigerant may be sold or exported as of model year 1994 and January 1, 1994 respectively. There is, however, a clause whereby the EPA Administrator can ask Congress to move the date back on auto air conditioners if technological problems are encountered.

S. 870 begins regulating auto air conditioner servicing within eighteen months, to ensure that chlorofluorocarbons (CFCs) are recaptured and recycled, and not unnecessarily vented to the atmosphere. (About 30% of U.S. emissions of CFC-12 originate from auto air conditioners, and about three-quarters of those emissions occur during maintenance and recharging.) S. 870 also eliminates, within nine months, the sale of CFC-containing air conditioner recharge canisters smaller than 30 pounds. Finally, S. 870 requires, within nine months, that servicers recharging auto air conditioners with CFC-containing fluids first test the system for leaks and repair those leaks before recharging.

AMENDMENT. A proposed amendment would eliminate the 1994 deadline on total phase-out of all CFC-12-dependent auto air conditioning. Although a number of manufacturers have voluntarily agreed to comply with the intent of this provision, not all will be able to do so. Theoretically, such a specific use control is no longer that important in

light of the production phase-out, recycling requirements and market forces.

Further AMENDMENTS to this section postpone the date for elimination of small air conditioning canisters from 1991 to 1992, and remove the absolute ban from those persons who replace canisters for a fee. The amendments clarify that "refrigerants" do not include those refrigerants which have no ozone-depleting potential.

4011. FIRE EXTINGUISHERS FOR CONSUMER APPLICATIONS

S. 870 bans, within nine months, the sale and distribution of fire extinguishers containing halons or other ozone-depleting substances for routine consumer applications, except in cases where such fire extinguishers are required by federal law. Furthermore, S. 870 directs the Secretary of Defense to eliminate all emissions of halon-1211 and halon-1301 than presently occur during the testing of fire-extinguishing equipment and to investigate the feasibility of testing such equipment by alternative methods.

The Committee Bill calls for a ban, within twenty-four months, on the sale and distribution of fire extinguishers containing halons except for commercial applications. It calls for regulations, also within twenty-four months, to control the commercial use of these extinguishers. It also calls for the reduction to "the maximum extent practicable" of the release of harmful substances associated with training, testing, leakage, or accidental discharges from fire control equipment.

AMENDMENT. The two year ban on sale of halon fire extinguishers for non-commercial use is removed. As in the case of the Section 4010 Amendment, such a specific use control is no longer considered very important.

4012. NONESSENTIAL CONSUMER PRODUCTS CONTAINING CHLOROFLUOROCARBONS

The Committee Bill uses language identical to that in S. 870, except that the ban takes effect in one year and only "non-commercial" cleaning fluid for electronic and photographic equipment is covered.

S. 870 bans, within nine months, the sale and distribution of non-essential consumer products that are capable of releasing ozone-depleting substances into the

atmosphere. These products include chlorofluorocarbon-containing plastic party streamers and noise horns, chlorofluorocarbon-containing cleaning fluids for electronic and photographic equipment, and others.

AMENDMENT. The proposed amendment would limit the statutory prohibition on nonessential uses to priority list substances. It would also statutorily prohibit, effective January 1, 1994, use of other ozone depleting substances such as HCFCs for dispersant purposes, explicitly in pressurized dispensers and in most plastic foam products.

4013. LIMITATION ON OZONE DEPLETION POTENTIAL

S. 872 and the Committee Bill both establish production limits for substances covered by their respective titles. Such limits, in both cases, are based on the ozone depletion factor assigned to each substance and 1986 production levels.

S. 872 requires that within one year of enactment total ozone depletion shall not exceed 1986 levels. Within two years, total levels shall be reduced to 75%; within three years, to 50%; and within four years, to 5%. Within five years, it shall be unlawful for any person to produce any priority substance .

This Section of the Committee Bill is meant to supplement Section 4007 (the production phase-out). Besides establishing the scheduled production caps and reductions applicable to priority list substances (Section 4007), the Bill requires that production of all regulated substances be limited so as to yield not less than a 95% reduction in total ozone depletion potential by the year 2010.

AMENDMENT: To delete section 4013 altogether. According to EPW, this section was designed to allow limited growth in the production and use of HCFCs during the time in which non-ozone depleting alternatives were being developed. According to the Committee, HCFCs are damaging, but not as damaging as the CFCs for which they could be used to substitute. This section had represented somewhat of a concession to industry.

According to EPW, recently obtained evidence -- particularly from UNEP -- affirms that growth in usage of all ozone-depleting substances must be arrested. Thus, a New Section addressing such issue is inserted as an amendment following Section 4008 in this brief.

AMENDMENT: According to the amendment, beginning January 1, 1991 and following every two years thereafter, the Administrator shall determine whether there exist substitute products or processes for those chemicals listed as priority substances. The Administrator shall require a warning label only for those substances for which this determination is positive.

This amendment limits the labeling requirement in two important ways. First, only products that depend on priority list substances are covered. The Administrator is authorized to require labels for products that depend on other ozone depleting or greenhouse chemicals but is not required to do so. Second, the requirement to label is limited to instances in which consumer choice might be affected (that is a choice between two similar products; not a choice of whether or not to buy). If consumers have no option in a purchase situation but to buy an ozone-depleting product, no label is required.

The original labeling requirement is further weakened by the fact that, for home appliances for which energy labels are already required, the new labeling requirement may be satisfied simply by adding the appropriate language to the energy label.

4016. SAFE ALTERNATIVES POLICY

S. 872 establishes the policy that ozone-depleting substances to be phased out will be replaced, to the maximum extent possible, by chemicals, product substitutes, or alternative manufacturing processes that reduce overall risks to public health and the environment.

S. 872 calls on the Administrator to review and report on the alternatives being considered. Specifically, the Administrator is directed to identify and describe these substances or alternatives, assess their risks to public health and the environment, and list the earliest date by which each alternative could become available. Additionally, the Administrator shall require all producers of these alternatives to provide the EPA with all available health and safety studies on the alternative they intend to produce, and to notify the EPA no less than 60 days before the plan to introduce the alternative into commercial use.

The Committee's statement of policy on safe alternatives is exactly the same as that contained in S. 872.

As in S. 872, the Administrator is directed in the Committee Bill to recommend Federal research programs and

4014. CERTIFICATION OF EQUIVALENT PROGRAMS

S. 872 and the Committee Bill both require certification that foreign countries have equivalent phase-out programs in place before allowing products that contain or are manufactured with ozone-depleting substances to be imported into the United States. The Committee Bill goes one step further by directing the President to prevent the United States from transferring technology to, or investing money in, facilities that either produce or increase demand for priority list substances in countries not certified as having equivalent phase-out programs.

AMENDMENT. The proposed amendment makes the President's prohibition of technology transfer to, or investment in, the described foreign facilities conditional upon a determination by the President that substitute products or processes exist that do not contain or depend on such substances. In addition the President must consider whether the proposed transfer or investment will increase use of priority list substances.

Another AMENDMENT to Section 4014 modifies rules on trade sanctions. Instead of imposing sanctions against countries not legislating and implementing phase-out programs as stringent as that of the U.S. beginning within 12 months of enactment, sanctions will only be imposed on such countries beginning on July 1, 2000, a deadline comparable to one set forth in the Montreal Protocol.

4015. LABELING REQUIREMENTS

S. 870 requires that within six months of enactment, consumer products that contain, are produced with, or are produced from an ozone-depleting substance be labeled. These labels should warn the purchaser that the product's contents and/or manufacturing process pose(s) a danger to the stratospheric ozone layer, and that depletion of the ozone layer could lead to increased risk of skin cancer and damage to natural systems, including food production.

The labeling provisions in the Committee Bill are essentially the same, although in some respects they are not as strong. Labeling requirements are to come into effect twenty-one months after the date on which a substance is placed on either the priority or the other regulated substance list. Unlike that in S. 870, the warning stops after stating only that the product's contents and/or manufacturing process pose(s) a danger to the ozone layer. The Committee warning does not list any potential consequences of ozone layer depletion.

other activities to assist in the identification of safe alternatives. Moreover, in the Committee Bill, he is directed to conduct studies of Federal procurement practices to promote transition by the national government to safer alternatives, and of possible initiatives to promote transfer to alternatives nationally and internationally. The administrator is offered the same provisions as in S. 872 to regulate the manufacture of alternatives.

Part B: Methane Assessment

S. 201 directs the Administrator of the EPA, the National Oceanic and Atmospheric Administration and the National Air and Space Administration to produce a series of reports on:

- the contribution of methane to global climate change;
- sources and sinks of methane;
- methods of controlling methane emissions; and
- the interaction of methane with other atmospheric gases.

The objective of this part of the Committee bill is to identify and analyze options to reduce the risks of tropospheric ozone formation and global climate change by reducing methane emissions enough to keep atmospheric concentrations from increasing; and promoting additional analyses of all potential sources and sinks of global methane. The national goal of the Committee bill is to reduce methane emissions in the U.S. and other countries.

S. 201 also contains directions to amend the Solid Waste Disposal Act by inserting much stricter regulations controlling air pollution, primarily methane, from solid waste disposal facilities. All new sewage treatment facilities are to be designed, maintained and operated in such a way as to minimize methane emissions. Moreover, all already existing sewage treatment facilities are to be modified so as to minimize methane emissions.

According to the Committee Bill, only the EPA is required to submit any reports to Congress. These shall include:

- a report on measures that could reduce methane emissions and that are economically justified with or without consideration of environmental benefits;
- reports including inventories of emissions associated with the following activities in the U.S.: natural gas and

coal extraction, transportation, distribution, storage, and use; management of solid waste; agriculture; biomass burning; and other activities deemed significant by the Administrator;

- a plan that could be implemented to stop the growth in atmospheric concentrations of methane from sources in the U.S. and an analysis of U.S. programs that could be used to induce developing countries to implement measures that will reduce methane emissions;

- reports on methane emissions from other countries and on the potential for preventing an increase in atmospheric concentrations of methane from foreign sources;

- reports on methane emissions from natural sources.

The Committee Bill offers no amendments to the Solid Waste Disposal Act.

AMENDMENT. More in accordance with S. 201, all required studies shall be carried out in consultation and coordination with the Administrators of the National Aeronautics and Space Administration and the National Oceanic and Atmospheric Administration, as well as the heads of other relevant federal agencies and departments.

Part C: Offset Of Government Expenses Associated with Implementation of Regulatory Controls and Implementation of Production, Importation, and Distribution Fees on Ozone-Depleting Chemicals

4029-4032. FEE IMPOSITIONS AND SUPPORTING PROVISIONS

The Committee Bill imposes a fee on the production and importation of ozone-depleting chemicals. An ozone depletion potential is assigned to each of the substances, and a fee is set based on the chemical's potential for depleting stratospheric ozone.

The fee imposed by the Committee Bill is to be absorbed by the chemical manufacturers, keeping the price of ozone-depleting chemicals stable. The fee is adjustable, to capture any windfall profits that producers realize as supplies drop during the phaseout period, and thus prevent the manufacturers from inflating the price of the chemicals being phased out.

S. 871 amends the Internal Revenue Code of 1986 to impose a manufacturers' excise tax on certain chemicals that deplete the stratospheric ozone layer. The amount of

the tax is adjusted for each chemical, depending on the chemical's potential for depleting stratospheric ozone.

The tax imposed by S. 871 can be passed on to purchasers of ozone-depleting chemicals, raising the price of the chemicals; thus, market forces are used to decrease the demand for the more dangerous chemicals. The increased price due to the tax effectively "internalizes" the environmental costs into the costs of the product (similar to the logic of those who would call for a carbon dioxide tax to reduce greenhouse gas emissions). If the price is not raised, no incentive is provided for consumers to demand the less-dangerous chemicals. The higher price also makes the environmentally safer substitutes more economically competitive with some traditionally very-low-cost ozone-depleting chemicals, and will eventually provide users with the incentive to recapture and recycle the most dangerous ozone-depleting chemicals.

The tax does not provide for adjustment to capture windfall profits. Companies are expected to use such profits -- to the extent that they occur -- in order to finance research and development of alternatives. Because the traditional products are being phased out, the companies should require those revenues to finance a substantial research and development effort.

4033. TRUST FUND

The Committee Bill establishes an Ozone Layer and Climate Protection Trust Fund consisting of all taxes received under the manufacturers' excise tax.

The Committee Bill is somewhat more specific as to how such money is to be appropriated. Up to \$100 million shall be available each year, subject to appropriations, for grants related to alternatives to chemical that contribute to ozone depletion or global climate change. The trust Fund shall also be available, as provided in appropriation Acts, to implement the Montreal Protocol and this Act. The balance of these monies are to remain in the Trust Fund and the interest earned shall be available, subject to appropriations, to the EPA: one half for abatement and control activities, and one half for research and development activities.

S. 871 similarly provides that there be established an Ozone Layer Conservation Trust Fund consisting of one-half of the taxes received under the manufacturers' excise tax. The trustees of this fund shall include the Secretaries of the Departments of the Treasury and of Energy, and the administrator of the EPA.

The Administrator shall, within six months of enactment deliver a plan of how money from this fund shall be spent. This strategic plan shall include expenditures for research, development and promotion of safe and appropriate alternatives to ozone-depleting chemicals and processes to be used both domestically and internationally. The plan includes a specific requirement that newly developed and safe air-conditioning products be given preference in government purchasing.

AMENDMENT. This amendment clarifies the type of work for which the trust fund may be used. Specifically, the amendment calls for cooperative projects by all relevant agencies, including NASA and NOAA, to study alternative fluorocarbon environmental acceptability and to finance technology transfers and other forms of assistance to any developing country that is a party to the Montreal Protocol.

**AMENDMENTS TO COMMITTEE BILL SECTIONS NOT COMPARED TO
EITHER S. 870, S. 871, S. 872, OR S. 201.**

An Amendment to Section 4004 defines "produce" in such a way as to "not include the manufacture of substances that are used and entirely consumed in the manufacture of other chemicals." According to EPW, this provision is added as a consequence of the fact that many priority list chemicals are necessary raw materials or feedstocks for the production of new, less potent ozone depleting chemicals such as hydrochlorofluorocarbons.

An Amendment to Section 4021 tracks language included in the Clean Air Act and adds a waiver provision modeled after section 209(b) of that same act.

SCHEDULE FOR THURSDAY, OCTOBER 12

(revised edition - thank you Danny Sells)

- 7:45a LV WASH DC NATL , Butler Aviation, Citation Jet 6 Seater Tail #N720C. You will be met by Tom Patton from Phillips. Pilot's name is Mike Lanagan
c: 703 549 8340
- 9:05a AR Greenville (Drive to Phillips Plant-Danny Sells will be at the Plant)
- 9:30a Press Arrival
- 9:45a Tour Facility and Mtg w/Phillips U.S. President and CEO (10:15)
- 10:20a Press Conference
- 11:00a LV Phillips for airport/landing strip
- 11:15a LV Greenville via Citation Jet 6 seater
- 12:35p AR WASH DC NATL
- 3:00p Mtg w/Senator Heinz SR-284

SCHEDULE FOR FRIDAY, OCTOBER 13, 1989

HAPPY BIRTHDAY ERIC ANDERSON!

Al will be in DC

** The following information on the Finance Retreat is subject to revision **

3:00p Registration begins for Finance Retreat at the Westin Hotel, 24th and M Streets, NW, Washington, D.C. 20037 (Patrick/Pete/Mary Pat)

7:30p Finance Retreat Cocktails and Dinner, Ballroom I
Welcome: Al Gore, Jr.
Speaker: David Halberstam (10:30)

SCHEDULE FOR SATURDAY, OCTOBER 14, 1989

8:00a Continental Breakfast, Outside the Forum (8:30)
8:30a Panel Discussion #1, The Forum (9:45)
Speakers: Robert Reich, Bruce Jentleson, Rudy Dornbush
9:45a Panel Discussion #2, The Forum
Speakers: Carl Sagan, Al Gore, Jr.
10:45a Break
11:00a Panel Discussion #3, The Forum
Speakers: Bob Squier, Doug Bailey, Chris Matthews
12:00n Free time until 6:30pm
6:45p Buses Depart
7:30p Cocktails & Dinner, The Lyceum, Entertainment: Bob Somerby and the Capital Steps

SCHEDULE FOR SUNDAY, OCTOBER 15, 1989

9:30a Working Breakfast, Ballroom I;
Speakers: Johnny Hayes, Peter Knight, Al Gore, Carter Eskew, Ed Lazarus
11:00a Guest Check-out

SCHEDULE FOR MONDAY, OCTOBER 16, 1989

HAPPY BIRTHDAY BARBARA KELLY!

10:00a Mtg w/Michael Adler of AIPAC c: Tom Sands (305) 590-1170 (Leon/Aaron)
10:30a Mtg Senator Learco Saporito, Deputy Minister for Universities, Science and Technology and Head of Space c: Dr. Orzelesi 328-5511
11:10a Speech on Organ Transplants for the Institute of Medicine at

National Academy of Sciences (Jerry)(11:40)
12:00n World Food Day Event c: Patricia Young 653-2404 (Marla)(3)
3:00p Jane Hopkins (6)
6:15p Mtg Steve Owen c: 602 351 8065

SCHEDULE FOR TUESDAY, OCTOBER 17, 1989

11:30a Briefing - Digital Globe Project/Lou Belcher w/ERIM
(Mike Nelson/Carol)
12:30p Democratic Luncheon (2)
2:00p Mtg Carter, Bob, Frank, Roy, Carol, Leon, Marla, Rick
c: Cynthia Kelly 547 4970 (3)
3:30p Video Interview re: Global Warming (Marla)(4)
4:00p Mtg w/Sumner Co. Resource Authority re: recycling
c: George Phillips 726-5600, 882-8822 (Jerry)
4:30p Courtesy Visit - Judge Bill Hanbery of Florence c: Cindy
205 760 5804 (Aaron)
5:00p Economic Seminar c: Johnathan Sallett 833-5126 (7)

SCHEDULE FOR WEDNESDAY, OCTOBER 18, 1989

8:00a Separate 30 Min Mtgs w/ Sarah's Teacher, Miss Malone, and
Albert's Teacher, Miss Hill at the Oakridge School
c: Kathy 358-5840 (9)
10:30a CRS Seminar on Computers and Emergency Mtg w/Chartand
SR253 (Mike Nelson)(11:15)
2:30p Mtg with Drs. Johnson and Leahey from the U of TN, Memphis
re: Health Care, ETS, and Resource Based Value Scales
c: Mrs. York (901) 528 5765 (Jerry) should meet w/Jerry
4:30p Family Photos at Al's house (5:30)

SCHEDULE FOR THURSDAY, OCTOBER 19, 1989

HAPPY BIRTHDAY, ALBERT!

9:30a Hearing on Ozone Bill c: Linda Lance 40415 (Rick/Carol)(12:30)
2:00p Photo on Senate Steps w/Foreign Students from Carson Newman
College (Shawn)
3:00p 1990 Nat'l Prayer Breakfast Committee Mtg, EF-100 Capitol
c: Cheryl 40476

SCHEDULE FOR FRIDAY, OCTOBER 20, 1989

9:30a OSTP Nomination Hearing Wyngaarten and Ratchford for Associate
Directorships (Pat Windham)(11)(tbc)

SCHEDULE FOR SATURDAY, OCTOBER 21, 1989

151 Day

S. 201

THE WORLD ENVIRONMENT POLICY ACT OF 1989

SUMMARY

TITLE I: COUNCIL ON WORLD ENVIRONMENTAL POLICY

To replace the Council on Environmental Quality with a new Council on World Environmental Policy better able to coordinate research and policy making and, to introduce a global perspective to research and policy-making activities.

TITLE II: SCIENTIFIC RESEARCH AND PUBLIC AWARENESS

U.S. support of the International Geosphere-Biosphere Program, an international scientific effort that will provide new insights into the processes of global change;

Support of IGBP effort to study Antarctica's role in global change and for corresponding research on the Arctic and tropical forests;

Support of NASA's Mission to Planet Earth initiative;

Designates 1990 the "International Year of the Greenhouse Effect" to focus and promote attention on the issue, and on research and policy findings.

TITLE III: REGULATION AND PHASE OUT OF EMISSIONS THAT DEGRADE THE ENVIRONMENT

Provides for a freeze, effective Jan. 1, 1990, on the production of ozone-depleting chemicals at 1986 production levels. A gradual phase-out follows with complete phaseout of the six most damaging chemicals by 1996, with exceptions for medical and national security reasons.

Instructs the EPA, NASA, and NOAA to identify methane emission sources, analyze methane's role in global change processes, and recommend methods for controlling emissions;

Amends the Solid Waste Disposal Act to minimize emissions of methane from landfills.

Provides for the control of other trace greenhouse gases, such as ground level ozone.

TITLE IV: VEHICLE FUEL EFFICIENCY IMPROVEMENTS

Mandates improvements in fuel economy standards for passenger cars and light trucks.

TITLE V: WASTE MINIMIZATION AND RECYCLING

Creates research program to examine alternatives for recycling;

Establishes clearinghouse for information on existing, successful recycling programs;

Establishes national education program on waste minimization and recycling.

Program for complete phase-out of non-recyclable packaging within five years (prohibits, five years after enactment, production and distribution of any products primarily used as packaging that cannot be recycled, exceptions for biodegradable, photodegradable or naturally degradable goods, and where the EPA administrator determines recycling is not feasible or threatens national security), federal standards, implementing authority with the states.

TITLE VI: THE WORLD BANK AND SUSTAINABLE ECONOMIC DEVELOPMENT

Directs Secretary of the Treasury to work with major contributors to the World Bank, and with Bank leadership, to develop a method to assess, for major donor governments, the environmental soundness of lending projects prior to final approval by the Bank.

TITLE VII: ASSISTANCE TO INTERNATIONAL FAMILY PLANNING ORGANIZATIONS

Return U.S. policy to pre-1984, to provide support for family planning efforts.

TITLE VIII: BIODIVERSITY

Establishes national policy for the conservation of biological diversity;

Requires assessments of the effects on biological diversity in all evaluations of the environmental impacts of all federal actions;

Establishes a federal strategy for preserving biological diversity and coordinates that effort among federal, state, and private initiatives;

Undertakes study of nation's biological diversity and supports basic research.

TITLE IX: REPLANTING AND CONSERVING THE WORLD'S FORESTS

Phased-in import ban of tropical wood products other than those obtained from regimes of sustained yield management, principle consuming nations support lending facility to help producers of tropical woods establish sustained yield management systems;

Instructs AID Director to assess potential gains and costs of a program to help small land holders with the capital needed to make improvements that could stop global deforestation, intent is to expand the use of the Micro Enterprises Act as a channel to bring such aid directly to small landholders;

Provide report identifying the potential for expanded areas of reforestation around the world, an estimate of costs and a plan for allocating those costs internationally;

Directs the Secretary of State to propose to the government of Brazil that the Brazilians take the lead in protecting the Amazon Basin by convening a conference focused on identifying programs to conserve the Basin's resources;

Includes finding that the major industrial nations should be prepared to consider substantial material contributions toward that end;

Congress directs the U.S. directors of multilateral development banks to urge reconsideration of and restraint in lending that would exacerbate deforestation.

TITLE X: INTERNATIONAL COOPERATION

Promotes U.S. participation in international initiatives and global environmental problems such as those initiated under the auspices of the United Nations.

##

S. 870
Consumer Ozone Protection Act of 1989

SUMMARY: The Bill would label, regulate, and -- in some cases -- eliminate the sale of certain consumer products that contain manmade substances that have been shown to deplete the stratospheric ozone layer. In addition, it promotes the development of a Chlorofluorocarbon and Halon Reclamation Plan for the purpose of encouraging recapture and recycling of ozone-depleting substances.

SPECIFIC PROVISIONS INCLUDE:

o Mobile Air Conditioners.

- Regulates auto air conditioner servicing, to ensure that chlorofluorocarbons (CFCs) are recaptured and recycled, and not unnecessarily vented to the atmosphere. (About 30% of U.S. emissions of CFC-12 originate from auto air conditioners, and three-quarters of those emissions occur during maintenance and recharging.)

- Eliminates the sale of CFC-containing air conditioner recharge cannisters smaller than 30 pounds. (This provision is intended to limit the sale of CFC-containing air conditioner fluid to bulk purchasers -- servicers -- only.)

- Requires that any servicer who recharges an auto air conditioner with CFC-containing fluids, first test the system for leaks and repair those leaks.

o Fire Extinguishers for Consumer Applications.

- Eliminates the sale of fire extinguishers that contain ozone-depleting substances for consumer applications, except for those applications required by Federal law.

o Nonessential Consumer Products Containing Chlorofluorocarbons.

- Eliminates the sale of certain nonessential CFC-containing consumer products (e.g., party streamers, noise horns, certain cleaning fluids.)

o Labeling.

- Labels consumer products that contain ozone-depleting chemicals, or use such chemicals in their manufacture or operation. The label would warn that the product's contents or manufacturing process pose a danger to

the stratospheric ozone layer, and that depletion of the ozone layer could lead to increased risk of skin cancer and damage to natural systems, including food production.

o Chlorofluorocarbon and Halon Reclamation Plan.

- Calls for a Chlorofluorocarbon and Halon Reclamation Plan, for the purpose of determining the most effective way to ensure widespread reclamation, recycling, or regulated disposal of the ozone-depleting chemicals covered by the Act,

-Referred to Commerce Committee.

###

S. 871
Ozone Layer Conservation Act of 1989

SUMMARY: The Bill calls for a manufacturers' excise tax on certain chemicals that deplete the stratospheric ozone layer; establishes an Ozone Layer Conservation Trust Fund in the Treasury Department; and directs half of the revenues from the excise tax into the Trust Fund for the purpose of promoting research, development, and market incentives for technological alternatives to ozone-depleting chemicals.

SPECIFIC PROVISIONS INCLUDE:

o Manufacturers' Excise Tax on Chemicals that Deplete the Stratospheric Ozone Layer.

- Amends the Internal Revenue Code of 1986 to impose a manufacturers' excise tax on certain chemicals that deplete the stratospheric ozone layer. The amount of the tax is adjusted for each chemical, depending upon the chemical's potential for depleting stratospheric ozone.

- A similar bill has been introduced in the House of Representatives by Rep. Stark, with 59 co-sponsors; according to a Joint Committee on Taxation study, this measure would raise 0.4 billion in the first year, 0.8 billion in the second year, 1.1 billion in the third year, 1.3 billion in the fourth year, and 1.5 billion in the fifth year.

o Ozone Layer Conservation Trust Fund.

- Would receive one-half of the revenues from the manufacturers' excise tax.

- Expenditures from the Trust Fund would provide for government-industry cooperation in research, development, and market incentives for non-ozone-depleting chemical and technological alternatives (such as new refrigerator and air conditioner designs) to ozone-depleting substances.

- In addition, the federal government would investigate the means by which it might assist United States manufacturers of such alternative technologies, in exporting the equipment for applications in developing and developed countries.

-Referred to Finance Committee.

###

S. 872
Upper-Ozone Chemicals Act of 1989

SUMMARY: The Bill provides for a five-year phaseout of six substances that deplete the stratospheric ozone layer (CFC-11, CFC-12, CFC-113, halon-1211, halon-1301, carbon tetrachloride), and a ten-year phaseout of other ozone-depleting substances (CFC-22, CFC-114, CFC-115, methyl chloroform, methylene chloride), with exceptions for medical and national security reasons. There are provisions for certifying that nations from which we import products that contain ozone-depleting chemicals have a similar phaseout program in place, and a requirement for safe disposal of ozone-depleting substances. Finally, the bill calls for developing a safe alternatives policy, for replacing the substances to be phased out with chemicals, product substitutes, or alternative manufacturing processes that reduce overall risk to public health and the environment.

SPECIFIC PROVISIONS INCLUDE:

o A Production Phaseout.

- Five-year phaseout for CFC-11, CFC-12, CFC-113, halon-1211, halon-1301, carbon tetrachloride.
- Ten-year phaseout for CFC-22, CFC-114, CFC-115, methyl chloroform, and methylene chloride.
- There is an exception to the production phaseout for medical and national security reasons.

o Certification of Equivalent Foreign Phaseout Programs.

- Requires certification by the Secretary of State that foreign countries have equivalent phaseout programs in place before allowing their products that contain or are manufactured with ozone-depleting substances, to be exported to the United States.

o Disposal of Ozone-Depleting Substances, and of Products That Contain Ozone-Depleting Substances.

- Requires ozone-depleting substances to be disposed of in a way that ensures that the substances will not be released to the environment.
- Requires that ozone-depleting substances be removed from appliances, machines, or other goods before those goods are disposed of, and that the substances be disposed of as indicated above.

o Safe Alternatives Policy.

- Establishes the policy that the substances to be phased out will be replaced, to the maximum extent possible, by chemicals, product substitutes, or alternative manufacturing processes that reduce overall risks to public health and the environment.

- Calls on EPA to review and report on the alternatives being considered, and assess their risks to public health and the environment.

-Referred to Environment and Public Works Committee.

###

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101ST CONGRESS
1ST SESSION

S. 1052

To regulate equipment used for servicing motor vehicle air conditioners, to restrict the sale of chlorofluorocarbons and motor vehicles with air conditioners that use chlorofluorocarbons, to require reports on the use of chemicals which deplete the ozone layer in the stratosphere, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MAY 18 (legislative day, JANUARY 3), 1989

Mr. KERRY (for himself, Mr. LEAHY, and Mr. GORE) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

A BILL

To regulate equipment used for servicing motor vehicle air conditioners, to restrict the sale of chlorofluorocarbons and motor vehicles with air conditioners that use chlorofluorocarbons, to require reports on the use of chemicals which deplete the ozone layer in the stratosphere, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the "Motor Vehicle Air Condi-
5 tioner Ozone Depletion Act".

1 (b) CONFORMING AMENDMENT.—Subsection (b) of sec-
 2 tion 4251 is amended to read as follows:

3 “(b) COMMUNICATIONS SERVICES.—For purposes of
 4 subsection (a), the term ‘communications services’ means—

5 “(1) local telephone service,

6 “(2) toll telephone service, and

7 “(3) teletypewriter exchange service.”

8 SEC. 11506. EXCISE TAX ON SALE OF CHEMICALS WHICH DE-
 9 PLETE THE OZONE LAYER AND OF PRODUCTS
 10 CONTAINING SUCH CHEMICALS.

11 (a) IN GENERAL.—Chaper 38 (relating to environmen-
 12 tal taxes) is amended by adding at the end thereof the follow-
 13 ing new subchapter:

14 “Subchapter D—Ozone-Depleting Chemicals, Etc.

“Sec. 4681. Imposition of tax.

“Sec. 4682. Definitions and special rules.

15 “SEC. 4681. IMPOSITION OF TAX.

16 “(a) GENERAL RULE.—There is hereby imposed a tax
 17 on—

18 “(1) any ozone-depleting chemical sold or used by
 19 the manufacturer, producer, or importer thereof, and

20 “(2) any imported taxable product sold or used by
 21 the importer thereof.

22 “(b) AMOUNT OF TAX.—

23 “(1) OZONE-DEPLETING CHEMICALS.—

1 “(A) IN GENERAL.—The amount of the tax
2 imposed by subsection (a) on each pound of ozone-
3 depleting chemical shall be an amount equal to—

4 “(i) the base tax amount, multiplied by

5 “(ii) the ozone-depletion factor for such
6 chemical.

7 “(B) BASE TAX AMOUNT.—Except as pro-
8 vided in subsection (c), the base tax amount for
9 purposes of subparagraph (A) with respect to any
10 sale or use during a calendar year is the amount
11 determined under the following table for such cal-
12 endar year:

“Calendar year:

	Base tax amount:
1990 or 1991.....	\$1.10
1992.....	1.60
1993 or thereafter.....	3.10.

1.30
1.80
3.30

13 “(2) IMPORTED TAXABLE PRODUCT.—

14 “(A) IN GENERAL.—The amount of the tax
15 imposed by subsection (a) on any imported taxable
16 product shall be the amount of tax which would
17 have been imposed by subsection (a) on the ozone-
18 depleting chemicals used as materials in the man-
19 ufacture or production of such product if such
20 ozone-depleting chemicals had been sold in the
21 United States for use in the manufacture or pro-
22 duction of such imported taxable product.

1990 - #1

1991 - #2

1992 - #3

1993 - #4

1994 -

therefore, \$5

1 “(B) CERTAIN RULES TO APPLY.—Rules
2 similar to the rules of paragraphs (2) and (3) of
3 section 4671(b) shall apply.

4 “(c) INFLATION ADJUSTMENT OF BASE TAX
5 AMOUNT.—

6 “(1) IN GENERAL.—In the case of any article
7 sold or used in a calendar year after 1990, the base
8 tax amount applicable to such year under subsection (b)
9 shall be the amount (determined by the Secretary)
10 equal to—

11 “(A) the dollar amount specified in subsec-
12 tion (b)(1)(B) for such calendar year, increased by

13 “(B) the product of—

14 “(i) the dollar amount so specified, and

15 “(ii) the inflation adjustment for such
16 calendar year.

17 (2) INFLATION ADJUSTMENT.—

18 “(A) IN GENERAL.—For purposes of para-
19 graph (1), the inflation adjustment for a calendar
20 year is the percentage (if any) by which—

21 “(i) the applicable price index for the
22 preceding calendar year, exceeds

23 “(ii) the applicable index for 1989.

24 “(B) APPLICABLE PRICE INDEX.—For pur-
25 poses of subparagraph (A), the applicable price

1 index for any calendar year is the average of the
 2 producer price index for basic inorganic chemicals
 3 (as published by the Secretary of Labor) for the
 4 months in the 12-month period ending on Septem-
 5 ber 30 of such calendar year.

6 “(3) ROUNDING.—If any increase determined
 7 under paragraph (1) is not a multiple of 10 cents, such
 8 increase shall be rounded to the nearest multiple of 10
 9 cents (or if such increase is a multiple of 5 cents, such
 10 increase shall be increased to the nearest multiple of
 11 10 cents).

12 “SEC. 4682. DEFINITIONS AND SPECIAL RULES.

13 “(a) OZONE-DEPLETING CHEMICAL.—For purposes of
 14 this subchapter—

15 “(1) IN GENERAL.—The term ‘ozone-depleting
 16 chemical’ means any substance—

17 “(A) which, at the time of the sale or use by
 18 the manufacturer, producer, or importer, is listed
 19 as an ozone-depleting chemical in the table con-
 20 tained in paragraph (2), and

21 “(B) which is manufactured or produced in
 22 the United States or entered into the United
 23 States for consumption, use, or warehousing.

24 “(2) OZONE-DEPLETING CHEMICALS.—

“Common name:

Chemical nomenclature:

CFC-11.....
 CFC-12.....
 CFC-113.....

trichlorofluoromethane
 dichlorodifluoromethane
 trichlorotrifluoroethane

CFC-22

"Common name:**Chemical nomenclature:**

CFC-114.....	1,2-dichloro-1,1,2,2-tetrafluoroethane
Carbon ter methyl chloroform CFC-115.....	chloropentafluoroethane
Halon-1211.....	bromochlorodifluoromethane
Methylene chloride Halon-1301.....	bromotrifluoromethane
*Halon-2402.....	dibromotetrafluoroethane.

removed language
re: Sec'y modification
to list

1 “(b) OZONE-DEPLETION FACTOR.—For purposes of
2 this subchapter, the term ‘ozone-depletion factor’ means,
3 with respect to an ozone-depleting chemical, the factor as-
4 signed to such chemical under the following table:

"Ozone-depleting chemical:	Ozone-depletion factor:
CFC-11.....	1.0
CFC-12.....	1.0
CFC-113.....	0.8
CFC-114.....	1.0
CFC-115.....	0.6
Halon-1211.....	3.0
Halon-1301.....	10.0
*Halon-2402.....	6.0.

removed language
re: Sec'y modification
to list

5 “(c) IMPORTED TAXABLE PRODUCT.—For purposes of
6 this subchapter—

7 “(1) IN GENERAL.—The term ‘imported taxable
8 product’ means any product (other than an ozone-de-
9pleting chemical) entered into the United States for
10 consumption, use, or warehousing if any ozone-deplet-
11ing chemical was used as material in the manufacture
12 or production of such product.

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13 “(2) DE MINIMIS EXCEPTION.—The term ‘im-
14ported taxable product’ shall not include any product
15 specified in regulations prescribed by the Secretary as
16 using a de minimis amount of ozone-depleting chemi-
17cals as materials in the manufacture or production

1 thereof. The preceding sentence shall not apply to any
2 product if any ozone-depleting chemical is used for pur-
3 poses of refrigeration or air conditioning, creating an
4 aerosol or foam, or electronic components.

5 “(d) EXCEPTIONS.—

6 “(1) RECYCLING.—No tax shall be imposed by
7 section 4681 on any ozone-depleting chemical which is
8 diverted or recovered in the United States as part of a
9 recycling process (and not as part of the original manu-
10 facturing or production process).

11 “(2) USE IN FURTHER MANUFACTURE.—

12 “(A) IN GENERAL.—No tax shall be imposed
13 by section 4681 on any ozone-depleting chemical
14 which is used (and entirely consumed) by the
15 manufacturer, producer, or importer thereof in the
16 manufacture or production of any other chemical.

17 “(B) CREDIT OR REFUND.—Under regula-
18 tions prescribed by the Secretary, if—

19 “(i) a tax under this subchapter was
20 paid with respect to any ozone-depleting
21 chemical, and

22 “(ii) such chemical was used (and en-
23 tirely consumed) by any person in the manu-
24 facture or production of any other chemical,

not in
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1 then an amount equal to the tax so paid shall be
2 allowed as a credit or refund (without interest) to
3 such person in the same manner as if it were an
4 overpayment of tax imposed by section 4681.

5 “(3) EXPORTS.—

6 “(A) IN GENERAL.—Except as provided in
7 subparagraph (B), rules similar to the rules of
8 section 4662(e) (other than section
9 4662(e)(2)(A)(ii)(II)) shall apply for purposes of
10 this subchapter.

11 “(B) LIMIT ON BENEFIT.—

12 “(i) IN GENERAL.—The aggregate tax
13 benefit allowable under subparagraph (A)
14 with respect to ozone-depleting chemicals
15 manufactured or produced by any person
16 during a calendar year shall not exceed the
17 sum of—

18 “(I) the amount equal to the 1986
19 export percentage of the aggregate tax
20 imposed by this subchapter with respect
21 to ozone-depleting chemicals manufac-
22 tured or produced by such person
23 during such calendar year (other than
24 chemicals with respect to which sub-
25 clause (II) applies), and

“(II) the aggregate tax imposed by this subchapter with respect to any additional production allowance granted to such person with respect to ozone-depleting chemicals manufactured or produced by such person during such calendar year by the Environmental Protection Agency under 40 CFR Part 82 (as in effect on September 14, 1989).

“(ii) 1986 EXPORT PERCENTAGE.—A person’s 1986 export percentage is the percentage equal to the ozone-depletion factor adjusted pounds of ozone-depleting chemicals manufactured or produced by such person during 1986 which were exported during 1986, divided by the ozone-depletion factor adjusted pounds of all ozone-depleting chemicals manufactured or produced by such person during 1986. The preceding sentence shall be determined based on data published by the Environmental Protection Agency.

“(e) OTHER DEFINITIONS.—For purposes of this subchapter—

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“(1) IMPORTER.—The term ‘importer’ means the person entering the article for consumption, use, or warehousing.

“(2) UNITED STATES.—The term ‘United States’ has the meaning given such term by section 4612(a)(4).

“(f) SPECIAL RULES.—

“(1) FRACTIONAL PARTS OF A POUND.—In the case of a fraction of a pound, the tax imposed by this subchapter shall be the same fraction of the amount of such tax imposed on a whole pound.

“(2) DISPOSITION OF REVENUES FROM PUERTO RICO AND THE VIRGIN ISLANDS.—The provisions of subsections (a)(3) and (b)(3) of section 7652 shall not apply to any tax imposed by this subchapter.

“(g) PHASE-IN OF TAX ON CERTAIN SUBSTANCES.—

“(1) TREATMENT FOR 1990.—

“(A) HALONS.—The term ‘ozone-depleting chemical’ shall not include halon-1211, halon-1301, or halon-2402 with respect to any sale or use during 1990.

“(B) CHEMICALS USED IN RIGID FOAM INSULATION.—No tax shall be imposed by section 4681—

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1 “(i) on the use during 1990 of any sub-
2 stance in the manufacture of rigid foam insu-
3 lation,

4 “(ii) on the sale during 1990 by the
5 manufacturer, producer, or importer of any
6 substance—

7 “(I) for use by the purchaser in the
8 manufacture of rigid foam insulation, or

9 “(II) for resale by the purchaser to
10 a second purchaser for such use by the
11 second purchaser, or

12 “(iii) on the sale or use during 1990 by
13 the importer of any rigid foam insulation.

14 Clause (ii) shall apply only if the manufacturer, produc-
15 er, and importer, and the 1st and 2d purchasers (if
16 any) meet such registration requirements as may be
17 prescribed by the Secretary.

18 “(2) TREATMENT FOR 1991, 1992, AND 1993.—

19 “(A) HALONS.—The tax imposed by section
20 4681 during 1991, 1992, or 1993 by reason of
21 the treatment of halon-1211, halon-1301, and
22 halon-2402 as ozone-depleting chemicals shall be
23 the applicable percentage (determined under the
24 following table) of the amount of such tax which
25 would (but for this subparagraph) be imposed.

“In the case of:	The applicable percentage is:		
	For sales during 1991	For sales during 1992	For sales during 1993
Halon-1211	7	5	3
Halon-1301	2	1	1
Halon-2402	4	2	1.

1 “(B) CHEMICALS USED IN RIGID FOAM IN-
2 SULATION.—In the case of a sale or use during
3 1991, 1992, or 1993 on which no tax would have
4 been imposed by reason of paragraph (1)(B) had
5 such sale or use occurred during 1990, the tax
6 imposed by section 4681 shall be the applicable
7 percentage (determined in accordance with the
8 following table) of the amount of such tax which
9 would (but for this subparagraph) be imposed.

“In the case of sales during:	The applicable percentage is:
1991	23
1992	16
1993	8.

10 “(3) OVERPAYMENTS WITH RESPECT TO CHEMI-
11 CALS USED IN RIGID FOAM INSULATION.—If any sub-
12 stance on which tax was paid under this subchapter is
13 used during 1990, 1991, 1992, or 1993 by any person
14 in the manufacture of rigid foam insulation, credit or
15 refund (without interest) shall be allowed to such
16 person an amount equal to the excess of—

17 “(A) the tax paid under this subchapter on
18 such substance, over

“(B) the tax (if any) which would be imposed by section 4681 if such substance were used for such use by the manufacturer, producer, or importer thereof on the date of its use by such person.

“(h) IMPOSITION OF FLOOR STOCKS TAXES.—

“(1) JANUARY 1, 1990, TAX.—On any ozone-depleting chemical which on January 1, 1990, is held by any person (other than the manufacturer, producer, or importer thereof) for sale or for use in further manufacture, there is hereby imposed a floor stocks tax in an amount equal to the tax which would be imposed by section 4681 on such chemical if such chemical were sold during 1990 by the manufacturer, producer, or importer thereof.

“(2) OTHER TAX-INCREASE DATES.—

“(A) IN GENERAL.—If, on any tax-increase date, any ozone-depleting chemical is held by any person (other than the manufacturer, producer, or importer thereof) for sale or for use in further manufacture, there is hereby imposed a floor stocks tax.

“(B) AMOUNT OF TAX.—The amount of the tax imposed by subparagraph (A) shall be the excess (if any) of—

“(i) the tax which would be imposed under section 4681 on such substance if such substance were sold on the tax-increase date by the manufacturer, producer, or importer thereof, over

“(ii) the prior tax (if any) imposed by this subchapter on such substance.

“(C) TAX-INCREASE DATE.—For purposes of this paragraph, the term ‘tax-increase date’ means January 1 of 1991, 1992, 1993, and 1994.

“(D) SPECIAL RULE FOR JANUARY 1, 1994, TAX-INCREASE DATE.—In the case of the January 1, 1994, tax-increase date, the tax imposed by subparagraph (A) shall apply only to ozone-depleting chemicals with respect to which the prior tax (if any) was determined under subsection (g).

“(3) DUE DATE.—The taxes imposed by this subsection on January 1 of any calendar year shall be paid on or before April 1 of such year.

“(4) COORDINATION WITH PHASE-IN OF TAX ON CERTAIN CHEMICALS.—

“(A) JANUARY 1, 1990, TAX.—The tax imposed by paragraph (1) shall not apply to—

“(i) halon-1211, halon-1301, and halon-2402, or

“(ii) any substance held by any person who could acquire, sell, or use such substance free of tax during 1990 by reason of subsection (g)(1)(B).

“(B) JANUARY 1, 1991, TAX.—In the case of the January 1, 1991, tax-increase date, paragraph (2) shall apply only to—

“(i) halon-1211, halon-1301, and halon-2402, and

“(ii) any substance held by any person free of tax by reason of subsection (g)(1)(B).

“(5) APPLICATION OF OTHER LAWS.—All other provisions of law, including penalties, applicable with respect to the taxes imposed by section 4681 shall apply to the floor stocks taxes imposed by this subsection.”

(b) CLERICAL AMENDMENT.—The table of subchapters for chapter 38 is amended by adding at the end thereof the following new item:

“SUBCHAPTER D. Ozone-depleting chemicals, etc.”

(c) EFFECTIVE DATE.—

(1) IN GENERAL.—The amendments made by this section shall take effect on January 1, 1990.

(2) NO DEPOSITS REQUIRED BEFORE APRIL 1, 1990.—No deposit of any tax imposed by subchapter D of chapter 38 of the Internal Revenue Code of

1 1986, as added by this section, shall be required to be
2 made before April 1, 1990.

3 SEC. 11507. AMENDMENTS RELATED TO EXCISE TAX ON VAC-
4 CINES AND VACCINE INJURY COMPENSATION
5 TRUST FUND.

6 (a) INACTIVATED POLIO VIRUS VACCINE EXEMPT
7 FROM TAX.—Paragraph (5) of section 4132(a) (defining
8 polio vaccine) is amended by adding at the end thereof the
9 following new sentence: “Such term shall not include any
10 inactivated polio vaccine sold by the manufacturer, producer,
11 or importer after the last day on which any injury or death
12 resulting from the administration of such vaccine on such day
13 is eligible for compensation from the Vaccine Injury Compens-
14 sation Trust Fund.”

15 (b) AUTHORITY TO PAY ADMINISTRATIVE EXPENSES
16 FROM TRUST FUND.—

17 (1) IN GENERAL.—Paragraph (1) of section
18 9510(c) (relating to expenditures from Vaccine Injury
19 Compensation Trust Fund) is amended by inserting
20 before the period at the end thereof the following: “, or
21 for the payment of all expenses of administration (but
22 not in excess of \$6,000,000 for any fiscal year) in-
23 curred by the Federal Government in administering
24 such subtitle”.

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United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

WASHINGTON, DC 20510-8175

For Immediate Attention

October 11, 1989

Dear Colleague:

We are writing to alert you that one of the most significant environmental votes of this decade may occur during consideration of the Fiscal Year 1990 reconciliation measure. During Senate debate, absent a leadership effort on the reconciliation measure, it is likely that a point of order will be raised under the "Byrd Rule" to strike provisions of the Environment and Public Works Committee title concerning regulation of chlorofluorocarbons (CFCs) and other ozone depleting chemicals.

The President's budget for FY90 explicitly calls for capturing the market value of limited rights to produce or import CFCs, estimated at \$400 million in this fiscal year. Consistent with the President's budget, and budget instructions to the Environment and Public Works Committee, we approved legislation to provide for a regulatory CFC phase-out and fee collection program on July 21, 1989 by a vote of 13-0.

There has been a great deal of misinformation circulated about this bill. Two important points require clarification.

First, this legislation did not appear out of nowhere. It was originally introduced in February 1987, almost three years ago, and again in this Congress on March 2, 1989. Since it was first introduced, the Environment and Public Works Committee has held six days of hearings, the most recent on May 19, 1989. We received testimony from all affected parties and numerous scientific experts. This has been a very open process and no one can accuse us of rushing to judgment.

Secondly, despite representations to the contrary, this bill does not ban the production of alternatives known as HCFCs. The controls in this bill will allow HCFC production to grow, while at the same time, bringing atmospheric chlorine levels back down to 1985 levels by the middle of the next century.

The severity of ozone depletion and the related issue of global climate change cannot be overstated. Last Friday, the Washington Post reported on the scientific assessment of the seasonal hole in the ozone layer over Antarctica this year. NASA scientists estimate that this year's hole covers 10 million square miles, with ozone depletion occurring at the rate of 1.5 percent per day. It is believed that this year's ozone depletion will match the 1987 level when nearly 50 percent of the Antarctic ozone layer was destroyed.

As the single largest producer and consumer of CFCs and other ozone depleting chemicals, the United States has an obligation to act soon, and decisively, to phase-out production and use of these substances as rapidly as possible, while also fostering development and transition to safe substitutes.

As stated in a letter being circulated by environmental groups in support of this legislation,

...enactment of this bill is the first concrete action Congress can take to reduce the global threats of ozone depletion and the greenhouse effect.

Therefore, absent a leadership effort on the reconciliation measure, should the germaneness or "extraneity" of the CFC control provisions be challenged, we urge you to support our efforts to assure that they remain in the bill.

Sincerely,



John H. Chafee
Ranking Minority Member



Quentin N. Burdick
Chairman



Max Baucus
Chairman
Subcommittee on
Environmental Protection

REPORT TO ACCOMPANY
TITLE IV -- ENVIRONMENT AND PUBLIC WORKS
SUBTITLE A -- ATMOSPHERIC POLLUTION FEES

GENERAL BACKGROUND

Fees

The President's budget recommendation for FY 1990 proposed the development and implementation of a system to charge market value for the limited rights to produce or import chlorofluorocarbons (CFCs) and other ozone depleting chemicals. These limited rights are the result of the Montreal Protocol on Substances that Deplete the Ozone Layer (the Protocol) [an international agreement negotiated and signed in 1987 and ratified by the United States in March 1988] and U.S. Environmental Protection Agency (EPA) regulations that have been promulgated under authority of the Clean Air Act to implement the Protocol.

CFCs and the other chemicals covered by the Protocol are persistent chemicals that rise into the stratosphere where they catalyze the destruction of stratospheric ozone. Stratospheric ozone is the Earth's main shield against ultraviolet (UV) radiation. A decrease in stratospheric ozone will allow more UV radiation to reach Earth, resulting in health and environmental damage, including increased incidence of skin cancer.

Signatories to the Protocol, including the United States, agreed to respond to this threat by imposing limits on what previously had been unlimited rights to produce, import and consume CFCs and other ozone depleting substances. Production of CFCs and related substances is being curtailed worldwide because of the risks that current production levels pose to human health and the environment. The Protocol requires industrialized countries such as the United States to limit CFC consumption, beginning in 1989, and to reduce CFC consumption 50 percent by 1998.

EPA has promulgated regulations under the authority of the Clean Air Act to implement the Montreal Protocol. Current EPA regulations assign production and importation privileges to firms based on each firm's 1986 levels of production and importation. The scarcity of CFCs brought about by the production and importation restrictions required to carry out the Protocol are predicted to result in a significant rise in CFC prices.

The Administration has been considering several mechanisms to charge market value for the limited rights to produce or import CFCs, including permit fees at a level designed to reflect the market value of CFC production and importation privileges or, as an alternative, periodic auctions of the limited rights. Such systems to charge market value are estimated by the

Administration to produce \$400 million in FY 1990, \$1.35 billion in '91, \$550 million in '92, \$625 million in '93, and \$950 million in '94.

The Senate Budget Resolution and the Committee on Environment and Public Work's reconciliation instructions accepted the President's assumption of capturing the market value for the limited rights to produce or import CFCs in FY 1990 and the estimate that such market value is \$400 million. EPA's regulations implementing the Protocol will limit CFC production and importation in the United States to 670 million pounds in FY 1990. As such, unless the limited production and importation rights are allocated through periodic auctions, a production and importation fee of 60 cents per pound is necessary to capture the \$400 million market value of the limited production and importation rights.

The legislation approved by the Environment Committee is modeled after S. 503, Senator Baucus' Chlorofluorocarbon and Halon Reduction Act of 1989, a bill that was introduced and referred to the Environment and Public Works Committee on March 2, 1989. That bill was the subject of a hearing before the Subcommittee on Environmental Protection on May 19, 1989 and, as approved by the Committee, establishes a base fee of 60 cents per pound to be paid in exchange for the limited right to produce or import certain CFCs.

In a memorandum dated April 14, 1989, the U.S. Department of Justice Office of Legal Counsel's Assistant Attorney General concluded that EPA has the authority under the Clean Air Act to allocate production privileges for CFCs through an auction or other market pricing mechanisms, such as a regulatory fee. That is a correct reading of the law.

As noted in the Justice Department memorandum, EPA's authority to restrict or prohibit the production of CFCs derives from section 157(b) of the Clean Air Act (42 U.S.C. 7457(b)). Once the decision has been made to cap the production of CFCs with allowances, a method for allocating the allowances is necessary. The memorandum goes on to note that auctions and historically based allocations with fees merely constitute different methods of allocating the allowances. Under the existing EPA rule of allocated quotas, the allowances are distributed on historical grounds.

The memorandum continues to observe that, unless a fee is charged for the allowance, the effect of the existing rule is to make a "gift" of the allowances to firms which have produced CFCs in the past. The value of such a "gift" is expected to be so great that CFC producers who are the most likely developers of substitutes

will, as long as the "gift" of the production or importation allowance is free, have an incentive to delay the introduction of safe substitutes that will be less profitable.

Notwithstanding EPA's existing statutory authority to allocate production privileges for CFCs through auctions or quotas with regulatory fees, the legislation reported by the Environment Committee establishes a statutory fee system to charge market value for the limited production rights to produce or import CFCs and other ozone depleting chemicals.

Requiring the payment of fees to the Government in an amount approximating the market value of limited production and importation rights in exchange for such limited rights will: supplement the regulations and controls applicable to CFCs and other ozone depleting substances pursuant to the Protocol, the Clean Air Act, and the Stratospheric Ozone and Climate Protection Act included as part of this legislation; eliminate the disincentive for the introduction of safe but less profitable substitutes that a quota system alone creates; and produce revenues to offset Government expenses associated with implementation of regulatory restrictions on production and use of CFCs and other ozone depleting chemicals pursuant to the Stratospheric Ozone and Climate Protection Act.

Controls and Assessments

Two distinct but closely related global environmental crises are destruction of the stratospheric ozone layer, Earth's main shield against the sun's harmful ultraviolet radiation, and massive, uncontrolled global climate change associated with intensification of the greenhouse effect.

Destruction of the ozone layer is caused primarily by the release of chlorofluorocarbons (CFCs) and similar manufactured substances into the atmosphere. The threat of uncontrolled global climate change is caused by the accelerating accumulation of greenhouse gases in the atmosphere, primarily carbon dioxide, CFCs and methane.

Carbon dioxide emissions account for an estimated 50% of current increases in the commitment to global warming. CFCs are estimated to account for 15 to 20% of current increases in the commitment to global warming, however, each molecule of CFC has approximately twenty thousand times more impact on global climate than does a single molecule of carbon dioxide. Similarly, emissions of methane account for an estimated 20% of current increases in the commitment to global warming and each molecule of methane has approximately twenty-five times more impact on global climate than a molecule of carbon dioxide.

The predicted environmental impacts of an intensified greenhouse effect include:

- an increase in the global average temperature of 1.5 to 5.5 degrees Centigrade (2.7 to 9.9 degrees Fahrenheit) over the next 40 to 60 years (to be compared with an average increase of less than 3 degrees Fahrenheit over the last 10,000 years) and continuing increases at an equally alarming rate in succeeding years;
- the extinction of numerous species of plants and animals and significant interference with natural evolutionary responses;
- reduced soil moisture content and altered storm patterns that may seriously disrupt the U.S agricultural industry; and
- a rise in sea level of 1 to 4 feet over the next 60 years and continuing sea level rise in succeeding years.

It is easy to overstate the uncertainty that surrounds this issue. It is true that scientists disagree about matters such as whether the greenhouse effect has already begun. Similarly, there is no scientific consensus about the precise timing of the predicted changes. Nevertheless, there is a remarkable degree of scientific consensus concerning the threat of massive, uncontrolled global climate change. Specifically, most experts agree that if we do not change our pattern of polluting the atmosphere, many of us, our children, and our grandchildren will experience devastating climate changes of a magnitude and at a rate that will preclude natural evolutionary responses.

There appears to be consensus on another critical point. That is: by the time there is scientific proof for every detail of the problem, it will be too late to avoid the most devastating impacts of an intensified greenhouse effect and global climate change. We can ill-afford to wait for ten years of research before we take action (1) to reduce atmospheric concentrations of greenhouse gases to limit the rate and extent of future climate change, and (2) to implement adaptation strategies for coping with the changes to which we are already committed.

Failure to act on the greenhouse effect on the basis of current scientific understanding would replicate the mistake made in the early 1980's with respect to destruction of the ozone layer.

In 1974, Drs. Sherwood Rowland and Mario Molina from the University of California published a paper demonstrating how CFCs destroy ozone in the stratosphere. In this country, the original scientific theory led to the ban of CFCs in aerosols in 1978.

There were no measurements of actual ozone loss, just the scientific theory.

Recognizing the problem, industry began to look for safe substitutes. Progress was being made when, in the early 1980's, the search for substitutes came to a virtual standstill and worldwide use of CFCs continued to grow. Today, the U.S. produces approximately 700 million pounds of CFCs each year, accounting for roughly one-third of the world total. Non-aerosol uses of CFCs in the U.S. have grown to record high levels and per capita usage of CFCs in the U.S. is among the highest in the world.

In 1985, scientists discovered a significant loss of ozone over a portion of the southern hemisphere that is the size of North America. The collapse was not predicted and measurements have revealed losses greater than 50% in the total column and greater than 95% between an altitude of 15 to 20 kilometers (9 to 12 miles). The discovery of this "Hole" in the stratospheric ozone layer over Antarctica gave renewed impetus to international efforts to understand and protect the ozone layer. In September 1987, the Montreal Protocol on Substances that Deplete the Ozone Layer was negotiated and signed by more than two dozen nations. The Protocol entered into force in January 1989 and 37 nations are now Parties to the Protocol.

Since the Montreal Protocol was negotiated and signed in 1987, scientists have observed and measured losses of ozone on a global scale. It has been discovered that destruction of the ozone layer is not limited to remote, uninhabited portions of Antarctica. Losses of ozone since 1970 have been measured during the winter months on a world-wide basis, including losses ranging from 2.3% to 6.2% over densely-populated portions of the Northern Hemisphere. These measurements of actual ozone loss are significantly greater than computer models had predicted and raise serious questions about the adequacy of the control measures set forth in the Montreal Protocol and existing EPA regulations.

Destruction of the ozone layer and the increased incidence of solar ultraviolet radiation that results will cause increased rates of disease in humans (including increased rates of skin cancer, cataracts, and, potentially, suppression of the immune system). It will also threaten food crops and marine resources. Parts A and B of this legislation are necessary to supplement existing controls and the provisions of part C of this bill establishing production and importation fees. Part C of the bill will, in part, offset the Government costs of implementing existing controls and the controls provided for in this bill.

Failure to enact part A of this bill and the emission control measures for CFCs and other ozone depleting and greenhouse forcing chemicals would result in a significant contribution to aggravation of these environmental problems. Not only would the United States continue to pour almost 700 million pounds of new CFCs into the atmosphere on an annual basis, domestic sources would be releasing all of the CFCs produced in past years that are currently contained in products all across the country. Assuming the phase-out schedule in the bill is adopted and not accelerated by the Administrator, just new production of CFCs between now and the year 2000 will result in the release of more than 6 billion pounds of CFCs into the atmosphere unless the emission control measures set forth in this bill are enacted.

By waiting for measurements of actual ozone loss, by failing to take appropriate action on the basis of credible, undisputed scientific theory, governments around the world allowed a manageable environmental threat to become an environmental crisis. As a result of atmospheric lag time and the persistence of CFCs and similar ozone depleting and greenhouse forcing gases, it is too late to prevent additional damage to the ozone layer or anthropogenically-induced global climate change. Our challenge is to take action as rapidly as possible that will, to the greatest extent possible, (1) reduce the threat of additional damage to the ozone layer and (2) reduce the rate and magnitude of anthropogenically-induced global climate change.

DISCUSSION

Subtitle A of Title IV of this reconciliation legislation shall be known as The Stratospheric Ozone and Climate Protection Act of 1989. The subtitle begins by emphasizing the facts that (1) the ozone depleting chemicals subject to controls under this Act are also powerful greenhouse gases and that (2) this Act will help address two related but distinct environmental problems -- global climate change resulting from an intensified greenhouse effect and destruction of the stratospheric ozone layer.

The Act is divided into three parts:

- A -- Control of Chlorofluorocarbons and Other Manufactured Substances;
- B -- Methane Assessment; and
- C -- Offset of Government Expenses Associated with Implementation of Regulatory Controls and Imposition of Production, Importation and Distribution Fees on Ozone-Depleting Chemicals.

A discussion of Part C is in the preceding general background section. A discussion of Parts A and B and a section-by-section analysis of the entire bill follows.

Part A -- Control of Chlorofluorocarbons and Other Manufactured Substances.

This portion of the Act is modeled after the Chafee/Baucus bill, S. 491, with the addition of provisions on: motor vehicle air-conditioning, modeled after the Jeffords/Leahy and Kerry bills, S. 1035 and S. 1052; fire extinguishers and nonessential consumer products, modeled after the Gore bill, S. 870; and safe alternatives, modeled after the McCain and Gore bills, S. 644 and S. 872. The Subcommittee on Environmental Protection held a hearing on May 19, 1989 to receive testimony on S. 491 and related legislation.

Part A of the Act has six main elements:

first, it establishes as a national policy that the production and use of the five most destructive chlorofluorocarbons (CFCs) [11, 12, 113, 114, and 115], the halons, and carbon tetrachloride should be reduced and eliminated "as expeditiously as possible". The Act directs the Administrator to implement a phase-out schedule to control, reduce and eliminate production more rapidly than the schedule set forth in the Act if (1) new information suggests such an accelerated schedule may be necessary, (2) the Administrator determines, based on the availability of substitutes, that an accelerated schedule is attainable, or (3) the Montreal Protocol on Substances that Deplete the Ozone Layer is modified to include a schedule that is more stringent than that included in the Act;

second, subject to acceleration by the Administrator as outlined above, the Act places the five most destructive CFCs on a production phase-down schedule that tracks the Montreal Protocol (20% reduction in 1993 and 50% reduction in 1998), and adds an additional step: virtual elimination by not later than 2000;

third, where the Protocol will only freeze production of the halons and does not regulate carbon tetrachloride at all, powerful ozone depleters, the Act puts these chemicals on the same phase-out schedule as the most harmful CFCs;

fourth, where the Montreal Protocol will allow unlimited growth in the production and use of other, less potent ozone depleting chemicals and, in turn, continue the threat to the

ozone layer, the Act places a limit on the growth of such chemicals by requiring that total ozone depletion potential be reduced by 95% between now and 2010;

fifth, the Act includes a supplement to the production phase-out: recognizing that it would be extremely difficult to eliminate all production and use of ozone depleting and greenhouse chemicals on a 2 to 3 year time frame, the Act provides for significant reductions in the emissions that are destroying the ozone layer and contributing to the greenhouse effect; to achieve this--

- the practice of venting or releasing these chemicals from refrigeration and air-conditioning units into the environment will be prohibited as of January 1, 1992;
- labeling, recapture, recycling and safe disposal will be required;
- EPA is directed to promulgate standards for control of emissions to the lowest achievable rate and for the use of alternative substances; and
- specific limitations and controls are prescribed for motor vehicle air-conditioning systems (including prohibitions, effective January 1, 1991, on the sale of do-it-yourself CFC canisters and, effective with model year 1994, on the sale of motor vehicle air-conditioning systems that are dependent on CFC-12 as a refrigerant), halon fire extinguishers for consumer applications (a ban on sale and distribution, effective 2 years after enactment), and nonessential consumer products containing CFCs (a ban on sale and distribution of items such as CFC-propelled plastic party streamers and noise horns, effective 1 year after enactment); and

sixth, twelve months after this Act becomes law, importation of the five most destructive CFCs, halons and carbon tetrachloride in bulk or in products will be prohibited unless EPA certifies that the country of origin is implementing a phase-out and regulatory control program that is as stringent as ours; and persons subject to U.S. jurisdiction will be prohibited from transferring technology or investing in facilities to produce or use such substances in countries that have not been certified.

The importance of (1) phasing out the most harmful ozone depleting chemicals and (2) controlling growth in other, less potent ozone depleting substances was graphically demonstrated by testimony presented to the Committee by EPA on May 19, 1989. Subsequent analysis has produced the following estimates of total atmospheric chlorine concentrations under various scenarios.

In 1985, the year the "Hole" over Antarctica was discovered, total atmospheric chlorine concentrations were 2.7 parts per billion (ppb). Under the provisions of the Montreal Protocol as currently written, chlorine concentrations are projected to reach more than 12 ppb by the year 2075, approximately 14 ppb by 2100, and will continue to increase. A year 2000 phase-out of just the five most destructive CFCs would yield chlorine concentrations of almost 10 ppb by 2075, more than 10 ppb by 2100 and would continue to increase. If carbon tetrachloride is added to the year 2000 phase-out, chlorine concentrations are projected to increase to almost 7 ppb by 2075 and then level off at that concentration before starting a very gradual downward trend.

If methyl chloroform is added to the year 2000 phase-out of CFCs and carbon tetrachloride, chlorine concentrations are projected to rise to approximately 4 ppb and, depending on the amount of growth in other, less potent ozone depleting chemicals and the average ozone depletion potential (ODP) of the chemicals, such concentrations may or may not return to 1985 levels by 2075. For example, if such substitutes have an average ODP of .05 and are allowed to capture 50% of what the CFC market would have been without the Protocol, chlorine concentrations will remain at approximately 4 ppb through 2100. If, however, the growth of such substitutes is controlled and market capture is limited to 20%, chlorine concentrations will decrease to around 3 ppb by the year 2075. If the average ODP of such substitutes is .02 and market capture is limited to 20%, chlorine concentrations are projected to return to the pre-1985 Antarctic "Hole" concentration of 2.6 ppb by the year 2075.

Part B -- Methane Assessment.

Part B of the Act is designed to develop information that is lacking on methane, one of the three most significant greenhouse gases (CFCs and carbon dioxide are the other two most significant greenhouse gases.) The Administrator is directed to study and report to Congress on the factors causing atmospheric concentrations of methane to increase; the sources of methane emissions; and opportunities for reducing such emissions.

Section-by-Section Analysis

Section 4001. Short Title.--

The Stratospheric Ozone and Climate Protection Act of 1989.

Section 4002. Findings.--

The Act begins by emphasizing the facts that (1) the ozone depleting chemicals subject to controls under this Act are also powerful greenhouse gases and that (2) this Act will help address two related but distinct environmental problems -- global climate change resulting from an intensified greenhouse effect and destruction of the stratospheric ozone layer.

Various findings are included regarding the nature of the problem, the status of scientific understanding and government responses, the effect such government responses will have on CFC prices, the need to impose additional controls and to charge market value in exchange for the limited rights to produce or import CFCs and other ozone depleting chemicals.

Section 4003. Objectives and National Goal.--

The objectives of this Act are to restore and maintain the chemical and physical integrity of the Earth's atmosphere, to protect human health and the global environment, and to provide a smooth transition from the use of ozone depleting chemicals to safe substitutes.

The national goal is declared to be the elimination of emissions of manufactured substances with ozone depleting potential as well as global warming potential, to reduce to the maximum extent possible emissions of other greenhouse gases, and to provide for an orderly and equitable shift to safe alternatives.

Section 4004. Definitions.--

The following terms are defined: Administrator; distributor; household appliances; import; manufactured substances; medical purposes; ozone depleting chemicals; person; producer; Secretary; and substances covered by this Act.

**PART A--CONTROL OF CHLOROFLUOROCARBONS AND OTHER
MANUFACTURED SUBSTANCES**

Section 4005. Listing of Regulated Substances.--

This section directs the Administrator to publish a "priority list" of chemicals to be phased-out, including CFCs 11, 12, 113, 114, 115, carbon tetrachloride, and halons 1211, 1301, and 2402.

The priority list is intended to include those manufactured substances that pose the greatest risk to the environment as a result of high ozone depletion potential, high global warming potential, or low ozone depletion or global warming potential but extremely high levels of emissions. The examples listed in the bill are those substances known to pose the greatest threat to the ozone layer and global climate but may not be a complete list due to the problem of "designer chemicals" (the creation of substances that are virtually identical to the listed chemicals but identified by another name). For that reason, the Administrator is authorized to add substances to the priority list. In addition to the problem of "designer chemicals", analysis of recently published or new data on the high levels of emissions of, for example, methyl chloroform, might justify the addition of one or more chemicals to the priority list. The Administrator is authorized to make such additions.

The Administrator is also directed to publish a list of other regulated substances that will be subject to a limit on total ozone depletion potential (ODP) in section 4013, including CFCs 22, 123, 124, 125, 141(b), 142(b), and, unless added to the priority list by the Administrator, methyl chloroform. Such an approach will allow production of these "other regulated substances" to increase while, at the same time, assuring that total chlorine loading of the atmosphere is reduced. As with the priority list, the Administrator is authorized to add substances to the list of other regulated substances.

Pending publication by the Administrator of ozone depletion factors (the relative destructive force of each chemical), such factors are included in the Act for purposes of computing and enforcing the section 4013 limit on ODP that is applicable to all substances covered by this Act.

Section 4006. Reporting Requirements.--

This section requires annual reporting by producers, importers and distributors of chemicals covered by this Act.

Section 4007. Production Phase-Out of Substances on the Priority List.

(a) National Policy.--

Congress declares it to be the national policy that the production and use of chemicals on the priority list be reduced and eliminated "as expeditiously as possible."

(b) Accelerated Schedule.--

The Act directs the Administrator to implement a phase-out schedule to control and reduce production more rapidly than the schedule set forth in the Act if (1) new information suggests such an accelerated schedule is necessary, (2) the Administrator determines, based on the availability of substitutes, that an accelerated schedule is attainable; or (3) the Montreal Protocol is modified to include an accelerated schedule that is more aggressive than the schedule set forth in the Act.

In keeping with the policy of eliminating these chemicals as rapidly as possible and before the year 2000, to the maximum extent practicable, the Administrator is directed to determine no less often than every eighteen months whether any of the three conditions requiring acceleration of the schedule have been satisfied.

The importance of accelerating the phase-out schedule is reflected in the estimate, presented by expert witnesses, that a phase-out in 1995 could accelerate the recovery of the stratosphere and allow atmospheric concentrations of chlorine to return to current levels approximately 20 years faster than phase-out in 2000. An additional 20 years of elevated chlorine levels presents an unacceptable risk that must be avoided if it is at all possible to do so.

(c) Schedule.--

In the absence of regulations under the preceding subsection, the Act codifies the CFC reduction schedule currently set forth in the Montreal Protocol (20% reduction in 1993 and 50% reduction in 1998), makes the schedule applicable to halons and carbon tetrachloride, and adds an additional step: virtual elimination by not later than 2000.

(d) Exception for Medical Purposes.--

The Administrator may, in consultation with the Commissioner of the Food and Drug Administration (FDA), authorize the

production of limited quantities of substances on the priority list after the year 2000 if such authorization is necessary for medical purposes.

As set forth in the definition of "medical purposes," two conditions must be satisfied as predicates to a finding under this section. First, it must be shown that no safe substitutes have been developed. Second, the drug, medical device or diagnostic product must be essential, as determined by the Commissioner of the FDA in consultation with the Administrator.

"Medical purposes" may include drugs and drug delivery systems that satisfy the criteria set forth in the Act. For example, effective treatment of acute, chronic asthma currently is dependent on an inhaled dose delivered by a CFC propellant inhaler. Unless a safe substitute exists or until a substitute is developed, such a drug delivery system may be found by the Commissioner and the Administrator to be essential. To the extent priority list substances are necessary for the manufacture of essential drug products as, for example, reactants or building blocks in the chemical synthesis of a drug active ingredient, such use may fall within the purview of the Act's conditional exceptions for "medical purposes."

Section 4008. Production Phase-Out Exception For National Security.--

The President may authorize the production and use of CFC 114 and the three halons, notwithstanding the provisions of this Act, if he finds that substitutes are not available and such production and use is necessary to protect the national security interests of the United States.

Section 4009. National Recycling and Disposal Program.--

By July 1, 1991, EPA is to promulgate standards and requirements to reduce the use and emissions of substances covered by this Act to the lowest achievable level. Such standards and requirements are expected to achieve, among other things, a reduction of at least 50 per cent in the use of nonrecycled priority list substances in the manufacture of products in which such substances are used as solvents or blowing agents. Similarly, releases associated with training, testing, leakage, or accidental discharge of such substances from fire prevention or extinguishing equipment should be reduced by at least 90 per cent.

Prior to January 1, 1994, EPA is to promulgate standards and requirements for the recapture, recycling and safe disposal of substances covered by this Act, including provisions that:

- mandate removal of these substances from products, such as refrigerators and air-conditioners, prior to disposal of the products;

- prohibit the manufacture or distribution of products containing substances covered by this Act unless such products are equipped with a servicing aperture that allows recapture during service and repair; and

- prevent, to the maximum extent practicable, the release of these substances during disposal of products in which the substances are incorporated, such as rigid and soft foams.

As of January 1, 1992, it will be unlawful for any person maintaining, servicing, repairing or disposing of a household appliance or a commercial refrigeration or air-conditioning unit to knowingly vent, release, or dispose of substances covered by this Act in a fashion which permits such substances to enter the environment. Exceptions to this prohibition are included for de minimis releases associated with good faith attempts to recapture, recycle and safely dispose of such substances.

As of July 1, 2000, it will be unlawful to use a priority list substance except for approved medical purposes and, until the year 2010, to maintain and service household appliances and commercial refrigeration and air-conditioning units.

The Administrator is directed to promulgate regulations concerning manufactured substances to assure that the greenhouse forcing potential of CFC substitutes are considered by manufacturers and users and that the problem of global climate change will not be exacerbated by the use of such substitutes. The greenhouse threat of such substances must be examined and considered both from the perspective of direct radiative effect when such substitutes are emitted into the atmosphere and from the perspective of indirect effects of substitutes that, for example, result in a significant increase in energy usage and resulting increases in carbon dioxide emissions.

Section 4010. Motor Vehicle Air-Conditioning.--

As of January 1, 1992, any person who services motor vehicle air-conditioning systems for consideration must use extraction and reclamation equipment that meets standards set by the Society of Automotive Engineers.

The sale of do-it-yourself recharge canisters of motor vehicle refrigerants will be prohibited as of January 1, 1991.

The sale or export of motor vehicles that contain passenger compartment air-conditioning systems that are dependent on CFC 12 (or similarly powerful ozone depleting chemicals) will be prohibited with respect to model year 1994 and subsequent model years. As of January 1, 1994, it will be unlawful to install or sell for installation any passenger compartment air-conditioning system that is dependent on CFC-12 or similarly powerful ozone depleting chemicals. If technological development problems will prevent the sale or installation of alternative air-conditioning systems prior to the effective date of the prohibitions on equipping motor vehicles with air-conditioning systems that are dependent on CFC 12, the Administrator is to report such fact to the Congress and recommend alternative effective dates for the prohibitions.

Section 4011. Fire Prevention or Extinguishing Equipment.--

EPA's regulations on use and disposal under section 4009 are to include requirements to reduce releases of priority list substances associated with training, testing, leakage and accidental discharges from fire control systems. Such releases are expected to be reduced by at least 90 per cent.

Effective 2 years after enactment, the sale and distribution of portable fire extinguishers containing halons will be prohibited. The Administrator is authorized to create an exception to this prohibition for commercial applications where use of such equipment is necessary to protect human health. For example, it may be necessary to allow, for a limited period, the sale of portable halon extinguishers for use in airplanes and similar closed environments.

Section 4012. Nonessential Consumer Products Containing Chlorofluorocarbons.--

Effective one year after enactment, the sale and distribution of CFC propelled plastic party streamers and noise horns, CFC cleaning fluids for noncommercial electronic and photographic equipment and other products determined by the Administrator to be nonessential will be prohibited.

Section 4013. Limitation on Ozone Depletion Potential.--

To supplement the section 4007 production caps and reductions applicable to priority list substances, production caps on total ozone depletion potential (ODP) of all substances covered by this Act are imposed.

By July 1, 1992, EPA is to promulgate regulations that will assure an overall ODP reduction of 95% by the year 2010. Such regulations should allow for market entry by new producers. If EPA fails to promulgate such regulations by July 1, 2000, it will be unlawful for any person to produce substances covered by this Act in annual quantities that yield a total ODP greater than 5% of such person's 1986 levels.

The elimination of CFCs, as provided for in this bill, will reduce total ODP by more than 95%. By capping total ODP at 5% of 1986 levels, this provision is projected to accommodate significant growth in, for example, hydrochlorofluorocarbons (HCFC). Unlimited growth in HCFCs, however, presents an unacceptable risk to the environment. Although HCFCs are less potent ozone depleters than CFCs, both classes of chemicals contribute to total chlorine loading of the atmosphere and destruction of the ozone layer. The 5% cap will allow HCFCs to capture a limited percentage of the CFC market which would have existed in the absence of the Montreal Protocol and this bill. It is estimated that such a cap will be reached around the year 2010.

Section 4014. Certification of Equivalent Programs.--

Effective one year after enactment, the importation of priority list substances in bulk or in products will be prohibited unless EPA certifies that the country of origin is implementing a phase-out and regulatory control program that is as stringent as that set forth in this Act.

To prevent persons subject to U.S. jurisdiction from transferring technology or investing in facilities to produce priority list substances in countries that are not so certified, the President is directed to prohibit such technology transfers and investments within one year of enactment. Similarly, the President is directed to prohibit technology transfers and investments in facilities that produce products that will create or expand the demand for priority list substances in such countries.

Section 4015. Labeling.--

Twenty-one months after a substance is listed under this Act, canisters or products containing or made with such substances must be labeled as such prior to being introduced into commerce.

Section 4016. Safe Alternatives Policy.--

To the maximum extent practicable, substances covered by this Act are to be replaced with alternative substances and processes that reduce overall risk to human health and the environment.

The Administrator is directed to recommend Federal research programs and other activities to assist in the identification of safe alternatives; and to examine Federal procurement practices and recommend measures to promote a transition by the Government to the use of safe substitutes.

The Administrator is also directed to collect health and safety studies from producers of chemical substitutes. Not less than 60 days prior to introducing a chemical substitute, the producer of such chemical must notify EPA.

Section 4017. Federal Enforcement.--

The Administrator is authorized to issue compliance orders, assess administrative civil penalties up to \$25,000 per day of noncompliance for each violation, and commence civil actions in court.

Criminal penalties (up to 2 years imprisonment and fines as set forth in the uniform criminal code) and civil penalties (up to \$25,000 per violation) are provided for violations of the Act. The list of "knowing" activities subject to criminal penalties are specified in the Act.

Section 4018. Judicial Review.--

Review of any final action under this Act may be had in the Circuit Court of Appeals for the Federal judicial district in which the petitioner resides or transacts business.

Section 4019. Citizens Suits.--

Citizen suits are authorized in the same manner as in most environmental statutes.

Section 4020. Separability.--

Invalidation of a portion of this Act will not affect the balance of the Act.

Section 4021. Relationship To Other Laws.--

This Act does not affect the authority of the Administrator under the Clean Air Act or TSCA, the authority of other agencies, or the authority of any State or political subdivision.

Section 4022. Authority of Administrator.--

The Administrator is authorized to prescribe such regulations as may be necessary to carry out this Act.

PART B--METHANE ASSESSMENT

Section 4023. Objective and National Goal.--

The objective of this part is to identify and analyze options to reduce the risks of tropospheric ozone formation and global climate change by: reducing methane emissions enough to keep atmospheric concentrations from increasing; and promoting additional analyses of (1) the factors causing methane concentrations to increase, (2) the sources of methane emissions, (3) the opportunities for reducing such emissions, and (4) the relationships among methane and other atmospheric pollutants.

The national goal is to reduce methane emissions in the U.S. and other countries; stimulate international agencies to fund projects in developing countries that will reduce methane emissions; and provide data in support of international efforts to reduce methane emissions.

Section 4024. Information Collection.--

For purposes of completing the studies required by this Act, the Administrator is authorized to collect information from persons responsible for the release of methane during manufacturing, processing, resource recovery or distribution, or waste management. The agency's need for this information should be considered carefully and, given the difficulties inherent in reporting on sources as diverse as agriculture and human activities, the authority to collect such information should be used advisedly. To the extent information concerning methane releases is already reported to other federal or state agencies and is available to the Administrator, duplicate reporting requirements are to be avoided. The Administrator is authorized to use survey techniques or to rely on reasonably accurate estimates of emissions and should not seek to establish an extensive new monitoring system.

Section 4025. Economically Justified Actions.--

By September 30, 1990, EPA is to report to Congress on measures that could reduce methane emissions and are economically justified with or without consideration of environmental benefits.

Section 4026. Domestic Methane Source Inventory and Control Options.--

By September 30, 1990, EPA is to submit to Congress reports, including inventories of emissions associated with the following activities in the U.S.:

- natural gas and coal extraction, transportation, distribution, storage, and use;
- management of solid waste;
- agriculture;
- biomass burning; and
- other activities deemed by the Administrator to be significant.

By September 30, 1990, EPA is to submit a plan to Congress that could be implemented to stop the growth in atmospheric concentrations of methane from sources in the U.S. and shall include an analysis of U.S. programs that could be used to induce developing countries to implement measures that will reduce methane emissions.

Section 4027. International Studies.--

By September 30, 1990, EPA is to submit to Congress reports on methane emissions from other countries and on the potential for preventing an increase in atmospheric concentrations of methane from sources in other countries.

Section 4028. Natural Sources.--

By September 30, 1992, EPA is to submit to Congress reports on methane emissions from natural sources such as forests, tundra, and wetlands, and on the changes in emissions that may occur as a result of increased atmospheric concentrations of carbon dioxide.

**PART C--OFFSET OF GOVERNMENT EXPENSES ASSOCIATED WITH
IMPLEMENTATION OF REGULATORY CONTROLS AND IMPOSITION OF
PRODUCTION, IMPORTATION AND DISTRIBUTION FEES ON OZONE DEPLETING
CHEMICALS**

Section 4029. Imposition of Fees.--

Production, importation and distribution fees are established for the 5 CFCs and the 3 halons covered by the Montreal Protocol. The effective dates for such fees are July 1, 1989 for CFCs and January 1, 1992 for halons. The Administrator is authorized to add ozone depleting chemicals to the list when and if production or importation limits are imposed for such chemical.

A base fee of 60 cents per pound is established for each person producing or importing substances subject to the fee. An alternative fee is established in an amount representing the greater of (1) the base fee or (2) an amount equal to each producer's, importer's and distributor's share of the total revenues collected by the industry and attributable to sales of each covered chemical less (1) an amount equal to the revenues that such sales would have generated at the adjusted 1987 average sales price and (2) an amount equal to income taxes due and payable on the revenues collected. In instances where the 60 cents per pound base fee has been passed through to a distributor by a producer or importer, the distributor will receive an additional allowance of 60 cents per pound. This provision is designed to avoid imposition of a double fee and the pass through to the consumer of \$1.20 per pound.

Under this Act, producers and importers who have been granted the limited right to produce or import substances subject to the fee will be required to pay, on a quarterly basis, a fee of 60 cents per pound for each pound of substance produced or imported during the previous quarter. At the end of the year, the alternative fee provided for in this Act shall be computed and, if the alternative fee is greater than the base 60 cents per pound fee, producers and importers who paid the 60 cents base fee will owe the Government the difference between the base fee and the alternative fee and distributors who did not pay the base fee will owe the Government the entire alternative fee.

**Section 4030. Off-setting Government Expenses Associated with
Implementation of Regulatory Controls and Support for Activities
Related to Alternatives to Ozone-Depleting Chemicals.--**

The fees established by this Act are estimated to produce approximately \$400 million in FY 1990. The Administration's

proposal is estimated to produce \$400 million in FY 1990, \$1.3 billion in '91, \$500 million in '92, \$600 million in '93, and \$900 million in '94. This section directs that this money be deposited each year in a new Ozone Layer and Climate Protection Trust Fund and that up to \$100 million shall be available each year, subject to appropriations, for grants related to alternatives to chemicals that contribute to ozone depletion or global climate change. The Trust Fund shall also be available, as provided in appropriation Acts, to implement the Montreal Protocol and this Act. The balance of these monies are to remain in the Trust Fund and the interest earned shall be available, subject to appropriations, for appropriation to the EPA. One half of such appropriation shall be allocated to EPA for abatement and control activities, and one half shall be allocated to EPA for research and development activities.

Section 4031. Advisory Committees.--

The Administrator is required to establish advisory committees composed of relevant government agency members and representatives of public interest and industry groups to provide recommendations to fund appropriate and innovative efforts for development of safe alternatives to substances that contribute to ozone depletion and climate change, through the grants authorized in Section 4032. Participants should have expertise in scientific and engineering disciplines compatible with the established purposes of the grant program including persons knowledgeable in the fields of alternative energy and conservation technologies.

Subsection (c) outlines the factors to be taken into account by the advisory committees in providing advise and formulating recommendations to the Administrator with respect to grant awards. It is intended that, consistent with the factors specified in this subsection, consideration be given to emerging technologies which do not rely on fossil fuels as an energy source as well as technologies which increase the efficiency of converting fossil fuels to other forms of energy and reduce emissions of carbon dioxide and other greenhouse gases.

Section 4032. Grants.--

This section authorizes the grant program referred to in section 4030. The grants are available for the purpose of stimulating development of technologies, processes and safe substances that can be substituted for technologies, processes and substances which contribute to ozone depletion and climate change. It is intended that in awarding grants, the Administrator shall consider overall climate impacts and, in

addition to other factors, the contributions that alternative energy and conservation technologies can make to solving the problem of global climate change.

Section 4033. Trust Fund.--

This section establishes the Trust Fund referred to in section 4030.

Section 4034. Authorizations.--

This section authorizes appropriations to EPA to carry out the grant program referred to in section 4030, to offset government costs associated with implementation of the Montreal Protocol and this Act, and for other purposes.

SUBTITLE B -- NUCLEAR REGULATORY COMMISSION USER FEES

Section 4101 amends the Consolidated Omnibus Budget Reconciliation Act of 1985 (P.L. 99-272) to require the Nuclear Regulatory Commission (NRC) to recover 45% of its budget for fiscal year 1990 through the collection of user fees.

Section 4102 amends the Atomic Energy Act of 1954 to clarify the authority of the NRC to reduce any penalties assessed against a licensee in an amount equal to the contribution such person agrees to pay to a nonprofit educational institution for use in furthering the protection of the radiological health and safety of the public.

DISCUSSION

The Consolidated Omnibus Budget Reconciliation Act of 1985 established permanent fee collection authority for the NRC at a maximum level equal to 33% of the Commission's annual estimated costs. The Omnibus Budget Reconciliation Act of 1987 (P.L. 100-203) authorized a fee collection increase to 45% of the Commission's budget for fiscal years 1988 and 1989. Without additional legislation, the fee recovery level for fiscal year 1990 would revert to the 33% level.

The present standard for the collection of these fees is maintained. The fees shall be reasonably related to the regulatory service provided by the Commission and shall fairly reflect the cost to the Commission of providing such service.

The second section of the subtitle clarifies that the NRC has the power to reduce any penalties assessed against any of its licensees (e.g., operators of nuclear power plants, persons

licensed to possess nuclear materials, etc.) by an amount equal to the amount which such person agrees to pay to a nonprofit educational institution for use in furthering the protection of the radiological health and safety of the public. The NRC currently has this authority through its power to remit and mitigate fines; however, this legislation will remove any doubts that may have existed as to the NRC's ability to accomplish this purpose.

The United States is suffering from a declining interest in nuclear sciences among our students and it is in the national security interest to maintain a high level of expertise within the hands of American citizens. It is intended that the NRC use this process to establish programs to enhance the quality of education of nuclear workers, such that the recurrence of violations might ultimately be prevented, and to establish programs to promote the protection of the radiological health and safety of the public. Further, it is strongly recommended that payments be made to a local institution in order to benefit the public health and safety of residents of the area wherein the licensee's facility is located and the violation occurred.

Because these payments are to be made in lieu of fines, they shall have the same tax consequences as a fine. They are not tax deductible. It is believed that these type of payments to nonprofit educational institutions will further the protection of public health and safety to a greater degree than if the payments were simply absorbed into the general revenues of the U.S. Treasury. The Environmental Protection Agency has been engaging in this sort of fine mitigation program for some time. It has been well received by the public and the industries affected.

The modest amount of additional administrative effort required on the part of the NRC to remit or mitigate fines in this manner will be more than compensated for by the benefits to the public health and safety achieved through the programs established by this effort. NRC is strongly encouraged to make greater use of this authority.

SUBTITLE C -- PAYMENTS TO THE OFFSHORE OIL POLLUTION COMPENSATION FUND

Section 4201 amends the Outer Continental Shelf Lands Act to continue payments to the Offshore Oil Pollution Compensation Fund until a balance of \$200,000,000 is reached.

DISCUSSION

Title III of the Outer Continental Shelf Lands Act (OCS) established the Offshore Oil Pollution Compensation Fund to assist in clean-up in the event of an oil spill associated with OCS operations. The Fund is supported by a charge of three cents per barrel of oil produced on OCS lands. Current law provides for a minimum balance within the Fund of \$100,000,000 and a ceiling of \$200,000,000. The Secretary of Transportation is authorized to suspend collection of payments if the balance is within these limits.

In April of this year, two weeks after the accident involving the Exxon Valdez, the Secretary exercised his authority and suspended payments to the Fund, though it was well short of the authorized ceiling. As a result, annual payments to the Fund of approximately \$10 - 15 million are lost until such time as the fee is reinstated.

This legislation requires continued collection of the three cent per barrel charge until the \$ 200 million level is reached. Reimposition of the charge would occur at any time the balance in the Fund drops below that level.

SUBTITLE D -- ONONDAGA LAKE RESTORATION PROGRAM

Onondaga Lake is located in central New York and borders on the city of Syracuse (population 170,000). Onondaga Lake has been called the most polluted large body of water in the nation. Other lakes, rivers or bays may have higher concentrations of individual contaminants, but in terms of overall use impairment due to pollution, Onondaga Lake has few rivals.

From 1884 to 1985 the Allied Chemical Corporation and its predecessors produced synthetic soda ash at a plant on the lakeshore, and discharged waste into the Lake. It is estimated that the lake contains 100 tons of mercury from the soda ash plant, and that as much as 30 percent of the its original volume has been lost due to a thick layer deposited on the lake bottom.

Swimming in the lake is not allowed, and fish cannot be eaten due to mercury contamination. In addition, discharges of raw sewage have been common due to combined sewer overflows.

Despite this high degree of toxic pollution, Onondaga Lake has not qualified as a Superfund site because its pollution is largely underwater. The Superfund Hazard Ranking System used by EPA to assess hazardous waste sites does not take into account the specifics of underwater waste sites.

Committee Hearings and Legislation

The Subcommittee on Water Resources, Transportation and Infrastructure held a hearing concerning Onondaga Lake in Syracuse, New York on April 27, 1989 (S. Hrg. 101-80). Among witnesses testifying were Mr. William J. Muszynski, Acting Regional Administrator for the EPA's Region II Office, Col. Hugh F. Boyd III, Buffalo District Engineer for the Army Corps of Engineers, and Mr. Langdon Marsh, Executive Deputy Commissioner of the New York State Department of Environmental Conservation.

In the 100th Congress Senator Moynihan sponsored S. 2824, the Onondaga Lake Restoration Act of 1988. This bill was re-introduced on the January 25, 1989, the first day of the 101st Congress, as S.27, the Onondaga Lake Restoration Act of 1989. The amendment adopted by the Committee is based on this bill.

Section-by-Section Summary

Section 4301 was added as part of an amendment offered by Senator Moynihan on July 20, 1989. This section would authorize the Environmental Protection Agency to establish and participate in a management conference for the conservation, restoration and management of Onondaga lake.

Subsection (a) directs the EPA administrator to convene the management conference, and states the two general purposes of the management conference.

First, the conference is to develop a comprehensive plan for the cleanup of the lake. This plan will include the specific actions to be taken by all members of the conference to assure the level of clean up that the plan commits to. Important tasks of the management conference will be to identify sources of funding for cleanup work, and set goals for the degree of cleanup to be accomplished. These cleanup goals should be consistent with what the management conference is willing and able to fund, including funds obtained from non-conference members such as parties responsible for lake pollution.

Second, the conference is to serve as a coordinating body for all lake cleanup work. The conference should assure that work performed by conference members and others is consistent with the plan, and that these efforts are consistent with one another and are not duplicative.

Subsection (b) describes the membership of the Conference. It is the intended that the membership outlined in the bill be

representative of the various governmental and non-governmental interests in the Lake. The seven-member management conference would be a forum to debate issues of disagreement, and to make decisions.

In general, it shall be the responsibility of the management conference to adopt its own bylaws. Such bylaws shall be adopted by majority vote, except that the representatives of the EPA and the Governor of the State of New York must concur in all votes. In addition, the representative of the Technical Advisory Committee shall serve ex officio, and shall not vote. The primary purpose of the Technical Advisory Committee is to advise the conference on technical and scientific issues relating to management of the Lake.

The Citizens' Advisory Committee shall be convened by the management conference and shall consist of 15 members, as follows: 3 persons who are members of locally represented environmental organizations incorporated under sec. 501(c)(3) or 501(c)(4) of the Internal Revenue Code that have been so incorporated for at least one year from the date of the convening of the Citizens' Advisory Committee; 3 persons representing the local business community; 1 person who is a resident of the Town of Geddes; 1 person who is a resident of the Town of Salina; 1 person who is a resident of the City of Syracuse; 4 persons representing the Onondaga Lake Advisory Committee; and 2 members at large. The Citizens' Advisory Committee shall choose a Chairman to represent it on the management conference. The vote of the Chairman on matters before the management conference shall reflect the majority views of the Citizens' Advisory Committee.

Subsection (c) address the approval and implementation of the plan. The plan assembled by the management conference must be approved by the EPA before federal funds can be granted for activities under subparagraph (d)(2)(B) of this section. It is not the intended that this requirement block funds from being expended for the purpose of carrying out other parts of subsection (d) or of this section in general.

EPA is charged with a special responsibility for approval of the plan because of its prominent role in funding the clean up options identified in the plan. In addition, a similar role is given to the Governor of the State of New York. It is expected that the New York State Department of Environmental Conservation will take a lead role in both directing activities of the management conference, and in identifying funding for the non-federal share of costs associated with developing and implementing the plan.

The special status of these two conference members effectively creates within the management conference an ad hoc executive committee that must approve all final decisions integrated into the plan. It is intended that the plan adopted by the management conference should as much as possible reflect the views of its members. However, it also recognizes that the management conference will function most efficiently only if leadership is exercised by the New York DEC and the EPA, each of which has substantial experience with the legal and technical details involved in environmental restoration projects.

Subsection (d) authorizes the conference to make grants to both develop and carry out the plan. Grants for collection of information and other activities related to preparation of the plan shall have a federal share of 75 percent, and grants to carry out provisions of the plan shall have a federal share of 55 percent. In order to assure accountability, grants under subparagraph (d)(2)(B) involving federal funds may not be available for work that is not prescribed by the plan. Reasonable operating expenses for the functioning of the management conference are to be considered as "necessary for the development of the plan", and shall be funded subject to subparagraph (d)(2)(A), with a federal share of 75 percent.

Paragraph (3) of subsection (d) allows for the non-federal share of any expenditures authorized by this section to be made up entirely or in part by in-kind contributions of services, materials, or other items of value. It shall be the responsibility of the EPA to determine the fair market value of any in-kind contributions.

Subsection (e) authorizes expenditures to carry out the provisions of section 4301, not to exceed \$5 million in Fiscal year 1990, and such sums as may be necessary for following years. It is intended that this authorization be available for reasonable operational expenses of the management conference as prescribed in subparagraph (d)(2)(A).

The additional authorization is provided for EPA to fund lake cleanup projects that may at some future time be subject the terms of legal settlement with responsible parties. It is intended that the EPA receive reimbursement for the federal share of any activities funded subject to this authorization in any such case.

SUBTITLE E

Maglev

Section 4401, included as part of an amendment offered by Senator Moynihan, would authorize the Army Corps of Engineers to complete a comprehensive work plan for the construction of a U.S. magnetic levitation (Maglev) system on the interstate highway rights-of-way.

A maglev system consists of magnetically levitated and propelled vehicles that run along a guideway at high speeds. The system designs, to be evaluated by the Corps of Engineers, will allow for guideway alignments along the interstate highway rights-of-way.

The Corps has the engineering and project management capability to perform this work, and has developed a plan to do so. Both the Chief of Engineers, Lt. General Henry J. Hatch, and the Assistant Secretary of the Army for Civil Works, Mr. Robert Page, have stated that the Corps has the necessary skills to build a U.S. maglev system.

It is intended that the Corps of Engineers consult with other interested federal agencies. The interest of the Department of Transportation in maglev is recognized, including their involvement in numerous studies on the feasibility of maglev systems in the U.S. It is intended that the Department of Transportation be closely involved with the development of maglev systems. For this reason, the Secretary of the Army is expected to coordinate and consult with the Secretary of Transportation during the development and execution of the pilot program.

Committee Activities

On June 22, 1989, the Maglev Technical Advisory Committee, convened at the request of the Subcommittee on Water Resources, Transportation and Infrastructure, issued a report describing the general characteristics of a U.S. maglev system to be located on the interstate highway rights-of-way (Benefits of Magnetically Levitated High-Speed Transportation for the United States, Volume 1 -- Executive Report, Maglev Technical Advisory Committee, June 1989.)

During the 100th Congress, the Subcommittee held three hearings on maglev, on January 21, 1988 (S. Hrg. 100-244, Part 3), February 26, 1988 (S. Hrg. 100-556), and September 28, 1988 (S. Hrg. 100-556, Part 2). During these hearings, the Committee received testimony from 15 witnesses.

Section-by-Section Summary

Section 4401 was added as part of an amendment offered by Senator Moynihan on July 21, 1989.

Subsection (a) gives authority to the U.S. Army Corps of Engineers to formulate a detailed implementation plan for a U.S. maglev/interstate highway rights-of-way pilot program. The Corps should consider construction and engineering issues regarding maglev, and options for cooperation with U.S. industry.

Subsection (b) directs the Corps of Engineers to formulate the implementation plan authorized by subsection (a), and directs that the Corps finish this implementation plan and report to the Congress and the President by May 30, 1990.

SUMMARY OF COMMITTEE ACTIONS ON RECONCILIATION RECOMMENDATIONS

The Committee on Environment and Public Works met July 20 and 21, 1989 to consider legislation to comply with Senate Budget Committee reconciliation instructions pursuant to H. Con. Res. 106, the Concurrent Resolution on the Budget for Fiscal Year 1990. During the course of consideration, five amendments were adopted as follows:

- an amendment offered by Senator Reid as modified by a second degree amendment offered by Senator Chafee, with respect to placing all CFC fees in the Ozone Layer and Climate Protection Trust Fund and authorized use of the accrued interest for EPA abatement, control and research and development activities -- adopted by a vote of 14 - 1;
- an amendment offered by Senator Lautenberg as modified to extend the deadline to 1992 for prohibiting release of regulated substances into the environment in the course of repairing or maintaining air conditioning units or household appliances -- adopted by voice vote;
- an amendment offered by Senator Moynihan with respect to Onondaga Lake restoration and magnetic levitation technology -- adopted by voice vote;
- an amendment offered by Senator Breaux with respect to NRC penalties -- adopted by voice vote.

The Committee voted 13 - 0 in favor of recommending the reconciliation recommendations to the Senate Budget Committee on July 21, 1989.

Additional Views of Senator Dave Durenberger

I want to begin by saying that I wholeheartedly support the general principles embodied in the legislation which has been reported by the Committee. This title of the reconciliation bill includes a virtual ban on the production of CFCs by the year 2000. It establishes an environmentally sound regulatory scheme for the introduction of alternatives. And it recaptures the windfall revenues created by the phaseout. I want commend Senator Chafee and Senator Baucus for developing this important piece of legislation.

But there are three problems I have with the proposal which should be addressed before the bill is finally enacted. First, it contains no prohibition on the production of methyl chloroform. This chemical -- also called 1,1,1-trichloroethane or TCA -- is a solvent with impacts on the ozone layer which is currently produced in large quantities and which is the substitute of choice for many CFC applications.

Recently EPA issued the Toxics Release Inventory of 350 chemicals for which manufacturers are required to report emissions. Methyl chloroform is one of the chemicals on that list. The EPA data showed air releases for methyl chloroform of 150 million pounds a year and total releases of 180 million pounds.

This data is only for the largest manufacturers and, thus, includes only a fraction of all releases. Methyl chloroform production is approximately 700 million pounds per year and there is every reason to believe that most of that eventually reaches the atmosphere. By way of comparison production of the five CFCs regulated under this bill totals 670 million pounds per year.

The reason that methyl chloroform is not listed for a complete phaseout in this bill is that it has a low ozone depletion potential compared to CFCs. One molecule of methyl chloroform does only 15% of the damage caused by one molecule of CFC-11 or -12.

Nevertheless, 700 million pounds of methyl chloroform is a lot of production. With a .15 depletion factor it does damage equivalent to 105 million pounds of CFCs. I don't think an amendment to leave 105 million pounds of CFC-12 out there would pass the Congress. The phaseout of other CFCs may also cause the use of methyl chloroform to increase dramatically. I don't think we should overlook methyl chloroform. It ought to be on the

basic list for early phaseout along with the other highly destructive CFCs.

My second problem with the bill is with the provision banning the packaging of CFC-12 in small cans for use by do-it-yourselfers to refill auto air conditioners. A few companies package the freon, auto air conditioner fluid, in these small cans and sell them in auto parts stores and service stations, so that consumers can refill their own car cooling systems. This might seem a profligate use of an ozone depleting chemical. But the prohibition contained in this bill has only symbolic effect.

If we ban the can, folks with leaky air conditioners will be required to go to their dealers or repair shops to get refills. The replacement CFC will come out of a 40-pound cylinder rather than a 14-ounce can. But once out, it will get to the stratosphere just as fast and do just as much damage. We have a limit on overall CFC production in this bill. If one assumes that all of the CFCs produced will reach the ozone layer, it doesn't really matter whether they are released from new cars or old cars...from foam boards or computer equipment...from big cylinders or small cans.

Banning the packaging of CFCs in small containers is gratuitous regulation. If the ban comes in 1991, well before a substitute for CFC-12 is available, the only effect is to put a few companies out of business. There is very little environmental benefit.

It may be that banning CFCs in new automobiles after 1994 will create the kind of intensive research effort which will bring substitutes on earlier. It may allow us to accelerate the schedule for phasing out CFC-12 to a date earlier than 2000. But banning the can won't have that effect. These packagers don't have the resources to run substitute development programs.

My final problem with this proposal is the trust fund which spends the money. The bill contains a \$100 million grant program to pay for research and development on CFC alternatives. This is completely unnecessary in my view.

Testimony before the Environment and Public Works Committee indicates that the private sector is already spending millions on substitute development. The entrepreneur who finds it will make millions selling it. We don't need to throw government money after a problem that is already being pursued aggressively by the largest chemical companies in the world.

The Committee has ordered that the remainder of the revenues from the fee be held in a trust fund and that interest earned on

these funds be appropriated for programs at the Environmental Protection Agency. This proposal, in my view, is directly contrary to the purpose of reconciliation and in violation of Senate rules. The Committee has used the reconciliation process as an opportunity to create a new spending program which is not relevant in any way to the fee program establish to meet its reconciliation targets. If the American public wonders why the Congress has failed to balance the budget after so many years of trying, there is no better example of our lack of discipline than the trust fund created by this bill.

10/4/89

M E M O R A N D U M

TO: interested staff

FROM: Steve Shimberg, x4 6228

SUBJECT: Senate consideration of CFC controls in reconciliation bill, proposed amendments by Senator Chafee

In an attempt to reduce opposition to the CFC control portion of the bill, I have been working with various outside interest groups on a package of amendments. The attached package of amendments and explanations is the result. In some instances negotiations are still going on and the amendments may be modified further as a result of continuing negotiations and comments I receive from you.

Senator Chafee plans to offer these amendments to the Reconciliation bill and will file them (or modified versions of them) no later than the evening before the bill comes to the floor, i.e. maybe as early as COB today (Wednesday). They are being circulated for comments, suggestions and cosponsorship. Please RSVP ASAP.

The issues dealt with, in order of complexity and constituent interest, are:

- creating a new regulatory program for HCFCs (of primary interest to producers, refrigerant and a/c users, and enviros);
- trade sanctions and technology export (electronics industry and refrigerant users);
- preemption (all users, enviros, and the State of Maine);
- labeling (all users and enviros);
- miscellaneous clarifying amendments, including:
 - definition of "produce" (all users);
 - listing of "priority" and "other" substances (EPA);
 - limiting prohibition on venting to refrigerants (foam insulators);
 - allowing use of recycled CFCs and CFCs as feedstocks after the year 2000 (all users and producers);
 - giving other federal agencies a role in the methane assessment (other federal agencies); and
 - authorizing use of fund for NASA and NOAA work on CFCs and greenhouse;
- regulation of 14 oz. cans (ARPI and enviros);
- allowing use of HCFCs for nonessential uses such as noise horns pending development of new chemicals (Falcon and enviros);

25 p.
10/4/89 Discussion draft

issue: control of HCFCs and other regulated substances

1) Strike section 4013, insert the following new section 4009, and renumber subsequent sections accordingly:

"PRODUCTION PHASE-OUT OF OTHER REGULATED SUBSTANCES

"SEC. 4009. (a) NATIONAL POLICY.-- The Congress hereby declares it to be the policy of the United States that the production and use of ozone depleting substances listed under subsection (b) of section 4005 are to be monitored closely and controlled in such a manner as to assure that the production and use of such substances will not--

"(1) increase the peak chlorine loading that is projected to occur on the basis of a year 2000 global phase-out of all halocarbon emissions (the base case);

"(2) reduce significantly the rate at which the atmospheric abundance of chlorine is projected to decrease under the base case; or

"(3) delay the date by which the average atmospheric concentration of chlorine is projected under the base case to return to a level of 2 parts per billion, the highest concentration at which repair of the Antarctic ozone hole may be possible.

"(b) MONITORING GROWTH IN PRODUCTION AND USE.--

"(1) The Administrator shall monitor and not less often than every three years following enactment of this subtitle submit a report to Congress on the production and use of substances listed under subsection (b) of section 4005. Such report shall include an estimate of the market share that would have existed for substances listed under subsection (a) of section 4005 in the absence of international and domestic controls that is being captured and satisfied by growth in the production and use of substances listed under subsection (b) of section 4005.

"(2) If, in consultation with the Administrators of the National Aeronautics and Space Administration and the National Oceanic and Atmospheric Administration, the Administrator determines that the domestic production and use of substances listed under subsection (b) of section 4005 is at a level that is likely to contribute significantly to atmospheric chlorine loading, the Administrator shall promulgate regulations to control specific uses of such substances.

"(c) MONITORING ATMOSPHERIC CONCENTRATIONS OF CHLORINE.--
The Administrators of the National Aeronautics and Space Administration and the National Oceanic and Atmospheric

Administration shall monitor and not less often than every 3 years following enactment of this subtitle submit a report to Congress on the current average tropospheric concentration of chlorine. Such reports shall include, under the base case as well as on the basis of current international and domestic controls on substances covered by this subtitle, updated projections of--

- "(1) peak chlorine loading;
- "(2) the rate at which the atmospheric abundance of chlorine is projected to decrease after the year 2000; and
- "(3) the date by which such concentration will return to a level of 2 parts per billion.

"(d) PHASE-OUT SCHEDULE.-- (1) Effective on the date determined in accordance with paragraph (2) of this subsection, it shall be unlawful for any person to produce, introduce into interstate commerce or use any substance listed under subsection (b) of section 4005 unless such substance (A) has been used, recovered and recycled or (B) is used and entirely consumed in the production of other chemicals, in which cases the general prohibition set forth in this paragraph shall not apply.

"(2) EFFECTIVE DATES.-- The general prohibition set forth in paragraph (1) shall become effective for each substance listed under subsection (b) of section 4005 on the basis of each such substance's atmospheric lifetime as established under this subsection or subsection (c) of section 4005. For each such substance, such effective date shall be January 1 of the year determined to be two and one-half times the atmospheric lifetime of such substance prior to (A) the date by which the average atmospheric concentration of chlorine is projected under subsection (c) of this section to return to a level of 2 parts per billion, or (B) the year 2075, whichever is earlier. The projection referred to in the preceding sentence shall, in accordance with subsection (c) of this section, be updated not less often than every three years.

"(3) ATMOSPHERIC LIFETIMES.-- Unless the Administrator promulgates regulations under subsection (c) of section 4005 setting forth a different value, the following atmospheric lifetimes shall apply for the following listed substances:

substance	lifetime (years)
hydrochlorofluorocarbon-22	15
hydrochlorofluorocarbon-123	2
hydrochlorofluorocarbon-124	7
hydrochlorofluorocarbon-141(b)	8
hydrochlorofluorocarbon-142(b)	19
methyl chloroform	6

"The Administrator shall not promulgate regulations under subsection (c) of section 4005 modifying estimated atmospheric lifetimes unless it is determined that such modification will affect, by greater than ten percent, the amount of the listed substance that is projected to be removed from the atmosphere after two and one-half times the estimated lifetime of such substance.

"(4) EXTENDED SCHEDULE.-- If the Administrator, in consultation with the Administrators of the National Aeronautics and Space Administration and the National Oceanic and Atmospheric Administration, determines that extending the effective dates of this subsection will not contravene the policy of this section, the Administrator shall so inform the Congress and propose alternative effective dates for this subsection."

conforming amendments

- 2) Amend section 4005(b) (other regulated substances) by striking "ozone depletion potential under section 4013" and inserting in lieu thereof "production and use under section 4009";
- 3) Amend section 4005(c) (ozone depletion factor) by inserting ", and a numerical value representing the atmospheric lifetime of such substance" after "chlorofluorocarbon-11" and by striking the second sentence;
- 4) Amend sections 4007(e) (importation), 4017(d) (criminal penalties), and 4017(f) (violations) by striking "section 4013 (limitation on ozone depletion potential)" each place that phrase appears and inserting in lieu thereof "section 4009 (production phase-out of other regulated substances)"; and
- 5) Renumber all cross-references to section 4009, 4010, 4011, 4012 and 4013 throughout the bill as appropriate.

explanation

The need to control the production and use of hydrochlorofluorocarbons (HCFCs) and other ozone depleting substances was graphically demonstrated in testimony presented to the Committee on Environment and Public Works by EPA on May 19, 1989. One difficulty, however, is the fact that achieving the goal of eliminating the potent, long-lived CFCs as rapidly as possible is, to some extent, dependent on the continued availability of HCFCs as intermediate substitutes pending development of other, safe, non-ozone depleting substances or processes. Section 4013 of the reported bill was designed to

accommodate these competing concerns and would have allowed limited growth in the production and use of HCFCs.

In August 1989, the international Science Assessment Panel established under the Montreal Protocol issued a United Nations Environment Programme (UNEP) report and presented several scenarios that highlighted the need to control the growth and use of all ozone depleting substances, including HCFCs.

The Panel established that: (1) the current atmospheric concentration of chlorine is approximately 3 parts per billion (ppb), a record high level; (2) peak chlorine loading is increasing and will continue to increase for several years; (3) increases in chlorine loading will increase the risk of significant ozone depletion over the northern hemisphere, similar to that occurring over Antarctica and the southern hemisphere; (4) an atmospheric chlorine concentration of 2 ppb is the maximum allowable level if the Antarctic ozone hole is to be repaired; and (5) the production and use of HCFCs and other ozone depleting substances: (a) may affect peak chlorine loading; (b) will affect the rate at which atmospheric abundance of chlorine is projected to decrease; and (c) may affect the date by which the average concentration of atmospheric chlorine is projected to return to 2 ppb.

The conclusion suggested by the recent UNEP presentation is that, in addition to eliminating the CFCs currently regulated under the Montreal Protocol as rapidly as possible, additional controls on methyl chloroform, carbon tetrachloride and the HCFCs are necessary to (1) limit increases in peak chlorine loading; (2) assure that the production and use of these substances does not reduce significantly the rate at which atmospheric chlorine loading is projected to decrease; and (3) assure that production and use of these substances does not delay the date by which the average atmospheric concentration of chlorine is projected to return to a level of 2 ppb (currently projected, on the basis of a year 2000 global elimination of all halocarbon emissions (the base case), to be 2075).

This amendment will replace the provisions of the bill controlling production and use of other regulated substances, including HCFCs, with a new approach. The original proposal to cap growth based on overall ozone depletion potential has been criticized as unnecessarily stringent, complicated, difficult to enforce, and sending unclear signals to the industries that must make investment decisions in the near future. The new approach contained in this amendment is based on the work of the UNEP Science Assessment Panel and is designed to protect the

environment while, at the same time, providing industry with the guidance and certainty necessary to achieve a rapid elimination of CFCs and other significant contributors to atmospheric chlorine loading as well as a smooth transition to non-ozone depleting substances and processes.

The phased elimination of these ozone depleting substances on the basis of atmospheric lifetime will assure that the production and use of these substances will not delay the date by which the average atmospheric concentration of chlorine is projected to return to a level of 2 ppb. Scientific experts predict that a level of 2 ppb is the maximum allowable level if the Antarctic ozone hole is to be repaired.

As a result of atmospheric lag time, to avoid delaying the date by which chlorine levels are projected to return to 2 ppb, the production and use of each of these chemicals must be eliminated two and one-half lifetimes prior to such date. Using a year 2000 global elimination of all halocarbon emissions as the base case, current projections are that atmospheric chlorine concentrations will return to 2 ppb by the year 2075. Therefore, unless the Administrator, on the basis of new scientific information, establishes atmospheric lifetimes that differ from those set out in the bill or updated projections under subsection (c) establish an earlier target date for chlorine concentrations of 2 ppb, production and use of the following substances will be prohibited on the following dates:

substance	date of ban
hydrochlorofluorocarbon-22	January 1, 2037
hydrochlorofluorocarbon-123	January 1, 2070
hydrochlorofluorocarbon-124	January 1, 2057
hydrochlorofluorocarbon-141(b)	January 1, 2055
hydrochlorofluorocarbon-142(b)	January 1, 2027
methyl chloroform	January 1, 2060

The phased elimination of ozone depleting substances on the basis of atmospheric lifetime establishes a bias in favor of producing short-lived, less potent ozone depleting chemicals as substitutes for CFCs and will create an incentive to develop non-ozone depleting substances and processes as long-term substitutes for CFCs and HCFCs. The establishment of dates certain for the elimination of these substances will also temper the impetus to construct excessive HCFC production capacity.

Industry analysts project that 30% of the demand for CFCs in the year 2000 will be satisfied by HCFCs. The balance of the demand is projected to be satisfied as follows: 32% by not-in-kind substitution, such as product or process changes; 29% by conservation; and 9% by HFCs. Depending on the accuracy of these projections and the ozone depleting potency of the HCFCs that are

chosen as substitutes, the production and use of these chemicals may or may not reduce significantly the rate at which the atmospheric abundance of chlorine is projected to decrease under the base case.

For example, if the projected 30% substitution rate proves to be correct and grows at a 3% annual rate, use of a HCFC with a relatively long atmospheric lifetime of 15 years and an ozone depletion potential (ODP) similar to HCFC-22 is projected to produce a year 2030 chlorine loading penalty of 0.6 ppb when compared to the base case. Use of a HCFC that has a relatively short atmospheric lifetime of 6 years and an ODP similar to that of HCFC-123 is projected to produce a year 2030 chlorine loading penalty of only 0.3 ppb. By way of contrast, if the long-lived HCFC is substituted at a rate of 50% and use is allowed to grow 3% until the year 2030, the chlorine loading penalty in the year 2030 will exceed 1.0 ppb, a significant amount.

By authorizing the imposition of specific use controls when and if the growth of HCFC production and use reaches a level that is likely to contribute significantly to atmospheric chlorine loading, the amendment creates an incentive to use short-lived, less potent ozone depleting chemicals as substitutes for CFCs in a prudent manner and assures that the production and use of chemical substitutes will not reduce significantly the rate at which the atmospheric abundance of chlorine is projected to decrease under the base case. The authority to control specific uses is designed to assure the availability of these substances for essential uses while, at the same time, eliminating frivolous uses that threaten to harm the environment.

An important component of this provision is the requirement for ongoing monitoring and periodic reports to Congress. The effective dates for the phased elimination of these chemicals are based on scientific projections of what is necessary to protect the environment. It is fortuitous that these projections have produced dates that are consistent with and will allow industry to make crucial investment decisions that will foster the elimination of the most harmful CFCs and the development of new substances that do not contribute to destruction of the ozone layer and do not exacerbate the problem of global climate change. The fact that our scientific understanding of atmospheric chemistry is changing so rapidly makes continual vigilance and frequent updating of scientific projections a necessity.

10/3/89

Discussion draft

issue: trade sanctions and technology export

1) Amend section 4014(a) (certification of equivalent programs - imports) by inserting "are parties to and in compliance with the Montreal Protocol on Substances that Deplete the Ozone Layer. Effective July 1, 2000, it shall be unlawful for any person to import a substance listed under subsection (a) of section 4005 or any product containing such substance unless the Administrator, in consultation with the Secretary, has published a decision, after notice and opportunity for public comment, certifying that the nations in which such substance or product was manufactured and from which such substance or product is imported" immediately before "have established and are fully implementing".

explanation

The bill as reported would have imposed trade sanctions against all nations that do not adopt production control programs as stringent as the program set forth in this bill within 12 months after enactment of this legislation. This amendment modifies that provision by requiring other nations to adopt and implement comparable production control programs by July 1, 2000, the year that the domestic program moves significantly beyond the requirements of the Montreal Protocol. Prior to that date, trade sanctions will be imposed only against nations that are not parties to and not in compliance with the Montreal Protocol.

2) Amend section 4014(d) to read as follows:

"(d) Investment and Export.-- (1) Within one year after enactment of this section, the President shall prohibit --

"(A) the export of technologies used to produce a substance listed under subsection (a) of section 4005; and

"(B) direct or indirect investments by any person in facilities designed for or capable of producing a substance listed under subsection (a) of section 4005 in nations not certified under this section.

"(2) Not later than January 1, 1992, and every two years thereafter, the President shall, after notice and opportunity for public comment --

"(A) determine whether there exists, for each class of products containing a substance listed under subsection (a) of section 4005 or manufactured with a process that uses such substance, substitute products or manufacturing processes that do not rely on the use of such substances; and

"(B) promulgate regulations for each class of products for which a positive determination has been made under subparagraph (A).

"Such regulations shall prohibit direct or indirect investments by any person in facilities designed for or capable of --

"(i) using a substance listed under subsection (a) of section 4005 in nations not certified under this section in quantities that will increase use of such substance in such nation, or

"(ii) manufacturing products that require the use of a substance listed under subsection (a) of section 4005 in nations not certified under this section in quantities that will increase use of such substance in such nation."

explanation

This amendment rewrites section 4014(d) of the reported bill to address concerns that were discussed during Committee consideration of the bill. At the outset, it should be noted that many of the concerns expressed at that time have been addressed by the previous amendment to section 4014(a).

The primary area of concern had to do with a statutory directive that the President prohibit direct or indirect investments by any person in facilities designed for or capable of using priority list substances in nations not certified under section 4014. The amendment modifies that directive and makes it conditional upon a determination by the President that substitute products or processes exist that do not contain or depend on use of such substances. When such substitutes become available, the justification for overseas investments in facilities that continue to rely on the old technology ceases to apply, especially where such investments are proposed to be made in nations that are not parties to and in compliance with the Montreal Protocol.

In addition to examining the issue of the availability of substitutes, the President is directed to consider whether the proposed investment will increase use of priority list substances in nations that are not certified under this section. This language has been added to give companies such as those in the electronics industry the flexibility to modify current overseas investments and to upgrade overseas facilities by, for example, investing in new, improved product lines. If such investments do not increase overall use of priority list substances in those countries as a result of, for example, the elimination of old product lines, the President may allow such investments to be made.

10/2/89

Discussion draft of possible amendments to EPW CFC reconciliation bill

issue: preemption

Amend section 4021 (relationship to other laws) by inserting "except as otherwise provided in subsection (c)" before the period at the end of subsection (b) and by adding the following new subsection:

"(c) If a regulation of any substance, practice, process, or activity is in effect under this subtitle in order to prevent or abate any risk to the stratosphere, or ozone in the stratosphere, no State or political subdivision thereof may adopt or attempt to enforce any requirement respecting the control of any such substance, practice, process, or activity to prevent or abate such risk, unless the requirement of the State or political subdivision is identical to the requirement of such regulation. If upon application of any person, after notice and opportunity for public hearing, the Administrator determines that the requirement of a State or political subdivision does not impose a substantial and unreasonable burden on interstate commerce, the Administrator shall waive application of the preceding sentence. No such waiver shall be granted if the Administrator determines that --

"(1) the decision of the State or political subdivision is arbitrary and capricious, or

"(2) the requirements and accompanying enforcement procedures of such State or political subdivision are inconsistent with the requirements and procedures of this subtitle.".

explanation

This amendment tracks the language of section 159(b) of the Clean Air Act with the addition of a waiver provision modeled after section 209(b) of the Clean Air Act. The preamble to EPA's final rule published on August 12, 1988, properly noted that the language of section 159(b) does not mean that the adoption of any federal regulation of any substance, practice, process, or activity preempts the entire field of stratospheric ozone regulation. EPA's August 1988 preamble includes a discussion of the preemption issue and contains relevant quotes from that portion of the 1977 Committee Report relating to section 159(b) (H. Rpt. 95-294, at 99). See, 53 Federal Register 156 at 30593 (August 12, 1988).

10/3/89 discussion draft

issue: labeling

Amend section 4015 by--

(1) striking the text preceding paragraphs (1) and (2) (including "(a)");

(2) redesignating paragraphs (1) and (2) as "(A)" and "(B)";

(3) inserting the following in lieu of the text preceding such paragraphs:

"Not later than January 1, 1992, and every two years thereafter, the Administrator shall, after notice and opportunity for public comment--

"(1) determine whether there exists, for each class of products containing a substance listed under subsection (a) of section 4005 or manufactured with a process that uses such substance, substitute products or manufacturing processes that do not rely on the use of such substances; and

"(2) promulgate regulations for each class of products for which a positive determination has been made under paragraph (1). Such regulations shall prohibit the introduction or reintroduction into interstate commerce of any product containing such substance or manufactured with a process that uses such substance ninety days after promulgation of such regulations unless such product bears a label stating either of the following as appropriate:"; and

(4) striking subsection (b).

explanation

This amendment will limit the labeling requirement in two important ways. First, only products that depend on priority list substances will be covered. The Administrator is authorized to require labels for products that depend on other ozone depleting or greenhouse chemicals but is not required to do so by a date certain.

Second, the statutory directive to promulgate regulations requiring labels is limited to instances where the information contained in the label may affect consumer choice. If substitute products or processes exist that do not contain or depend on use of priority list substances, similar products that do contain or are made with priority list substances must bear the appropriate

label. The Administrator is authorized to require labels for other products but is not required to do so by a date certain.

Requiring labels will serve two purposes: (1) they will alert consumers to the fact that they are choosing a product that contains or uses a substance that destroys the ozone layer and contributes to the greenhouse effect; and (2) for products containing such substances, labels will alert consumers to the fact that they must take care in handling and disposing of such product to avoid emitting such substances to the environment.

In the case of household appliances for which energy labels are required under, for example, 42 U.S.C. 6294, any labeling requirement imposed under this section may be satisfied by adding the appropriate language to the energy label.

10/3/89

issue: miscellaneous clarifying amendments

1) definition of "produce"

Amend section 4004 (definitions) by adding the following new paragraph (9) and renumbering subsequent paragraphs accordingly:

"(9) 'to produce' means to manufacture a substance from any raw material or feedstock chemical but does not include the manufacture of substances that are used and entirely consumed in the manufacture of other chemicals;".

explanation

Many of the substances subject to controls under this bill, current EPA regulations and the Montreal Protocol are, in addition to being produced and used as end-products, necessary raw materials or feedstocks for the production of new, less potent ozone depleting chemicals such as hydrochlorofluorocarbons (HCFCs). This technical amendment tracks EPA's regulations implementing the Montreal Protocol and will allow the continued production and use of such substances provided they are used and entirely consumed in the manufacture of other chemicals.

This amendment will also clarify that, as in current EPA regulations, recycled substances are excluded from the definition of production.

2) listing of priority substances

Amend section 4005(a) (priority list) by inserting "significantly" after "to cause or contribute" and by inserting "all fully halogenated chlorine or bromine containing halocarbons, including" after "The initial list shall include".

explanation

The first part of this amendment adds the word "significantly" to clarify the distinction between the subsection (a) priority list of substances to be phased out and the subsection (b) list of other regulated substances.

The second part of the amendment clarifies the intent to have all fully halogenated chlorine or bromine containing compounds (CFCs, halons and carbon tetrachloride) placed on the priority list of substances to be phased-out. The examples listed in the bill are those known to pose the greatest threat to

the ozone layer and global climate but may not be a complete list due to the problems of "designer chemicals" (the creation of substances that are similar to the listed chemicals but identified by another name) and the creation of new chemicals that have comparable ozone depletion potential.

3) listing of other regulated substances

Amend section 4005 (b) (other regulated substances) by --

A) striking "meet the criteria set forth in the first sentence of subsection (a)" the first place it appears and inserting in lieu thereof: "are known or may reasonably be anticipated to cause or contribute to atmospheric or climatic modification, including stratospheric ozone depletion" and inserting "or this subsection" after "the criteria set forth in the first sentence of subsection (a)" in both the third and fourth sentences;

B) inserting "all partially halogenated chlorine containing halocarbons not listed under subsection (a), including" before "hydrochlorofluorocarbon-22"; and

C) striking "hydrochlorofluorocarbon-125,".

explanation

The first part of this amendment clarifies the distinction between the subsection (a) priority list of substances to be phased out and the subsection (b) list of other regulated substances.

The second part of the amendment clarifies the intent to have all partially halogenated chlorine containing compounds that are not already listed under subsection (a) (primarily HCFCs) placed on the list of other regulated substances. The examples listed in the bill are those known to pose a threat to the ozone layer and global climate but may not be a complete list due to the problems of "designer chemicals" (the creation of substances that are similar to the listed chemicals but identified by another name) and the creation of new chemicals that have comparable ozone depletion potential.

The third part of the amendment makes a technical correction to the bill. The substance listed as HCFC-125 is not a HCFC but is a HFC that does not contain chlorine and is not an ozone depleting substance.

4) prohibition on venting

Amend section 4009 (d) of the reported bill by inserting "used as a refrigerant in such appliance or unit and" after "release or dispose of any substance".

explanation

This amendment clarifies that subsection (d)'s prohibition is limited to the venting or release of substances used as refrigerants in appliances or units and does not extend to disposal of substances used as, for example, insulation in such appliances or units.

5) prohibition on use after 2000

Amend section 4009 (e) of the reported bill by inserting before the period at the end thereof: "unless such substance (1) has been used, recovered and recycled or (2) is used and entirely consumed in the production of other chemicals, in which cases the general prohibition set forth in this subsection shall not apply".

explanation

This amendment clarifies that subsection (e)'s limitations and prohibitions on introduction into interstate commerce and use after the year 2000 do not apply to recycled substances or substances that are used and entirely consumed as raw materials or feedstocks in the production of other chemicals.

6) methane assessment

Amend sections 4025, 4026(a), 4026(b), 4027(a), 4027(b), and 4028 by inserting "develop in consultation and coordination with the Administrators of the National Aeronautics and Space Administration and the National Oceanic and Atmospheric Administration, as well as the heads of other relevant federal agencies and departments, and" after "the Administrator shall" each place that phrase appears in those sections.

explanation

This amendment requires the Administrator of EPA to conduct the methane assessments in consultation with other federal agencies that are involved with the issue.

7) use of fund

A) Amend section 4033(b) (trust fund) by inserting "to carry out global climate change monitoring and research activities of the Environmental Protection Agency, the National Aeronautics and Space Administration and the National Oceanic and Atmospheric Administration including but not limited to the alternative fluorocarbon environmental acceptability studies, to finance technology transfers and other forms of assistance to any developing country that is a party to the Montreal Protocol and is subject to Article 5 of such Protocol," after "the Montreal Protocol and this subtitle,".

B) Amend section 4034(a) (authorizations) by inserting ", the National Aeronautics and Space Administration, and the National Oceanic and Atmospheric Administration".

explanation

These two amendments clarify the type of work for which the fund may be used and authorizes appropriations from the fund to the Administrators of NASA and NOAA, two agencies that do a great deal of crucial work relating to stratospheric ozone depletion and global climate change.

The appliance industry recently announced the formation of the Appliance Industry-Government CFC Replacement Consortium, Inc., to find replacement substances for home refrigeration use. Such work is critical and should be encouraged by the government. Support for such work is one of the primary purposes of the fund. Similarly, there is a need to develop safe, economical disposal technology for CFCs used in refrigerators as refrigerants as well as to make foam insulation. EPA should use the fund to initiate immediately such research and development.

10/3/89

issue: regulation of small recharge cans

1) Amend section 4004(2) by inserting "in a container containing more than 150 pounds of such chemicals" after "subtitle".

explanation

This provision amends the definition of "distributor" to clarify that makers and distributors of small recharge cans or other products containing relatively small amounts of substances covered by the fee are not liable for payment of the fee.

2) Amend section 4010(d) of the reported bill by--

(A) striking "1991" and inserting "1992";

(B) inserting "listed under section 4005 of this subtitle" after "any refrigerant"; and

(C) inserting "to any person or entity other than a person or entity performing service for consideration on motor vehicle air-conditioning systems in compliance with subsection (a) of this section" before the period at the end of the subsection.

explanation

The first part of the amendment conforms the effective date of the statutory prohibition on sale of do-it-yourself canisters to the date by which motor vehicle service stations are required to use approved recapture and recycling equipment.

The second part of the amendment clarifies that this provision does not extend to refrigerants that do not have any ozone depletion potential and are, therefore, not listed under section 4005.

The third part of the amendment changes the absolute prohibition on sale or distribution of small recharge cans to create an exception for sales to persons or entities that perform service on motor vehicle air-conditioners for a fee and are in compliance with the statutory requirement that such persons and entities use approved recapture and recycling equipment when servicing motor vehicle air-conditioners.

10/3/89

issue: nonessential uses

Amend section 4012 of the reported bill by --

(1) designating existing text as subsection (a);

(2) striking "covered by this subtitle" and insert in lieu thereof "listed under subsection (a) of section 4005"; and

(3) adding the following new subsection:

"(b) Effective January 1, 1994, it shall be unlawful for any person to sell or distribute, or offer for sale or distribution,

"(1) any aerosol product or other pressurized dispenser (other than a medical device or diagnostic product, including drugs, as defined in the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321) or a drug delivery system) which contains a substance listed under subsection (b) of section 4005; or

"(2) any plastic foam product (other than a foam insulation product) which contains or is manufactured with a substance listed under subsection (b) of section 4005."

explanation

The first part of this amendment would limit the statutory prohibition on nonessential uses to priority list substances. EPA would retain the authority to prohibit specific uses of other regulated substances under section 4022.

The second part of the amendment would add a new subsection to statutorily prohibit, effective January 1, 1994, nonessential, disperant uses of other ozone depleting substances such as HCFCs. EPA may issue regulations restricting or prohibiting one or more other uses of such substances if, for example, it is determined that the use of alternative chemicals or processes is feasible and preferable. Relevant factors in making such determinations include the relative toxicity, ozone depletion potential, radiative absorption capacity and energy efficiency of such alternatives.

10/3/89 Discussion draft

issue: eliminating two specific use controls

1) Strike section 4010(e) of the reported bill (1994 ban on sale of auto air-conditioners).

explanation

Although Vermont and Hawaii have passed comparable state laws and several auto manufacturers have announced plans to voluntarily comply with the intent of this provision, it is not clear that conversion of the entire production line can be accomplished by model year 1994. Specific use controls are less important in light of the production phase-out, recycling requirements and market forces.

2) Strike section 4011(b) of the reported bill (two year ban on sale of halon fire extinguishers for consumer applications).

explanation

Specific use controls are less important in light of the production phase-out, recycling requirements and market forces.

Trust Fund Amendment to CFC Excise Tax

1. At Subchapter D -- Ozone-Depleting Chemicals, Etc., Sec 4681(b)(B), revise the "base tax amount" column upwards by 20 percent.

This will raise an additional \$80 million over the 5-year period -- if the original language planned to raise \$400 million over 5 years.

2. At 4681(b)(2)(A), insert "As determined by the Secretary with the advice of the Administrator of the Environmental Protection Agency " prior to "[T]he amount of the tax..."

This will assign primary responsibility to the Treasury which will be looking to raise additional funds, but will give EPA a role in analysing the tax on imported products.

3. Delete 4682(g).

This is a huge windfall for the foam and halon industries, and will be administratively impossible to enforce. For example, allowing a chemical company to sell CFC-11 to a foam manufacturer

b. At (b), substitute "one-sixth" for "one-half."

This will cause the tax table to yield the same volume of revenue for the general fund as the tax table in the House reconciliation bill.

c. At (c)(1), delete "in consultation with the Secretary of Energy," and require that the Strategic Plan be delivered in 3 months.

d. Delete (c)(2)(B)(ii).

Block purchase requirements reward manufacturers for showing up with any product, whether its good or not. Item (iii) can be a lever to move GSA to change their purchase specs.

f. Insert Sec. 4034, 4031, and 4032 of the EPW Committee print (in that order) at the end of S.871, as a means for spending the money raised in the Trust Fund. Change the EPW name of the fund to be consistent with S.871.

g. At Sec. 4034(a)(1), insert "not less than \$45,000,000 and" before "not more than \$100,000,000..."

tax-free (but not to a chiller manufacturer) will require that every pound of CFC be tracked throughout its equipment lifetime.

4. Delete 4682(h)(4).

Same reason as 3.

5. Insert a new 4682(c): "Based only on the best scientific analyses available, the Administrator of the Environmental Protection Agency may add or subtract chemicals from the list in paragraph (a)(2) and modify the ozone-depletion factors listed in paragraph (b)."

As more chemicals are added to the Protocol, we want to be able to put them on the list without minimal hassle. The UNEP Science Assessment(s), now and in the future, and/or EPA analyses can provide the necessary authority. Because the ozone depletion factors of chemicals are not known with complete certainty at this time, it would be wise to leave a route for re-evaluation, again based on the science.

6. At the appropriate spot, insert Sec. 4 of S. 871 with the following modifications:

a. At (a)(2), delete the Secretary of Energy.

This will prevent the money from being sequestered for phoney deficit reduction purposes, as has been done with the Highway and Airports trust funds.

###

AMENDMENTS TO FINANCE COMMITTEE BILL
SUBMITTED FOR BUDGET RECONCILIATION

1. Amend Sec 4681 (b) (B) of the Senate Finance Print by striking:

"Calendar year:	Base tax amount:
1990 or 1991	\$1.10
1992	\$1.60
1993 or thereafter	\$3.10"

and inserting:

"Calendar year:	Base tax amount:
1990 or 1991	\$1.32
1992	\$1.92
1993 or thereafter	\$3.72"

This 20% increase in the base tax on ozone-depleting chemicals will provide an additional \$80 million in revenue over the 5-year phase-out period (that is, if the original language planned to raise \$400 million over 5 years.)

*check out
the part*

2. Sec 4681 (b) (2) (A). Insert:

"As determined by the Secretary with advice of the Administrator of the Environmental Protection Agency" prior to "[T]he amount of the tax..."

4

This amendment will assign primary responsibility to the Treasury which will be looking to raise additional funds, but will give EPA a role in analyzing the tax on imported products.

6

is a huge windfall
sector represents

This ~~is~~ a huge windfall for the foam and halon industries ~~and~~ will be administratively impossible to enforce. For example, allowing a chemical company to sell CFC-11 to a foam manufacturer tax-free (but not to a chill manufacturer) will require that every pound of CFC be tracked throughout its equipment lifetime.

4. Delete Sec 4682 (h) (4).

foam would refuse

As in Amendment 3, this is a huge windfall for the foam and halon industries, and will be administratively impossible to enforce: for example, allowing a chemical company to sell CFC-11 to a foam manufacturer tax-free (but not to a chill^{er} manufacturer) will require that every pound of CFC be tracked throughout its equipment lifetime.

In addition, it would

~~See~~ Lise Hartman
Baerman's office

5. Stride Sec 4682 (c) and insert the following new
Sec 4682 (c):

"(c) .--Based ~~only~~^{on} on the best scientific analyses available, the Administrator of the Environmental Protection Agency may add or subtract chemicals from the list in paragraph (a) (2) and modify the ozone-depletion factors listed in paragraph (b)."

complications

As more chemicals are added to the Protocol, we want to be able to put them on the list with minimal ~~hassle~~. The UNEP Science Assessment(s), now and in the future, and/or EPA analyses can provide the necessary authority. Because the ozone depletion factors of chemicals are not known with complete certainty at this time, it would be wise to leave a route for re-evaluation, again based on the science.

6. At the appropriate spot, insert Sec. 4 of S.871 in the following modified form:

SEC. 4. OZONE LAYER CONSERVATION TRUST FUND.

(a) CREATION OF TRUST FUND.--

(1) IN GENERAL.--There shall be established in the Treasury of the United States a trust fund to be known as the "Ozone Layer Conservation Trust Fund", consisting of such amounts as may be appropriated or credited to the Ozone Layer Conservation Trust Fund.

(2) TRUSTEES.--The trustees of the Ozone Layer Conservation Trust Fund shall be the Secretary of the Treasury and the Administrator of the Environmental Protection Agency.

(b) TRANSFER OF CERTAIN TAXES.--There shall be appropriated to the Ozone Layer Conservation Trust Fund amounts equivalent to one-sixth of the taxes received in the Treasury under the manufacturers' excise tax instituted in section 3 of this Act.

(c) EXPENDITURES FROM TRUST FUND.--

(1) DEVELOPMENT OF STRATEGIC PLAN.-- The Administrator of the Environmental Protection Agency shall develop a strategic plan for the disbursement of funds from the Ozone Layer Conservation Trust Fund. Such plan shall be delivered to the Congress within three months of the enactment of the Act.

(2) CONSIDERATIONS FOR STRATEGIC PLAN.--

(A) GENERAL CONSIDERATIONS.--The strategic plan shall provide for Federal Government-private sector cooperation in research, development, and deployment of non-ozone-depleting chemical and technological alternatives to the ozone-depleting substances listed in section 2. Such plan shall seek to hasten the development and deployment of such alternative technologies with maximal environmental benefit in terms of both the stratospheric ozone layer, and energy-efficiency. Such plan shall also seek to develop such alternative technologies that are suitable for export to the developing world.

(B) SPECIFIC CONSIDERATIONS.--

and Sec 4034, and
of the
and committee
print

3. Delete 4682 (g) of the Senate Finance Print

(i) Research, development, and deployment of air-conditioning and refrigeration equipment that does not rely on the ozone-depleting substances listed in section 3, is energy-efficient, is suitable for applications in the developing world, and is capable of being powered by thermal, direct-current electric, and alternating-current electric power sources.

(ii) The feasibility of granting preferential status to such air-conditioning and refrigeration equipment in Federal procurement.

(iii) The means by which the Federal Government might assist United States manufacturers of such air-conditioning and refrigeration equipment, in exporting such equipment.

(d) AUTHORIZATIONS.--

(1) There are authorized to be appropriated to the Environmental Protection Agency from the Ozone Layer Conservation Trust Fund such amounts as may be necessary, except that

(A) not less than \$45,000,000 and not more than \$100,000,000 in any fiscal year shall be appropriated to carry out the grant program pursuant to subsection (f) of this section and

(B) not more than an amount equal to the amount of interest credited to the Ozone Layer Trust Fund during the preceding fiscal year shall be appropriated from the Ozone Layer Trust Fund in any fiscal year to carry out the abatement and control activities and research and development activities of the Environmental Protection Agency and one-half of such amount shall be allocated to abatement and control activities and one-half of such amount shall be allocated to research and development activities.

(2) There are authorized to be appropriated to the Environmental Protection Agency such amounts as may be necessary to offset government costs associated with implementation of the Montreal Protocol and this section.

(3) The funds referred to in subsection (1)(B) of this section shall not be available for appropriation in a fiscal year in which the amount appropriated from sources other than the Ozone Layer Trust Fund for abatement and control activities or research and development activities of the Environmental Protection Agency is less than the amount appropriated for such abatement and control activities or research and development activities in the preceding fiscal year.

(e) ADVISORY COMMITTEES.--

(1) The administrator shall establish advisory committees to provide advice in connection with activities and programs to be funded under subsection (f) of this section. Such committees shall be comprised of individuals who are representative of chlorofluorocarbon and halon producers, chlorofluorocarbon and halon users, the Department of Defense (designated by and with the approval of the Secretary of Defense), the Department of Commerce (designated by and with the approval of the Secretary of Commerce), and public interest groups. Members of the committees will serve without additional pay.

(2) It shall be the function of the advisory committees, at the request of the Administrator, to advise and make recommendations to the Administrator as to the making of grants under subsection (f) of this section.

(3) In carrying out its function, the advisory committees shall consider, among other factors: the quantities of ozone-depleting chemicals or greenhouse gas emissions the proposed substitute, product or technology would replace; the timing of possible reductions with preference given to substitutes, products and technologies that will yield prompt reductions in demand for ozone-depleting chemicals covered by this subtitle; the global climate implications of a proposed project; the likelihood of commercialization of the technology; the degree of public and private participation and support for a proposed project; the extent to which the results of the project will be accessible to the public; and the energy efficiency that would result from the project.

(f) GRANTS.--

(1) The Administrator is authorized to establish and carry out a grant program through the Office of Air and Radiation for purposes of: testing the basic properties of chemical substitutes; examining product redesign and technological innovations that would reduce, avoid, or eliminate chemical use in specific production processes; testing the applicability of possible substitutes in specific products; examining health, environmental, and safety issues related to the use of potential chemical substitutes; developing new technologies; improving the energy efficiency of new or modified technologies; monitoring environmental impacts; conservation; and other related purposes. Grants made under such program may be made to public and private entities, or combinations thereof, including consortia established expressly for the purpose of conducting research and related activities pursuant to this subtitle.

(2) Applications for grants under this subtitle shall be submitted at such time and in such form and contain such information as the Administrator shall prescribe by regulation.

Such ~~Amendments~~ ^{in addition} will prevent the money from being sequestered for phoney deficit reduction purposes, as has been done with the Highway and Airport ~~trust~~ ³ funds.

provide for the creation of an
Ozone Layer Trust Fund in a way
which

REPORT TO ACCOMPANY
TITLE IV -- ENVIRONMENT AND PUBLIC WORKS
SUBTITLE A -- ATMOSPHERIC POLLUTION FEES

GENERAL BACKGROUND

Fees

The President's budget recommendation for FY 1990 proposed the development and implementation of a system to charge market value for the limited rights to produce or import chlorofluorocarbons (CFCs) and other ozone depleting chemicals. These limited rights are the result of the Montreal Protocol on Substances that Deplete the Ozone Layer (the Protocol) [an international agreement negotiated and signed in 1987 and ratified by the United States in March 1988] and U.S. Environmental Protection Agency (EPA) regulations that have been promulgated under authority of the Clean Air Act to implement the Protocol.

CFCs and the other chemicals covered by the Protocol are persistent chemicals that rise into the stratosphere where they catalyze the destruction of stratospheric ozone. Stratospheric ozone is the Earth's main shield against ultraviolet (UV) radiation. A decrease in stratospheric ozone will allow more UV radiation to reach Earth, resulting in health and environmental damage, including increased incidence of skin cancer.

Signatories to the Protocol, including the United States, agreed to respond to this threat by imposing limits on what previously had been unlimited rights to produce, import and consume CFCs and other ozone depleting substances. Production of CFCs and related substances is being curtailed worldwide because of the risks that current production levels pose to human health and the environment. The Protocol requires industrialized countries such as the United States to limit CFC consumption, beginning in 1989, and to reduce CFC consumption 50 percent by 1998.

EPA has promulgated regulations under the authority of the Clean Air Act to implement the Montreal Protocol. Current EPA regulations assign production and importation privileges to firms based on each firm's 1986 levels of production and importation. The scarcity of CFCs brought about by the production and importation restrictions required to carry out the Protocol are predicted to result in a significant rise in CFC prices.

The Administration has been considering several mechanisms to charge market value for the limited rights to produce or import CFCs, including permit fees at a level designed to reflect the market value of CFC production and importation privileges or, as an alternative, periodic auctions of the limited rights. Such systems to charge market value are estimated by the

Administration to produce \$400 million in FY 1990, \$1.35 billion in '91, \$550 million in '92, \$625 million in '93, and \$950 million in '94.

The Senate Budget Resolution and the Committee on Environment and Public Work's reconciliation instructions accepted the President's assumption of capturing the market value for the limited rights to produce or import CFCs in FY 1990 and the estimate that such market value is \$400 million. EPA's regulations implementing the Protocol will limit CFC production and importation in the United States to 670 million pounds in FY 1990. As such, unless the limited production and importation rights are allocated through periodic auctions, a production and importation fee of 60 cents per pound is necessary to capture the \$400 million market value of the limited production and importation rights.

The legislation approved by the Environment Committee is modeled after S. 503, Senator Baucus' Chlorofluorocarbon and Halon Reduction Act of 1989, a bill that was introduced and referred to the Environment and Public Works Committee on March 2, 1989. That bill was the subject of a hearing before the Subcommittee on Environmental Protection on May 19, 1989 and, as approved by the Committee, establishes a base fee of 60 cents per pound to be paid in exchange for the limited right to produce or import certain CFCs.

In a memorandum dated April 14, 1989, the U.S. Department of Justice Office of Legal Counsel's Assistant Attorney General concluded that EPA has the authority under the Clean Air Act to allocate production privileges for CFCs through an auction or other market pricing mechanisms, such as a regulatory fee. That is a correct reading of the law.

As noted in the Justice Department memorandum, EPA's authority to restrict or prohibit the production of CFCs derives from section 157(b) of the Clean Air Act (42 U.S.C. 7457(b)). Once the decision has been made to cap the production of CFCs with allowances, a method for allocating the allowances is necessary. The memorandum goes on to note that auctions and historically based allocations with fees merely constitute different methods of allocating the allowances. Under the existing EPA rule of allocated quotas, the allowances are distributed on historical grounds.

The memorandum continues to observe that, unless a fee is charged for the allowance, the effect of the existing rule is to make a "gift" of the allowances to firms which have produced CFCs in the past. The value of such a "gift" is expected to be so great that CFC producers who are the most likely developers of substitutes

will, as long as the "gift" of the production or importation allowance is free, have an incentive to delay the introduction of safe substitutes that will be less profitable.

Notwithstanding EPA's existing statutory authority to allocate production privileges for CFCs through auctions or quotas with regulatory fees, the legislation reported by the Environment Committee establishes a statutory fee system to charge market value for the limited production rights to produce or import CFCs and other ozone depleting chemicals.

Requiring the payment of fees to the Government in an amount approximating the market value of limited production and importation rights in exchange for such limited rights will: supplement the regulations and controls applicable to CFCs and other ozone depleting substances pursuant to the Protocol, the Clean Air Act, and the Stratospheric Ozone and Climate Protection Act included as part of this legislation; eliminate the disincentive for the introduction of safe but less profitable substitutes that a quota system alone creates; and produce revenues to offset Government expenses associated with implementation of regulatory restrictions on production and use of CFCs and other ozone depleting chemicals pursuant to the Stratospheric Ozone and Climate Protection Act.

Controls and Assessments

Two distinct but closely related global environmental crises are destruction of the stratospheric ozone layer, Earth's main shield against the sun's harmful ultraviolet radiation, and massive, uncontrolled global climate change associated with intensification of the greenhouse effect.

Destruction of the ozone layer is caused primarily by the release of chlorofluorocarbons (CFCs) and similar manufactured substances into the atmosphere. The threat of uncontrolled global climate change is caused by the accelerating accumulation of greenhouse gases in the atmosphere, primarily carbon dioxide, CFCs and methane.

Carbon dioxide emissions account for an estimated 50% of current increases in the commitment to global warming. CFCs are estimated to account for 15 to 20% of current increases in the commitment to global warming, however, each molecule of CFC has approximately twenty thousand times more impact on global climate than does a single molecule of carbon dioxide. Similarly, emissions of methane account for an estimated 20% of current increases in the commitment to global warming and each molecule of methane has approximately twenty-five times more impact on global climate than a molecule of carbon dioxide.

The predicted environmental impacts of an intensified greenhouse effect include:

- an increase in the global average temperature of 1.5 to 5.5 degrees Centigrade (2.7 to 9.9 degrees Fahrenheit) over the next 40 to 60 years (to be compared with an average increase of less than 3 degrees Fahrenheit over the last 10,000 years) and continuing increases at an equally alarming rate in succeeding years;
- the extinction of numerous species of plants and animals and significant interference with natural evolutionary responses;
- reduced soil moisture content and altered storm patterns that may seriously disrupt the U.S agricultural industry; and
- a rise in sea level of 1 to 4 feet over the next 60 years and continuing sea level rise in succeeding years.

It is easy to overstate the uncertainty that surrounds this issue. It is true that scientists disagree about matters such as whether the greenhouse effect has already begun. Similarly, there is no scientific consensus about the precise timing of the predicted changes. Nevertheless, there is a remarkable degree of scientific consensus concerning the threat of massive, uncontrolled global climate change. Specifically, most experts agree that if we do not change our pattern of polluting the atmosphere, many of us, our children, and our grandchildren will experience devastating climate changes of a magnitude and at a rate that will preclude natural evolutionary responses.

There appears to be consensus on another critical point. That is: by the time there is scientific proof for every detail of the problem, it will be too late to avoid the most devastating impacts of an intensified greenhouse effect and global climate change. We can ill-afford to wait for ten years of research before we take action (1) to reduce atmospheric concentrations of greenhouse gases to limit the rate and extent of future climate change, and (2) to implement adaptation strategies for coping with the changes to which we are already committed.

Failure to act on the greenhouse effect on the basis of current scientific understanding would replicate the mistake made in the early 1980's with respect to destruction of the ozone layer.

In 1974, Drs. Sherwood Rowland and Mario Molina from the University of California published a paper demonstrating how CFCs destroy ozone in the stratosphere. In this country, the original scientific theory led to the ban of CFCs in aerosols in 1978.

There were no measurements of actual ozone loss, just the scientific theory.

Recognizing the problem, industry began to look for safe substitutes. Progress was being made when, in the early 1980's, the search for substitutes came to a virtual standstill and worldwide use of CFCs continued to grow. Today, the U.S. produces approximately 700 million pounds of CFCs each year, accounting for roughly one-third of the world total. Non-aerosol uses of CFCs in the U.S. have grown to record high levels and per capita usage of CFCs in the U.S. is among the highest in the world.

In 1985, scientists discovered a significant loss of ozone over a portion of the southern hemisphere that is the size of North America. The collapse was not predicted and measurements have revealed losses greater than 50% in the total column and greater than 95% between an altitude of 15 to 20 kilometers (9 to 12 miles). The discovery of this "Hole" in the stratospheric ozone layer over Antarctica gave renewed impetus to international efforts to understand and protect the ozone layer. In September 1987, the Montreal Protocol on Substances that Deplete the Ozone Layer was negotiated and signed by more than two dozen nations. The Protocol entered into force in January 1989 and 37 nations are now Parties to the Protocol.

Since the Montreal Protocol was negotiated and signed in 1987, scientists have observed and measured losses of ozone on a global scale. It has been discovered that destruction of the ozone layer is not limited to remote, uninhabited portions of Antarctica. Losses of ozone since 1970 have been measured during the winter months on a world-wide basis, including losses ranging from 2.3% to 6.2% over densely-populated portions of the Northern Hemisphere. These measurements of actual ozone loss are significantly greater than computer models had predicted and raise serious questions about the adequacy of the control measures set forth in the Montreal Protocol and existing EPA regulations.

Destruction of the ozone layer and the increased incidence of solar ultraviolet radiation that results will cause increased rates of disease in humans (including increased rates of skin cancer, cataracts, and, potentially, suppression of the immune system). It will also threaten food crops and marine resources. Parts A and B of this legislation are necessary to supplement existing controls and the provisions of part C of this bill establishing production and importation fees. Part C of the bill will, in part, offset the Government costs of implementing existing controls and the controls provided for in this bill.

Failure to enact part A of this bill and the emission control measures for CFCs and other ozone depleting and greenhouse forcing chemicals would result in a significant contribution to aggravation of these environmental problems. Not only would the United States continue to pour almost 700 million pounds of new CFCs into the atmosphere on an annual basis, domestic sources would be releasing all of the CFCs produced in past years that are currently contained in products all across the country. Assuming the phase-out schedule in the bill is adopted and not accelerated by the Administrator, just new production of CFCs between now and the year 2000 will result in the release of more than 6 billion pounds of CFCs into the atmosphere unless the emission control measures set forth in this bill are enacted.

By waiting for measurements of actual ozone loss, by failing to take appropriate action on the basis of credible, undisputed scientific theory, governments around the world allowed a manageable environmental threat to become an environmental crisis. As a result of atmospheric lag time and the persistence of CFCs and similar ozone depleting and greenhouse forcing gases, it is too late to prevent additional damage to the ozone layer or anthropogenically-induced global climate change. Our challenge is to take action as rapidly as possible that will, to the greatest extent possible, (1) reduce the threat of additional damage to the ozone layer and (2) reduce the rate and magnitude of anthropogenically-induced global climate change.

DISCUSSION

Subtitle A of Title IV of this reconciliation legislation shall be known as The Stratospheric Ozone and Climate Protection Act of 1989. The subtitle begins by emphasizing the facts that (1) the ozone depleting chemicals subject to controls under this Act are also powerful greenhouse gases and that (2) this Act will help address two related but distinct environmental problems -- global climate change resulting from an intensified greenhouse effect and destruction of the stratospheric ozone layer.

The Act is divided into three parts:

- A -- Control of Chlorofluorocarbons and Other Manufactured Substances;
- B -- Methane Assessment; and
- C -- Offset of Government Expenses Associated with Implementation of Regulatory Controls and Imposition of Production, Importation and Distribution Fees on Ozone-Depleting Chemicals.

A discussion of Part C is in the preceding general background section. A discussion of Parts A and B and a section-by-section analysis of the entire bill follows.

Part A -- Control of Chlorofluorocarbons and Other Manufactured Substances.

This portion of the Act is modeled after the Chafee/Baucus bill, S. 491, with the addition of provisions on: motor vehicle air-conditioning, modeled after the Jeffords/Leahy and Kerry bills, S. 1035 and S. 1052; fire extinguishers and nonessential consumer products, modeled after the Gore bill, S. 870; and safe alternatives, modeled after the McCain and Gore bills, S. 644 and S. 872. The Subcommittee on Environmental Protection held a hearing on May 19, 1989 to receive testimony on S. 491 and related legislation.

Part A of the Act has six main elements:

first, it establishes as a national policy that the production and use of the five most destructive chlorofluorocarbons (CFCs) [11, 12, 113, 114, and 115], the halons, and carbon tetrachloride should be reduced and eliminated "as expeditiously as possible". The Act directs the Administrator to implement a phase-out schedule to control, reduce and eliminate production more rapidly than the schedule set forth in the Act if (1) new information suggests such an accelerated schedule may be necessary, (2) the Administrator determines, based on the availability of substitutes, that an accelerated schedule is attainable, or (3) the Montreal Protocol on Substances that Deplete the Ozone Layer is modified to include a schedule that is more stringent than that included in the Act;

second, subject to acceleration by the Administrator as outlined above, the Act places the five most destructive CFCs on a production phase-down schedule that tracks the Montreal Protocol (20% reduction in 1993 and 50% reduction in 1998), and adds an additional step: virtual elimination by not later than 2000;

third, where the Protocol will only freeze production of the halons and does not regulate carbon tetrachloride at all, powerful ozone depleters, the Act puts these chemicals on the same phase-out schedule as the most harmful CFCs;

fourth, where the Montreal Protocol will allow unlimited growth in the production and use of other, less potent ozone depleting chemicals and, in turn, continue the threat to the

ozone layer, the Act places a limit on the growth of such chemicals by requiring that total ozone depletion potential be reduced by 95% between now and 2010;

fifth, the Act includes a supplement to the production phase-out: recognizing that it would be extremely difficult to eliminate all production and use of ozone depleting and greenhouse chemicals on a 2 to 3 year time frame, the Act provides for significant reductions in the emissions that are destroying the ozone layer and contributing to the greenhouse effect; to achieve this--

- the practice of venting or releasing these chemicals from refrigeration and air-conditioning units into the environment will be prohibited as of January 1, 1992;
- labeling, recapture, recycling and safe disposal will be required;
- EPA is directed to promulgate standards for control of emissions to the lowest achievable rate and for the use of alternative substances; and
- specific limitations and controls are prescribed for motor vehicle air-conditioning systems (including prohibitions, effective January 1, 1991, on the sale of do-it-yourself CFC canisters and, effective with model year 1994, on the sale of motor vehicle air-conditioning systems that are dependent on CFC-12 as a refrigerant), halon fire extinguishers for consumer applications (a ban on sale and distribution, effective 2 years after enactment), and nonessential consumer products containing CFCs (a ban on sale and distribution of items such as CFC-propelled plastic party streamers and noise horns, effective 1 year after enactment); and

sixth, twelve months after this Act becomes law, importation of the five most destructive CFCs, halons and carbon tetrachloride in bulk or in products will be prohibited unless EPA certifies that the country of origin is implementing a phase-out and regulatory control program that is as stringent as ours; and persons subject to U.S. jurisdiction will be prohibited from transferring technology or investing in facilities to produce or use such substances in countries that have not been certified.

The importance of (1) phasing out the most harmful ozone depleting chemicals and (2) controlling growth in other, less potent ozone depleting substances was graphically demonstrated by testimony presented to the Committee by EPA on May 19, 1989. Subsequent analysis has produced the following estimates of total atmospheric chlorine concentrations under various scenarios.

In 1985, the year the "Hole" over Antarctica was discovered, total atmospheric chlorine concentrations were 2.7 parts per billion (ppb). Under the provisions of the Montreal Protocol as currently written, chlorine concentrations are projected to reach more than 12 ppb by the year 2075, approximately 14 ppb by 2100, and will continue to increase. A year 2000 phase-out of just the five most destructive CFCs would yield chlorine concentrations of almost 10 ppb by 2075, more than 10 ppb by 2100 and would continue to increase. If carbon tetrachloride is added to the year 2000 phase-out, chlorine concentrations are projected to increase to almost 7 ppb by 2075 and then level off at that concentration before starting a very gradual downward trend.

If methyl chloroform is added to the year 2000 phase-out of CFCs and carbon tetrachloride, chlorine concentrations are projected to rise to approximately 4 ppb and, depending on the amount of growth in other, less potent ozone depleting chemicals and the average ozone depletion potential (ODP) of the chemicals, such concentrations may or may not return to 1985 levels by 2075. For example, if such substitutes have an average ODP of .05 and are allowed to capture 50% of what the CFC market would have been without the Protocol, chlorine concentrations will remain at approximately 4 ppb through 2100. If, however, the growth of such substitutes is controlled and market capture is limited to 20%, chlorine concentrations will decrease to around 3 ppb by the year 2075. If the average ODP of such substitutes is .02 and market capture is limited to 20%, chlorine concentrations are projected to return to the pre-1985 Antarctic "Hole" concentration of 2.6 ppb by the year 2075.

Part B -- Methane Assessment.

Part B of the Act is designed to develop information that is lacking on methane, one of the three most significant greenhouse gases (CFCs and carbon dioxide are the other two most significant greenhouse gases.) The Administrator is directed to study and report to Congress on the factors causing atmospheric concentrations of methane to increase; the sources of methane emissions; and opportunities for reducing such emissions.

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Section-by-Section Analysis

Section 4001. Short Title.--

The Stratospheric Ozone and Climate Protection Act of 1989.

Section 4002. Findings.--

The Act begins by emphasizing the facts that (1) the ozone depleting chemicals subject to controls under this Act are also powerful greenhouse gases and that (2) this Act will help address two related but distinct environmental problems -- global climate change resulting from an intensified greenhouse effect and destruction of the stratospheric ozone layer.

Various findings are included regarding the nature of the problem, the status of scientific understanding and government responses, the effect such government responses will have on CFC prices, the need to impose additional controls and to charge market value in exchange for the limited rights to produce or import CFCs and other ozone depleting chemicals.

Section 4003. Objectives and National Goal.--

The objectives of this Act are to restore and maintain the chemical and physical integrity of the Earth's atmosphere, to protect human health and the global environment, and to provide a smooth transition from the use of ozone depleting chemicals to safe substitutes.

The national goal is declared to be the elimination of emissions of manufactured substances with ozone depleting potential as well as global warming potential, to reduce to the maximum extent possible emissions of other greenhouse gases, and to provide for an orderly and equitable shift to safe alternatives.

Section 4004. Definitions.--

The following terms are defined: Administrator; distributor; household appliances; import; manufactured substances; medical purposes; ozone depleting chemicals; person; producer; Secretary; and substances covered by this Act.

**PART A--CONTROL OF CHLOROFLUOROCARBONS AND OTHER
MANUFACTURED SUBSTANCES**

Section 4005. Listing of Regulated Substances.--

This section directs the Administrator to publish a "priority list" of chemicals to be phased-out, including CFCs 11, 12, 113, 114, 115, carbon tetrachloride, and halons 1211, 1301, and 2402.

The priority list is intended to include those manufactured substances that pose the greatest risk to the environment as a result of high ozone depletion potential, high global warming potential, or low ozone depletion or global warming potential but extremely high levels of emissions. The examples listed in the bill are those substances known to pose the greatest threat to the ozone layer and global climate but may not be a complete list due to the problem of "designer chemicals" (the creation of substances that are virtually identical to the listed chemicals but identified by another name). For that reason, the Administrator is authorized to add substances to the priority list. In addition to the problem of "designer chemicals", analysis of recently published or new data on the high levels of emissions of, for example, methyl chloroform, might justify the addition of one or more chemicals to the priority list. The Administrator is authorized to make such additions.

The Administrator is also directed to publish a list of other regulated substances that will be subject to a limit on total ozone depletion potential (ODP) in section 4013, including CFCs 22, 123, 124, 125, 141(b), 142(b), and, unless added to the priority list by the Administrator, methyl chloroform. Such an approach will allow production of these "other regulated substances" to increase while, at the same time, assuring that total chlorine loading of the atmosphere is reduced. As with the priority list, the Administrator is authorized to add substances to the list of other regulated substances.

Pending publication by the Administrator of ozone depletion factors (the relative destructive force of each chemical), such factors are included in the Act for purposes of computing and enforcing the section 4013 limit on ODP that is applicable to all substances covered by this Act.

Section 4006. Reporting Requirements.--

This section requires annual reporting by producers, importers and distributors of chemicals covered by this Act.

Section 4007. Production Phase-Out of Substances on the Priority List.

(a) National Policy.--

Congress declares it to be the national policy that the production and use of chemicals on the priority list be reduced and eliminated "as expeditiously as possible."

(b) Accelerated Schedule.--

The Act directs the Administrator to implement a phase-out schedule to control and reduce production more rapidly than the schedule set forth in the Act if (1) new information suggests such an accelerated schedule is necessary, (2) the Administrator determines, based on the availability of substitutes, that an accelerated schedule is attainable; or (3) the Montreal Protocol is modified to include an accelerated schedule that is more aggressive than the schedule set forth in the Act.

In keeping with the policy of eliminating these chemicals as rapidly as possible and before the year 2000, to the maximum extent practicable, the Administrator is directed to determine no less often than every eighteen months whether any of the three conditions requiring acceleration of the schedule have been satisfied.

The importance of accelerating the phase-out schedule is reflected in the estimate, presented by expert witnesses, that a phase-out in 1995 could accelerate the recovery of the stratosphere and allow atmospheric concentrations of chlorine to return to current levels approximately 20 years faster than phase-out in 2000. An additional 20 years of elevated chlorine levels presents an unacceptable risk that must be avoided if it is at all possible to do so.

(c) Schedule.--

In the absence of regulations under the preceding subsection, the Act codifies the CFC reduction schedule currently set forth in the Montreal Protocol (20% reduction in 1993 and 50% reduction in 1998), makes the schedule applicable to halons and carbon tetrachloride, and adds an additional step: virtual elimination by not later than 2000.

(d) Exception for Medical Purposes.--

The Administrator may, in consultation with the Commissioner of the Food and Drug Administration (FDA), authorize the

production of limited quantities of substances on the priority list after the year 2000 if such authorization is necessary for medical purposes.

As set forth in the definition of "medical purposes," two conditions must be satisfied as predicates to a finding under this section. First, it must be shown that no safe substitutes have been developed. Second, the drug, medical device or diagnostic product must be essential, as determined by the Commissioner of the FDA in consultation with the Administrator.

"Medical purposes" may include drugs and drug delivery systems that satisfy the criteria set forth in the Act. For example, effective treatment of acute, chronic asthma currently is dependent on an inhaled dose delivered by a CFC propellant inhaler. Unless a safe substitute exists or until a substitute is developed, such a drug delivery system may be found by the Commissioner and the Administrator to be essential. To the extent priority list substances are necessary for the manufacture of essential drug products as, for example, reactants or building blocks in the chemical synthesis of a drug active ingredient, such use may fall within the purview of the Act's conditional exceptions for "medical purposes."

Section 4008. Production Phase-Out Exception For National Security.--

The President may authorize the production and use of CFC 114 and the three halons, notwithstanding the provisions of this Act, if he finds that substitutes are not available and such production and use is necessary to protect the national security interests of the United States.

Section 4009. National Recycling and Disposal Program.--

By July 1, 1991, EPA is to promulgate standards and requirements to reduce the use and emissions of substances covered by this Act to the lowest achievable level. Such standards and requirements are expected to achieve, among other things, a reduction of at least 50 per cent in the use of nonrecycled priority list substances in the manufacture of products in which such substances are used as solvents or blowing agents. Similarly, releases associated with training, testing, leakage, or accidental discharge of such substances from fire prevention or extinguishing equipment should be reduced by at least 90 per cent.

Prior to January 1, 1994, EPA is to promulgate standards and requirements for the recapture, recycling and safe disposal of substances covered by this Act, including provisions that:

- mandate removal of these substances from products, such as refrigerators and air-conditioners, prior to disposal of the products;

- prohibit the manufacture or distribution of products containing substances covered by this Act unless such products are equipped with a servicing aperture that allows recapture during service and repair; and

- prevent, to the maximum extent practicable, the release of these substances during disposal of products in which the substances are incorporated, such as rigid and soft foams.

As of January 1, 1992, it will be unlawful for any person maintaining, servicing, repairing or disposing of a household appliance or a commercial refrigeration or air-conditioning unit to knowingly vent, release, or dispose of substances covered by this Act in a fashion which permits such substances to enter the environment. Exceptions to this prohibition are included for de minimis releases associated with good faith attempts to recapture, recycle and safely dispose of such substances.

As of July 1, 2000, it will be unlawful to use a priority list substance except for approved medical purposes and, until the year 2010, to maintain and service household appliances and commercial refrigeration and air-conditioning units.

The Administrator is directed to promulgate regulations concerning manufactured substances to assure that the greenhouse forcing potential of CFC substitutes are considered by manufacturers and users and that the problem of global climate change will not be exacerbated by the use of such substitutes. The greenhouse threat of such substances must be examined and considered both from the perspective of direct radiative effect when such substitutes are emitted into the atmosphere and from the perspective of indirect effects of substitutes that, for example, result in a significant increase in energy usage and resulting increases in carbon dioxide emissions.

Section 4010. Motor Vehicle Air-Conditioning.--

As of January 1, 1992, any person who services motor vehicle air-conditioning systems for consideration must use extraction and reclamation equipment that meets standards set by the Society of Automotive Engineers.

The sale of do-it-yourself recharge canisters of motor vehicle refrigerants will be prohibited as of January 1, 1991.

The sale or export of motor vehicles that contain passenger compartment air-conditioning systems that are dependent on CFC 12 (or similarly powerful ozone depleting chemicals) will be prohibited with respect to model year 1994 and subsequent model years. As of January 1, 1994, it will be unlawful to install or sell for installation any passenger compartment air-conditioning system that is dependent on CFC-12 or similarly powerful ozone depleting chemicals. If technological development problems will prevent the sale or installation of alternative air-conditioning systems prior to the effective date of the prohibitions on equipping motor vehicles with air-conditioning systems that are dependent on CFC 12, the Administrator is to report such fact to the Congress and recommend alternative effective dates for the prohibitions.

Section 4011. Fire Prevention or Extinguishing Equipment.--

EPA's regulations on use and disposal under section 4009 are to include requirements to reduce releases of priority list substances associated with training, testing, leakage and accidental discharges from fire control systems. Such releases are expected to be reduced by at least 90 per cent.

Effective 2 years after enactment, the sale and distribution of portable fire extinguishers containing halons will be prohibited. The Administrator is authorized to create an exception to this prohibition for commercial applications where use of such equipment is necessary to protect human health. For example, it may be necessary to allow, for a limited period, the sale of portable halon extinguishers for use in airplanes and similar closed environments.

Section 4012. Nonessential Consumer Products Containing Chlorofluorocarbons.--

Effective one year after enactment, the sale and distribution of CFC propelled plastic party streamers and noise horns, CFC cleaning fluids for noncommercial electronic and photographic equipment and other products determined by the Administrator to be nonessential will be prohibited.

Section 4013. Limitation on Ozone Depletion Potential.--

To supplement the section 4007 production caps and reductions applicable to priority list substances, production caps on total ozone depletion potential (ODP) of all substances covered by this Act are imposed.

By July 1, 1992, EPA is to promulgate regulations that will assure an overall ODP reduction of 95% by the year 2010. Such regulations should allow for market entry by new producers. If EPA fails to promulgate such regulations by July 1, 2000, it will be unlawful for any person to produce substances covered by this Act in annual quantities that yield a total ODP greater than 5% of such person's 1986 levels.

The elimination of CFCs, as provided for in this bill, will reduce total ODP by more than 95%. By capping total ODP at 5% of 1986 levels, this provision is projected to accommodate significant growth in, for example, hydrochlorofluorocarbons (HCFC). Unlimited growth in HCFCs, however, presents an unacceptable risk to the environment. Although HCFCs are less potent ozone depleters than CFCs, both classes of chemicals contribute to total chlorine loading of the atmosphere and destruction of the ozone layer. The 5% cap will allow HCFCs to capture a limited percentage of the CFC market which would have existed in the absence of the Montreal Protocol and this bill. It is estimated that such a cap will be reached around the year 2010.

Section 4014. Certification of Equivalent Programs.--

Effective one year after enactment, the importation of priority list substances in bulk or in products will be prohibited unless EPA certifies that the country of origin is implementing a phase-out and regulatory control program that is as stringent as that set forth in this Act.

To prevent persons subject to U.S. jurisdiction from transferring technology or investing in facilities to produce priority list substances in countries that are not so certified, the President is directed to prohibit such technology transfers and investments within one year of enactment. Similarly, the President is directed to prohibit technology transfers and investments in facilities that produce products that will create or expand the demand for priority list substances in such countries.

Section 4015. Labeling.--

Twenty-one months after a substance is listed under this Act, canisters or products containing or made with such substances must be labeled as such prior to being introduced into commerce.

Section 4016. Safe Alternatives Policy.--

To the maximum extent practicable, substances covered by this Act are to be replaced with alternative substances and processes that reduce overall risk to human health and the environment.

The Administrator is directed to recommend Federal research programs and other activities to assist in the identification of safe alternatives; and to examine Federal procurement practices and recommend measures to promote a transition by the Government to the use of safe substitutes.

The Administrator is also directed to collect health and safety studies from producers of chemical substitutes. Not less than 60 days prior to introducing a chemical substitute, the producer of such chemical must notify EPA.

Section 4017. Federal Enforcement.--

The Administrator is authorized to issue compliance orders, assess administrative civil penalties up to \$25,000 per day of noncompliance for each violation, and commence civil actions in court.

Criminal penalties (up to 2 years imprisonment and fines as set forth in the uniform criminal code) and civil penalties (up to \$25,000 per violation) are provided for violations of the Act. The list of "knowing" activities subject to criminal penalties are specified in the Act.

Section 4018. Judicial Review.--

Review of any final action under this Act may be had in the Circuit Court of Appeals for the Federal judicial district in which the petitioner resides or transacts business.

Section 4019. Citizens Suits.--

Citizen suits are authorized in the same manner as in most environmental statutes.

Section 4020. Separability.--

Invalidation of a portion of this Act will not affect the balance of the Act.

Section 4021. Relationship To Other Laws.--

This Act does not affect the authority of the Administrator under the Clean Air Act or TSCA, the authority of other agencies, or the authority of any State or political subdivision.

Section 4022. Authority of Administrator.--

The Administrator is authorized to prescribe such regulations as may be necessary to carry out this Act.

PART B--METHANE ASSESSMENT

Section 4023. Objective and National Goal.--

The objective of this part is to identify and analyze options to reduce the risks of tropospheric ozone formation and global climate change by: reducing methane emissions enough to keep atmospheric concentrations from increasing; and promoting additional analyses of (1) the factors causing methane concentrations to increase, (2) the sources of methane emissions, (3) the opportunities for reducing such emissions, and (4) the relationships among methane and other atmospheric pollutants.

The national goal is to reduce methane emissions in the U.S. and other countries; stimulate international agencies to fund projects in developing countries that will reduce methane emissions; and provide data in support of international efforts to reduce methane emissions.

Section 4024. Information Collection.--

For purposes of completing the studies required by this Act, the Administrator is authorized to collect information from persons responsible for the release of methane during manufacturing, processing, resource recovery or distribution, or waste management. The agency's need for this information should be considered carefully and, given the difficulties inherent in reporting on sources as diverse as agriculture and human activities, the authority to collect such information should be used advisedly. To the extent information concerning methane releases is already reported to other federal or state agencies and is available to the Administrator, duplicate reporting requirements are to be avoided. The Administrator is authorized to use survey techniques or to rely on reasonably accurate estimates of emissions and should not seek to establish an extensive new monitoring system.

Section 4025. Economically Justified Actions.--

By September 30, 1990, EPA is to report to Congress on measures that could reduce methane emissions and are economically justified with or without consideration of environmental benefits.

Section 4026. Domestic Methane Source Inventory and Control Options.--

By September 30, 1990, EPA is to submit to Congress reports, including inventories of emissions associated with the following activities in the U.S.:

- natural gas and coal extraction, transportation, distribution, storage, and use;
- management of solid waste;
- agriculture;
- biomass burning; and
- other activities deemed by the Administrator to be significant.

By September 30, 1990, EPA is to submit a plan to Congress that could be implemented to stop the growth in atmospheric concentrations of methane from sources in the U.S. and shall include an analysis of U.S. programs that could be used to induce developing countries to implement measures that will reduce methane emissions.

Section 4027. International Studies.--

By September 30, 1990, EPA is to submit to Congress reports on methane emissions from other countries and on the potential for preventing an increase in atmospheric concentrations of methane from sources in other countries.

Section 4028. Natural Sources.--

By September 30, 1992, EPA is to submit to Congress reports on methane emissions from natural sources such as forests, tundra, and wetlands, and on the changes in emissions that may occur as a result of increased atmospheric concentrations of carbon dioxide.



**PART C--OFFSET OF GOVERNMENT EXPENSES ASSOCIATED WITH
IMPLEMENTATION OF REGULATORY CONTROLS AND IMPOSITION OF
PRODUCTION, IMPORTATION AND DISTRIBUTION FEES ON OZONE DEPLETING
CHEMICALS**

✓ **Section 4029. Imposition of Fees.--**

Production, importation and distribution fees are established for the 5 CFCs and the 3 halons covered by the Montreal Protocol. The effective dates for such fees are July 1, 1989 for CFCs and January 1, 1992 for halons. The Administrator is authorized to add ozone depleting chemicals to the list when and if production or importation limits are imposed for such chemical.

A base fee of 60 cents per pound is established for each person producing or importing substances subject to the fee. An alternative fee is established in an amount representing the greater of (1) the base fee or (2) an amount equal to each producer's, importer's and distributor's share of the total revenues collected by the industry and attributable to sales of each covered chemical less (1) an amount equal to the revenues that such sales would have generated at the adjusted 1987 average sales price and (2) an amount equal to income taxes due and payable on the revenues collected. In instances where the 60 cents per pound base fee has been passed through to a distributor by a producer or importer, the distributor will receive an additional allowance of 60 cents per pound. This provision is designed to avoid imposition of a double fee and the pass through to the consumer of \$1.20 per pound.

Under this Act, producers and importers who have been granted the limited right to produce or import substances subject to the fee will be required to pay, on a quarterly basis, a fee of 60 cents per pound for each pound of substance produced or imported during the previous quarter. At the end of the year, the alternative fee provided for in this Act shall be computed and, if the alternative fee is greater than the base 60 cents per pound fee, producers and importers who paid the 60 cents base fee will owe the Government the difference between the base fee and the alternative fee and distributors who did not pay the base fee will owe the Government the entire alternative fee.

**Section 4030. Off-setting Government Expenses Associated with
Implementation of Regulatory Controls and Support for Activities
Related to Alternatives to Ozone-Depleting Chemicals.--**

The fees established by this Act are estimated to produce approximately \$400 million in FY 1990. The Administration's

proposal is estimated to produce \$400 million in FY 1990, \$1.3 billion in '91, \$500 million in '92, \$600 million in '93, and \$900 million in '94. This section directs that this money be deposited each year in a new Ozone Layer and Climate Protection Trust Fund and that up to \$100 million shall be available each year, subject to appropriations, for grants related to alternatives to chemicals that contribute to ozone depletion or global climate change. The Trust Fund shall also be available, as provided in appropriation Acts, to implement the Montreal Protocol and this Act. The balance of these monies are to remain in the Trust Fund and the interest earned shall be available, subject to appropriations, for appropriation to the EPA. One half of such appropriation shall be allocated to EPA for abatement and control activities, and one half shall be allocated to EPA for research and development activities.

Section 4031. Advisory Committees.--

The Administrator is required to establish advisory committees composed of relevant government agency members and representatives of public interest and industry groups to provide recommendations to fund appropriate and innovative efforts for development of safe alternatives to substances that contribute to ozone depletion and climate change, through the grants authorized in Section 4032. Participants should have expertise in scientific and engineering disciplines compatible with the established purposes of the grant program including persons knowledgeable in the fields of alternative energy and conservation technologies.

Subsection (c) outlines the factors to be taken into account by the advisory committees in providing advise and formulating recommendations to the Administrator with respect to grant awards. It is intended that, consistent with the factors specified in this subsection, consideration be given to emerging technologies which do not rely on fossil fuels as an energy source as well as technologies which increase the efficiency of converting fossil fuels to other forms of energy and reduce emissions of carbon dioxide and other greenhouse gases.

Section 4032. Grants.--

This section authorizes the grant program referred to in section 4030. The grants are available for the purpose of stimulating development of technologies, processes and safe substances that can be substituted for technologies, processes and substances which contribute to ozone depletion and climate change. It is intended that in awarding grants, the Administrator shall consider overall climate impacts and, in

addition to other factors, the contributions that alternative energy and conservation technologies can make to solving the problem of global climate change.

Section 4033. Trust Fund.--

This section establishes the Trust Fund referred to in section 4030.

Section 4034. Authorizations.--

This section authorizes appropriations to EPA to carry out the grant program referred to in section 4030, to offset government costs associated with implementation of the Montreal Protocol and this Act, and for other purposes.

SUBTITLE B -- NUCLEAR REGULATORY COMMISSION USER FEES

Section 4101 amends the Consolidated Omnibus Budget Reconciliation Act of 1985 (P.L. 99-272) to require the Nuclear Regulatory Commission (NRC) to recover 45% of its budget for fiscal year 1990 through the collection of user fees.

Section 4102 amends the Atomic Energy Act of 1954 to clarify the authority of the NRC to reduce any penalties assessed against a licensee in an amount equal to the contribution such person agrees to pay to a nonprofit educational institution for use in furthering the protection of the radiological health and safety of the public.

DISCUSSION

The Consolidated Omnibus Budget Reconciliation Act of 1985 established permanent fee collection authority for the NRC at a maximum level equal to 33% of the Commission's annual estimated costs. The Omnibus Budget Reconciliation Act of 1987 (P.L. 100-203) authorized a fee collection increase to 45% of the Commission's budget for fiscal years 1988 and 1989. Without additional legislation, the fee recovery level for fiscal year 1990 would revert to the 33% level.

The present standard for the collection of these fees is maintained. The fees shall be reasonably related to the regulatory service provided by the Commission and shall fairly reflect the cost to the Commission of providing such service.

The second section of the subtitle clarifies that the NRC has the power to reduce any penalties assessed against any of its licensees (e.g., operators of nuclear power plants, persons

licensed to possess nuclear materials, etc.) by an amount equal to the amount which such person agrees to pay to a nonprofit educational institution for use in furthering the protection of the radiological health and safety of the public. The NRC currently has this authority through its power to remit and mitigate fines; however, this legislation will remove any doubts that may have existed as to the NRC's ability to accomplish this purpose.

The United States is suffering from a declining interest in nuclear sciences among our students and it is in the national security interest to maintain a high level of expertise within the hands of American citizens. It is intended that the NRC use this process to establish programs to enhance the quality of education of nuclear workers, such that the recurrence of violations might ultimately be prevented, and to establish programs to promote the protection of the radiological health and safety of the public. Further, it is strongly recommended that payments be made to a local institution in order to benefit the public health and safety of residents of the area wherein the licensee's facility is located and the violation occurred.

Because these payments are to be made in lieu of fines, they shall have the same tax consequences as a fine. They are not tax deductible. It is believed that these type of payments to nonprofit educational institutions will further the protection of public health and safety to a greater degree than if the payments were simply absorbed into the general revenues of the U.S. Treasury. The Environmental Protection Agency has been engaging in this sort of fine mitigation program for some time. It has been well received by the public and the industries affected.

The modest amount of additional administrative effort required on the part of the NRC to remit or mitigate fines in this manner will be more than compensated for by the benefits to the public health and safety achieved through the programs established by this effort. NRC is strongly encouraged to make greater use of this authority.

SUBTITLE C -- PAYMENTS TO THE OFFSHORE OIL POLLUTION COMPENSATION FUND

Section 4201 amends the Outer Continental Shelf Lands Act to continue payments to the Offshore Oil Pollution Compensation Fund until a balance of \$200,000,000 is reached.

DISCUSSION

Title III of the Outer Continental Shelf Lands Act (OCS) established the Offshore Oil Pollution Compensation Fund to assist in clean-up in the event of an oil spill associated with OCS operations. The Fund is supported by a charge of three cents per barrel of oil produced on OCS lands. Current law provides for a minimum balance within the Fund of \$100,000,000 and a ceiling of \$200,000,000. The Secretary of Transportation is authorized to suspend collection of payments if the balance is within these limits.

In April of this year, two weeks after the accident involving the Exxon Valdez, the Secretary exercised his authority and suspended payments to the Fund, though it was well short of the authorized ceiling. As a result, annual payments to the Fund of approximately \$10 - 15 million are lost until such time as the fee is reinstated.

This legislation requires continued collection of the three cent per barrel charge until the \$ 200 million level is reached. Reimposition of the charge would occur at any time the balance in the Fund drops below that level.

SUBTITLE D -- ONONDAGA LAKE RESTORATION PROGRAM

Onondaga Lake is located in central New York and borders on the city of Syracuse (population 170,000). Onondaga Lake has been called the most polluted large body of water in the nation. Other lakes, rivers or bays may have higher concentrations of individual contaminants, but in terms of overall use impairment due to pollution, Onondaga Lake has few rivals.

From 1884 to 1985 the Allied Chemical Corporation and its predecessors produced synthetic soda ash at a plant on the lakeshore, and discharged waste into the Lake. It is estimated that the lake contains 100 tons of mercury from the soda ash plant, and that as much as 30 percent of the its original volume has been lost due to a thick layer deposited on the lake bottom.

Swimming in the lake is not allowed, and fish cannot be eaten due to mercury contamination. In addition, discharges of raw sewage have been common due to combined sewer overflows.

Despite this high degree of toxic pollution, Onondaga Lake has not qualified as a Superfund site because its pollution is largely underwater. The Superfund Hazard Ranking System used by EPA to assess hazardous waste sites does not take into account the specifics of underwater waste sites.

Committee Hearings and Legislation

The Subcommittee on Water Resources, Transportation and Infrastructure held a hearing concerning Onondaga Lake in Syracuse, New York on April 27, 1989 (S. Hrg. 101-80). Among witnesses testifying were Mr. William J. Muszynski, Acting Regional Administrator for the EPA's Region II Office, Col. Hugh F. Boyd III, Buffalo District Engineer for the Army Corps of Engineers, and Mr. Langdon Marsh, Executive Deputy Commissioner of the New York State Department of Environmental Conservation.

In the 100th Congress Senator Moynihan sponsored S. 2824, the Onondaga Lake Restoration Act of 1988. This bill was re-introduced on the January 25, 1989, the first day of the 101st Congress, as S.27, the Onondaga Lake Restoration Act of 1989. The amendment adopted by the Committee is based on this bill.

Section-by-Section Summary

Section 4301 was added as part of an amendment offered by Senator Moynihan on July 20, 1989. This section would authorize the Environmental Protection Agency to establish and participate in a management conference for the conservation, restoration and management of Onondaga lake.

Subsection (a) directs the EPA administrator to convene the management conference, and states the two general purposes of the management conference.

First, the conference is to develop a comprehensive plan for the cleanup of the lake. This plan will include the specific actions to be taken by all members of the conference to assure the level of clean up that the plan commits to. Important tasks of the management conference will be to identify sources of funding for cleanup work, and set goals for the degree of cleanup to be accomplished. These cleanup goals should be consistent with what the management conference is willing and able to fund, including funds obtained from non-conference members such as parties responsible for lake pollution.

Second, the conference is to serve as a coordinating body for all lake cleanup work. The conference should assure that work performed by conference members and others is consistent with the plan, and that these efforts are consistent with one another and are not duplicative.

Subsection (b) describes the membership of the Conference. It is the intended that the membership outlined in the bill be

representative of the various governmental and non-governmental interests in the Lake. The seven-member management conference would be a forum to debate issues of disagreement, and to make decisions.

In general, it shall be the responsibility of the management conference to adopt its own bylaws. Such bylaws shall be adopted by majority vote, except that the representatives of the EPA and the Governor of the State of New York must concur in all votes. In addition, the representative of the Technical Advisory Committee shall serve *ex officio*, and shall not vote. The primary purpose of the Technical Advisory Committee is to advise the conference on technical and scientific issues relating to management of the Lake.

The Citizens' Advisory Committee shall be convened by the management conference and shall consist of 15 members, as follows: 3 persons who are members of locally represented environmental organizations incorporated under sec. 501(c)(3) or 501(c)(4) of the Internal Revenue Code that have been so incorporated for at least one year from the date of the convening of the Citizens' Advisory Committee; 3 persons representing the local business community; 1 person who is a resident of the Town of Geddes; 1 person who is a resident of the Town of Salina; 1 person who is a resident of the City of Syracuse; 4 persons representing the Onondaga Lake Advisory Committee; and 2 members at large. The Citizens' Advisory Committee shall choose a Chairman to represent it on the management conference. The vote of the Chairman on matters before the management conference shall reflect the majority views of the Citizens' Advisory Committee.

Subsection (c) address the approval and implementation of the plan. The plan assembled by the management conference must be approved by the EPA before federal funds can be granted for activities under subparagraph (d)(2)(B) of this section. It is not the intended that this requirement block funds from being expended for the purpose of carrying out other parts of subsection (d) or of this section in general.

EPA is charged with a special responsibility for approval of the plan because of its prominent role in funding the clean up options identified in the plan. In addition, a similar role is given to the Governor of the State of New York. It is expected that the New York State Department of Environmental Conservation will take a lead role in both directing activities of the management conference, and in identifying funding for the non-federal share of costs associated with developing and implementing the plan.

The special status of these two conference members effectively creates within the management conference an ad hoc executive committee that must approve all final decisions integrated into the plan. It is intended that the plan adopted by the management conference should as much as possible reflect the views of its members. However, it also recognizes that the management conference will function most efficiently only if leadership is exercised by the New York DEC and the EPA, each of which has substantial experience with the legal and technical details involved in environmental restoration projects.

Subsection (d) authorizes the conference to make grants to both develop and carry out the plan. Grants for collection of information and other activities related to preparation of the plan shall have a federal share of 75 percent, and grants to carry out provisions of the plan shall have a federal share of 55 percent. In order to assure accountability, grants under subparagraph (d)(2)(B) involving federal funds may not be available for work that is not prescribed by the plan. Reasonable operating expenses for the functioning of the management conference are to be considered as "necessary for the development of the plan", and shall be funded subject to subparagraph (d)(2)(A), with a federal share of 75 percent.

Paragraph (3) of subsection (d) allows for the non-federal share of any expenditures authorized by this section to be made up entirely or in part by in-kind contributions of services, materials, or other items of value. It shall be the responsibility of the EPA to determine the fair market value of any in-kind contributions.

Subsection (e) authorizes expenditures to carry out the provisions of section 4301, not to exceed \$5 million in Fiscal year 1990, and such sums as may be necessary for following years. It is intended that this authorization be available for reasonable operational expenses of the management conference as prescribed in subparagraph (d)(2)(A).

The additional authorization is provided for EPA to fund lake cleanup projects that may at some future time be subject the terms of legal settlement with responsible parties. It is intended that the EPA receive reimbursement for the federal share of any activities funded subject to this authorization in any such case.

SUBTITLE E

Maglev

Section 4401, included as part of an amendment offered by Senator Moynihan, would authorize the Army Corps of Engineers to complete a comprehensive work plan for the construction of a U.S. magnetic levitation (Maglev) system on the interstate highway rights-of-way.

A maglev system consists of magnetically levitated and propelled vehicles that run along a guideway at high speeds. The system designs, to be evaluated by the Corps of Engineers, will allow for guideway alignments along the interstate highway rights-of-way.

The Corps has the engineering and project management capability to perform this work, and has developed a plan to do so. Both the Chief of Engineers, Lt. General Henry J. Hatch, and the Assistant Secretary of the Army for Civil Works, Mr. Robert Page, have stated that the Corps has the necessary skills to build a U.S. maglev system.

It is intended that the Corps of Engineers consult with other interested federal agencies. The interest of the Department of Transportation in maglev is recognized, including their involvement in numerous studies on the feasibility of maglev systems in the U.S. It is intended that the Department of Transportation be closely involved with the development of maglev systems. For this reason, the Secretary of the Army is expected to coordinate and consult with the Secretary of Transportation during the development and execution of the pilot program.

Committee Activities

On June 22, 1989, the Maglev Technical Advisory Committee, convened at the request of the Subcommittee on Water Resources, Transportation and Infrastructure, issued a report describing the general characteristics of a U.S. maglev system to be located on the interstate highway rights-of-way (Benefits of Magnetically Levitated High-Speed Transportation for the United States, Volume 1 -- Executive Report, Maglev Technical Advisory Committee, June 1989.)

During the 100th Congress, the Subcommittee held three hearings on maglev, on January 21, 1988 (S. Hrg. 100-244, Part 3), February 26, 1988 (S. Hrg. 100-556), and September 28, 1988 (S. Hrg. 100-556, Part 2). During these hearings, the Committee received testimony from 15 witnesses.

Section-by-Section Summary

Section 4401 was added as part of an amendment offered by Senator Moynihan on July 21, 1989.

Subsection (a) gives authority to the U.S. Army Corps of Engineers to formulate a detailed implementation plan for a U.S. maglev/interstate highway rights-of-way pilot program. The Corps should consider construction and engineering issues regarding maglev, and options for cooperation with U.S. industry.

Subsection (b) directs the Corps of Engineers to formulate the implementation plan authorized by subsection (a), and directs that the Corps finish this implementation plan and report to the Congress and the President by May 30, 1990.

SUMMARY OF COMMITTEE ACTIONS ON RECONCILIATION RECOMMENDATIONS

The Committee on Environment and Public Works met July 20 and 21, 1989 to consider legislation to comply with Senate Budget Committee reconciliation instructions pursuant to H. Con. Res. 106, the Concurrent Resolution on the Budget for Fiscal Year 1990. During the course of consideration, five amendments were adopted as follows:

- an amendment offered by Senator Reid as modified by a second degree amendment offered by Senator Chafee, with respect to placing all CFC fees in the Ozone Layer and Climate Protection Trust Fund and authorized use of the accrued interest for EPA abatement, control and research and development activities -- adopted by a vote of 14 - 1;

- an amendment offered by Senator Lautenberg as modified to extend the deadline to 1992 for prohibiting release of regulated substances into the environment in the course of repairing or maintaining air conditioning units or household appliances -- adopted by voice vote;

- an amendment offered by Senator Moynihan with respect to Onondaga Lake restoration and magnetic levitation technology -- adopted by voice vote;

- an amendment offered by Senator Breaux with respect to NRC penalties -- adopted by voice vote.

The Committee voted 13 - 0 in favor of recommending the reconciliation recommendations to the Senate Budget Committee on July 21, 1989.

Additional Views of Senator Dave Durenberger

I want to begin by saying that I wholeheartedly support the general principles embodied in the legislation which has been reported by the Committee. This title of the reconciliation bill includes a virtual ban on the production of CFCs by the year 2000. It establishes an environmentally sound regulatory scheme for the introduction of alternatives. And it recaptures the windfall revenues created by the phaseout. I want commend Senator Chafee and Senator Baucus for developing this important piece of legislation.

But there are three problems I have with the proposal which should be addressed before the bill is finally enacted. First, it contains no prohibition on the production of methyl chloroform. This chemical -- also called 1,1,1-trichloroethane or TCA -- is a solvent with impacts on the ozone layer which is currently produced in large quantities and which is the substitute of choice for many CFC applications.

Recently EPA issued the Toxics Release Inventory of 350 chemicals for which manufacturers are required to report emissions. Methyl chloroform is one of the chemicals on that list. The EPA data showed air releases for methyl chloroform of 150 million pounds a year and total releases of 180 million pounds.

This data is only for the largest manufacturers and, thus, includes only a fraction of all releases. Methyl chloroform production is approximately 700 million pounds per year and there is every reason to believe that most of that eventually reaches the atmosphere. By way of comparison production of the five CFCs regulated under this bill totals 670 million pounds per year.

The reason that methyl chloroform is not listed for a complete phaseout in this bill is that it has a low ozone depletion potential compared to CFCs. One molecule of methyl chloroform does only 15% of the damage caused by one molecule of CFC-11 or -12.

Nevertheless, 700 million pounds of methyl chloroform is a lot of production. With a .15 depletion factor it does damage equivalent to 105 million pounds of CFCs. I don't think an amendment to leave 105 million pounds of CFC-12 out there would pass the Congress. The phaseout of other CFCs may also cause the use of methyl chloroform to increase dramatically. I don't think we should overlook methyl chloroform. It ought to be on the

basic list for early phaseout along with the other highly destructive CFCs.

My second problem with the bill is with the provision banning the packaging of CFC-12 in small cans for use by do-it-yourselfers to refill auto air conditioners. A few companies package the freon, auto air conditioner fluid, in these small cans and sell them in auto parts stores and service stations, so that consumers can refill their own car cooling systems. This might seem a profligate use of an ozone depleting chemical. But the prohibition contained in this bill has only symbolic effect.

If we ban the can, folks with leaky air conditioners will be required to go to their dealers or repair shops to get refills. The replacement CFC will come out of a 40-pound cylinder rather than a 14-ounce can. But once out, it will get to the stratosphere just as fast and do just as much damage. We have a limit on overall CFC production in this bill. If one assumes that all of the CFCs produced will reach the ozone layer, it doesn't really matter whether they are released from new cars or old cars...from foam boards or computer equipment...from big cylinders or small cans.

Banning the packaging of CFCs in small containers is gratuitous regulation. If the ban comes in 1991, well before a substitute for CFC-12 is available, the only effect is to put a few companies out of business. There is very little environmental benefit.

It may be that banning CFCs in new automobiles after 1994 will create the kind of intensive research effort which will bring substitutes on earlier. It may allow us to accelerate the schedule for phasing out CFC-12 to a date earlier than 2000. But banning the can won't have that effect. These packagers don't have the resources to run substitute development programs.

My final problem with this proposal is the trust fund which spends the money. The bill contains a \$100 million grant program to pay for research and development on CFC alternatives. This is completely unnecessary in my view.

Testimony before the Environment and Public Works Committee indicates that the private sector is already spending millions on substitute development. The entrepreneur who finds it will make millions selling it. We don't need to throw government money after a problem that is already being pursued aggressively by the largest chemical companies in the world.

The Committee has ordered that the remainder of the revenues from the fee be held in a trust fund and that interest earned on

these funds be appropriated for programs at the Environmental Protection Agency. This proposal, in my view, is directly contrary to the purpose of reconciliation and in violation of Senate rules. The Committee has used the reconciliation process as an opportunity to create a new spending program which is not relevant in any way to the fee program establish to meet its reconciliation targets. If the American public wonders why the Congress has failed to balance the budget after so many years of trying, there is no better example of our lack of discipline than the trust fund created by this bill.

9/25/89

M E M O R A N D U M

TO: Rick Adcock, Sen. Gore ✓
David Harwood, Sen. Wirth
Andy McElwaine, Sen. Heinz
Deborah Merrick, Sen. Bumpers
Paul Kerkhoven, Sen. Roth
Jeff Burnam, Sen. Lugar

FROM: Steve Shimberg, EPW/Chafee

SUBJECT: Senate debate on CFCs as part of reconciliation

In preparation for the long awaited and yet to be scheduled debate on the budget reconciliation bill, you may find the enclosed EPW bill and report to be useful background. A two page fact sheet by the environmental groups is also enclosed.

The CFC portion of the bill is expected to be the focal point for an extensive environmental debate when the bill comes to the floor. Your bosses' assistance is needed and will be greatly appreciated.

I will be calling you in the next few days to see if you are interested in meeting to help develop a strategy for defending the CFC regulatory control piece of the bill. If you know of other likely allies, please do not hesitate to suggest their names to me. At the same time, if you know of particular problems with the bill and have suggested changes that will make it easier for your boss to defend the whole package, please call. Thanks.

ANALYSIS OF THE STRATOSPHERIC OZONE AND CLIMATE PROTECTION ACT OF 1989

Current national and international controls on chlorofluorocarbons (CFCs) and related chemicals are inadequate to protect the ozone layer and the global climate. There is now a strong scientific consensus, widely accepted even in industry, that the offending chemicals must be phased out as rapidly as possible.

The United States is the world's largest producer, user, and emitter of these chemicals, responsible for nearly one third of the global total. As such, our country has a special responsibility both to clean up its own house and to demonstrate international leadership. Environmental organizations fully support diplomatic efforts to strengthen the Montreal Protocol. Those efforts, however, must be backed up by action here at home.

Enactment of the Stratospheric Ozone and Climate Protection Act is the first concrete action Congress can take to reduce the global threats of ozone depletion and the greenhouse effect. We urge its enactment, with two amendments described below, as part of reconciliation legislation this year.

The bill will accomplish six critical objectives:

1. Recouping Windfall Profits. It is intolerable that the very companies most responsible for damaging the ozone layer are reaping multi-billion dollar windfall profits off the measures intended to save it. The bill recoups those undeserved profits for the benefit of the public.

The price rises that are generating those profits are due to governmental limits on the supplies of these chemicals, imposed to protect the ozone layer. The producers have no right to these excess profits. They have plenty of incentives to develop alternative chemicals, using traditional sources of capital, without a special subsidy. For these reasons, the Bush Administration supports measures for windfall profit recoupment.

We support the proposed combination of a minimum excise fee, to raise \$400 million in the first year, and a fee based on windfall price increases, if larger.

We also support the trust fund directing a portion of the revenue to the development of promising new ozone-safe and energy-efficient technologies. The fund offers enormous potential to leverage technological progress that will protect the ozone layer and the climate both by reducing dependence on these chemicals and by cutting energy waste.

2. Phasing Out the Most Dangerous Chemicals. The bill provides for the total phase-out of CFCs and the other most dangerous chemicals. Recognizing how fast new and almost universally negative scientific data are coming in, and how fast alternatives are being developed, the bill requires EPA to review the situation every 18 months and mandate the earliest possible phase-out.

We urge the Senate to add methyl chloroform to the phase-out list as well. Because of the enormous volume of methyl chloroform emissions, EPA ranks it equal in importance with the chemicals slated for phase-out. At present, however, the bill treats methyl chloroform on a par with new substitutes for CFCs. Unless it is phased out, methyl chloroform will "crowd out" other, more valuable substitutes needed to efficiently replace the current CFCs.

The Senate also should amend the bill to set an earlier date than 2000 for the outer limit of the phase-out. Three major industrial nations - West Germany, Sweden, and Norway - are already committed to a virtually complete phase-out (at least 95% reduction) of CFCs by 1995. Their economies are as sophisticated and complex as ours. They have just as much need for coolants, insulating materials, and solvents as we do. If they can do it, the U.S. can too.

3. Making Feasible Near-Term Reductions. Major near-term reductions can be made in emissions of CFCs and other covered chemicals. Leading firms are pioneering recycling methods, leak reduction, and use of alternatives. But many firms and some whole sectors are failing to respond.

We support the bill's provisions to maximize recycling, prevent venting, eliminate patently frivolous uses, and provide for the earliest possible use of safe alternatives. We particularly applaud the bill's requirements for cutting CFC losses from auto air conditioners, which currently are responsible for *one-fourth* of all CFC emissions in the U.S.

4. Setting Responsible Limits on New Chemicals. Substitute chemicals are needed to replace current CFCs. However, some of the substitutes will still contribute significantly to ozone depletion and the greenhouse effect. If they grow indefinitely without restraint, they will slow down and perhaps even prevent recovery of the ozone layer.

We support the bill's limits on long-term growth of ozone-depleting substitute chemicals. These limits allow industry to plan for substantial growth while simultaneously promoting development of even better technical solutions.

5. Leveraging International Cooperation. The bill effectively spurs cooperation in the international process by other countries. It requires EPA to determine periodically whether other countries have ozone protection programs equivalent to ours. Imports of CFC-related products are barred from countries which do not.

The U.S. Trade Representative has ruled such measures legal and appropriate under international trade treaties.

We strongly support this measure as an effective way to assure fair treatment of our own companies and to leverage international cooperation in protecting the ozone layer.

6. Developing Control Strategies for Methane. Methane is a rapidly growing contributor to the greenhouse effect. Preliminary research indicates, however, that methane levels can be stabilized with practical control measures. This bill provides for the acquisition of key data on methane releases and for the development of an effective control strategy. These are essential provisions which we fully support.

American Council for an Energy-Efficient Economy
Environmental Defense Fund
Friends of the Earth / Environmental Policy Institute
National Audubon Society
National Council of Churches
National Wildlife Federation
Natural Resources Defense Council
Sierra Club
Union of Concerned Scientists

September 21, 1989

For further information contact:

David Doniger, NRDC, 783-7800

Section-by-Section Analysis

Section 4001. Short Title.--

The Stratospheric Ozone and Climate Protection Act of 1989.

Section 4002. Findings.--

The Act begins by emphasizing the facts that (1) the ozone depleting chemicals subject to controls under this Act are also powerful greenhouse gases and that (2) this Act will help address two related but distinct environmental problems -- global climate change resulting from an intensified greenhouse effect and destruction of the stratospheric ozone layer.

Various findings are included regarding the nature of the problem, the status of scientific understanding and government responses, the effect such government responses will have on CFC prices, the need to impose additional controls and to charge market value in exchange for the limited rights to produce or import CFCs and other ozone depleting chemicals.

Section 4003. Objectives and National Goal.--

The objectives of this Act are to restore and maintain the chemical and physical integrity of the Earth's atmosphere, to protect human health and the global environment, and to provide a smooth transition from the use of ozone depleting chemicals to safe substitutes.

The national goal is declared to be the elimination of emissions of manufactured substances with ozone depleting potential as well as global warming potential, to reduce to the maximum extent possible emissions of other greenhouse gases, and to provide for an orderly and equitable shift to safe alternatives.

Section 4004. Definitions.--

The following terms are defined: Administrator; distributor; household appliances; import; manufactured substances; medical purposes; ozone depleting chemicals; person; producer; Secretary; and substances covered by this Act.

**PART A--CONTROL OF CHLOROFLUOROCARBONS AND OTHER
MANUFACTURED SUBSTANCES**

Section 4005. Listing of Regulated Substances.--

This section directs the Administrator to publish a "priority list" of chemicals to be phased-out, including CFCs 11, 12, 113, 114, 115, carbon tetrachloride, and halons 1211, 1301, and 2402.

The priority list is intended to include those manufactured substances that pose the greatest risk to the environment as a result of high ozone depletion potential, high global warming potential, or low ozone depletion or global warming potential but extremely high levels of emissions. The examples listed in the bill are those substances known to pose the greatest threat to the ozone layer and global climate but may not be a complete list due to the problem of "designer chemicals" (the creation of substances that are virtually identical to the listed chemicals but identified by another name). For that reason, the Administrator is authorized to add substances to the priority list. In addition to the problem of "designer chemicals", analysis of recently published or new data on the high levels of emissions of, for example, methyl chloroform, might justify the addition of one or more chemicals to the priority list. The Administrator is authorized to make such additions.

The Administrator is also directed to publish a list of other regulated substances that will be subject to a limit on total ozone depletion potential (ODP) in section 4013, including CFCs 22, 123, 124, 125, 141(b), 142(b), and, unless added to the priority list by the Administrator, methyl chloroform. Such an approach will allow production of these "other regulated substances" to increase while, at the same time, assuring that total chlorine loading of the atmosphere is reduced. As with the priority list, the Administrator is authorized to add substances to the list of other regulated substances.

Pending publication by the Administrator of ozone depletion factors (the relative destructive force of each chemical), such factors are included in the Act for purposes of computing and enforcing the section 4013 limit on ODP that is applicable to all substances covered by this Act.

Section 4006. Reporting Requirements.--

This section requires annual reporting by producers, importers and distributors of chemicals covered by this Act.

Section 4007. Production Phase-Out of Substances on the Priority List.

(a) National Policy.--

Congress declares it to be the national policy that the production and use of chemicals on the priority list be reduced and eliminated "as expeditiously as possible."

(b) Accelerated Schedule.--

The Act directs the Administrator to implement a phase-out schedule to control and reduce production more rapidly than the schedule set forth in the Act if (1) new information suggests such an accelerated schedule is necessary, (2) the Administrator determines, based on the availability of substitutes, that an accelerated schedule is attainable; or (3) the Montreal Protocol is modified to include an accelerated schedule that is more aggressive than the schedule set forth in the Act.

In keeping with the policy of eliminating these chemicals as rapidly as possible and before the year 2000, to the maximum extent practicable, the Administrator is directed to determine no less often than every eighteen months whether any of the three conditions requiring acceleration of the schedule have been satisfied.

The importance of accelerating the phase-out schedule is reflected in the estimate, presented by expert witnesses, that a phase-out in 1995 could accelerate the recovery of the stratosphere and allow atmospheric concentrations of chlorine to return to current levels approximately 20 years faster than phase-out in 2000. An additional 20 years of elevated chlorine levels presents an unacceptable risk that must be avoided if it is at all possible to do so.

(c) Schedule.--

In the absence of regulations under the preceding subsection, the Act codifies the CFC reduction schedule currently set forth in the Montreal Protocol (20% reduction in 1993 and 50% reduction in 1998), makes the schedule applicable to halons and carbon tetrachloride, and adds an additional step: virtual elimination by not later than 2000.

(d) Exception for Medical Purposes.--

The Administrator may, in consultation with the Commissioner of the Food and Drug Administration (FDA), authorize the

production of limited quantities of substances on the priority list after the year 2000 if such authorization is necessary for medical purposes.

As set forth in the definition of "medical purposes," two conditions must be satisfied as predicates to a finding under this section. First, it must be shown that no safe substitutes have been developed. Second, the drug, medical device or diagnostic product must be essential, as determined by the Commissioner of the FDA in consultation with the Administrator.

"Medical purposes" may include drugs and drug delivery systems that satisfy the criteria set forth in the Act. For example, effective treatment of acute, chronic asthma currently is dependent on an inhaled dose delivered by a CFC propellant inhaler. Unless a safe substitute exists or until a substitute is developed, such a drug delivery system may be found by the Commissioner and the Administrator to be essential. To the extent priority list substances are necessary for the manufacture of essential drug products as, for example, reactants or building blocks in the chemical synthesis of a drug active ingredient, such use may fall within the purview of the Act's conditional exceptions for "medical purposes."

Section 4008. Production Phase-Out Exception For National Security.--

The President may authorize the production and use of CFC 114 and the three halons, notwithstanding the provisions of this Act, if he finds that substitutes are not available and such production and use is necessary to protect the national security interests of the United States.

Section 4009. National Recycling and Disposal Program.--

By July 1, 1991, EPA is to promulgate standards and requirements to reduce the use and emissions of substances covered by this Act to the lowest achievable level. Such standards and requirements are expected to achieve, among other things, a reduction of at least 50 per cent in the use of nonrecycled priority list substances in the manufacture of products in which such substances are used as solvents or blowing agents. Similarly, releases associated with training, testing, leakage, or accidental discharge of such substances from fire prevention or extinguishing equipment should be reduced by at least 90 per cent.

Prior to January 1, 1994, EPA is to promulgate standards and requirements for the recapture, recycling and safe disposal of substances covered by this Act, including provisions that:

- mandate removal of these substances from products, such as refrigerators and air-conditioners, prior to disposal of the products;

- prohibit the manufacture or distribution of products containing substances covered by this Act unless such products are equipped with a servicing aperture that allows recapture during service and repair; and

- prevent, to the maximum extent practicable, the release of these substances during disposal of products in which the substances are incorporated, such as rigid and soft foams.

As of January 1, 1992, it will be unlawful for any person maintaining, servicing, repairing or disposing of a household appliance or a commercial refrigeration or air-conditioning unit to knowingly vent, release, or dispose of substances covered by this Act in a fashion which permits such substances to enter the environment. Exceptions to this prohibition are included for de minimis releases associated with good faith attempts to recapture, recycle and safely dispose of such substances.

As of July 1, 2000, it will be unlawful to use a priority list substance except for approved medical purposes and, until the year 2010, to maintain and service household appliances and commercial refrigeration and air-conditioning units.

The Administrator is directed to promulgate regulations concerning manufactured substances to assure that the greenhouse forcing potential of CFC substitutes are considered by manufacturers and users and that the problem of global climate change will not be exacerbated by the use of such substitutes. The greenhouse threat of such substances must be examined and considered both from the perspective of direct radiative effect when such substitutes are emitted into the atmosphere and from the perspective of indirect effects of substitutes that, for example, result in a significant increase in energy usage and resulting increases in carbon dioxide emissions.

Section 4010. Motor Vehicle Air-Conditioning.--

As of January 1, 1992, any person who services motor vehicle air-conditioning systems for consideration must use extraction and reclamation equipment that meets standards set by the Society of Automotive Engineers.

The sale of do-it-yourself recharge canisters of motor vehicle refrigerants will be prohibited as of January 1, 1991.

The sale or export of motor vehicles that contain passenger compartment air-conditioning systems that are dependent on CFC 12 (or similarly powerful ozone depleting chemicals) will be prohibited with respect to model year 1994 and subsequent model years. As of January 1, 1994, it will be unlawful to install or sell for installation any passenger compartment air-conditioning system that is dependent on CFC-12 or similarly powerful ozone depleting chemicals. If technological development problems will prevent the sale or installation of alternative air-conditioning systems prior to the effective date of the prohibitions on equipping motor vehicles with air-conditioning systems that are dependent on CFC 12, the Administrator is to report such fact to the Congress and recommend alternative effective dates for the prohibitions.

Section 4011. Fire Prevention or Extinguishing Equipment.--

EPA's regulations on use and disposal under section 4009 are to include requirements to reduce releases of priority list substances associated with training, testing, leakage and accidental discharges from fire control systems. Such releases are expected to be reduced by at least 90 per cent.

Effective 2 years after enactment, the sale and distribution of portable fire extinguishers containing halons will be prohibited. The Administrator is authorized to create an exception to this prohibition for commercial applications where use of such equipment is necessary to protect human health. For example, it may be necessary to allow, for a limited period, the sale of portable halon extinguishers for use in airplanes and similar closed environments.

Section 4012. Nonessential Consumer Products Containing Chlorofluorocarbons.--

Effective one year after enactment, the sale and distribution of CFC propelled plastic party streamers and noise horns, CFC cleaning fluids for noncommercial electronic and photographic equipment and other products determined by the Administrator to be nonessential will be prohibited.

Section 4013. Limitation on Ozone Depletion Potential.--

To supplement the section 4007 production caps and reductions applicable to priority list substances, production caps on total ozone depletion potential (ODP) of all substances covered by this Act are imposed.

By July 1, 1992, EPA is to promulgate regulations that will assure an overall ODP reduction of 95% by the year 2010. Such regulations should allow for market entry by new producers. If EPA fails to promulgate such regulations by July 1, 2000, it will be unlawful for any person to produce substances covered by this Act in annual quantities that yield a total ODP greater than 5% of such person's 1986 levels.

The elimination of CFCs, as provided for in this bill, will reduce total ODP by more than 95%. By capping total ODP at 5% of 1986 levels, this provision is projected to accommodate significant growth in, for example, hydrochlorofluorocarbons (HCFC). Unlimited growth in HCFCs, however, presents an unacceptable risk to the environment. Although HCFCs are less potent ozone depleters than CFCs, both classes of chemicals contribute to total chlorine loading of the atmosphere and destruction of the ozone layer. The 5% cap will allow HCFCs to capture a limited percentage of the CFC market which would have existed in the absence of the Montreal Protocol and this bill. It is estimated that such a cap will be reached around the year 2010.

Section 4014. Certification of Equivalent Programs.--

Effective one year after enactment, the importation of priority list substances in bulk or in products will be prohibited unless EPA certifies that the country of origin is implementing a phase-out and regulatory control program that is as stringent as that set forth in this Act.

To prevent persons subject to U.S. jurisdiction from transferring technology or investing in facilities to produce priority list substances in countries that are not so certified, the President is directed to prohibit such technology transfers and investments within one year of enactment. Similarly, the President is directed to prohibit technology transfers and investments in facilities that produce products that will create or expand the demand for priority list substances in such countries.

Section 4015. Labeling.--

Twenty-one months after a substance is listed under this Act, canisters or products containing or made with such substances must be labeled as such prior to being introduced into commerce.

Section 4016. Safe Alternatives Policy.--

To the maximum extent practicable, substances covered by this Act are to be replaced with alternative substances and processes that reduce overall risk to human health and the environment.

The Administrator is directed to recommend Federal research programs and other activities to assist in the identification of safe alternatives; and to examine Federal procurement practices and recommend measures to promote a transition by the Government to the use of safe substitutes.

The Administrator is also directed to collect health and safety studies from producers of chemical substitutes. Not less than 60 days prior to introducing a chemical substitute, the producer of such chemical must notify EPA.

Section 4017. Federal Enforcement.--

The Administrator is authorized to issue compliance orders, assess administrative civil penalties up to \$25,000 per day of noncompliance for each violation, and commence civil actions in court.

Criminal penalties (up to 2 years imprisonment and fines as set forth in the uniform criminal code) and civil penalties (up to \$25,000 per violation) are provided for violations of the Act. The list of "knowing" activities subject to criminal penalties are specified in the Act.

Section 4018. Judicial Review.--

Review of any final action under this Act may be had in the Circuit Court of Appeals for the Federal judicial district in which the petitioner resides or transacts business.

Section 4019. Citizens Suits.--

Citizen suits are authorized in the same manner as in most environmental statutes.

Section 4020. Separability.--

Invalidation of a portion of this Act will not affect the balance of the Act.

~~1 halons or any ozone-depleting substances listed under section~~
~~2 10 of this Act, except for applications required by Federal~~
~~3 law.~~

~~4 SEC. 7. NONESSENTIAL CONSUMER PRODUCTS CONTAINING~~
~~5 CHLOROFLUOROCARBONS.~~

~~6 Within six months after the date of enactment of this~~
~~7 Act, no person shall sell or distribute, or offer for sale or~~
~~8 distribution, in commerce chlorofluorocarbon-propelled plastic~~
~~9 party streamers and noise horns, chlorofluorocarbon contain-~~
~~10 ing cleaning fluids for electronic and photographic equipment,~~
~~11 or any other consumer products which are capable of releas-~~
~~12 ing into the atmosphere substances listed under section 10 of~~
~~13 this Act and are determined by the Secretary to be non-~~
~~14 essential.~~

~~15 SEC. 8. LABELING REQUIREMENT.~~

SEC. 4015.

~~16 (a) REQUIREMENT.—Any consumer product that con-~~
~~17 tains, is produced with, or is produced from a substance listed~~
~~18 under section 10 of this Act shall be labeled in accordance~~
~~19 with regulations issued by the Consumer Product Safety~~
~~20 Commission under subsection (c) with the appropriate label,~~
~~21 as follows:~~

~~22 (1) If the consumer product contains a substance~~
~~23 listed under section 10: " [REDACTED] WARN-~~
~~24 ING: This Product Contains (insert name of listed~~
~~25 substance), Which Destroys the Earth's Protective~~

of the Environmental Protection Agency

1 Ozone Layer, and Disrupts the Earth's Climate. De-
 2 stroying the Ozone layer Greatly Increases the Risk of
 3 Skin Cancer and Harms Natural Systems, Including
 4 Food Production.".

5 (2) If the consumer product is manufactured by a
 6 process that involves the use of a substance listed
 7 ~~under section 10:~~ *subsection (a) or (b) of section 4005* "GOVERNMENT WARNING:
 8 This Product is Manufactured With (insert name of
 9 listed substance), Which Destroys the Earth's Protec-
 10 tive Ozone layer, and Disrupts the Earth's Climate.
 11 Destroying the Ozone Layer Greatly Increases the
 12 Risk of Skin Cancer and Harms Natural Systems, In-
 13 cluding Food Production.".

14 ~~(3) If the consumer product is produced from a~~
 15 ~~substance listed under section 10. "GOVERNMENT~~
 16 ~~WARNING: This Product Is Produced From (insert~~
 17 ~~name of listed substance), Which Destroys the Earth's~~
 18 ~~Protective Ozone layer, and Disrupts the Earth's Cli-~~
 19 ~~mate. Destroying the Ozone layer Greatly Increases~~
 20 ~~the Risk of Skin Cancer and Harms Natural Systems,~~
 21 ~~Including Food Production."~~

22 (b) PROHIBITION.—Effective nine months after the date
 23 ~~of enactment of this Act, no person shall sell or distribute, or~~
 24 ~~offer for sale or distribution, in commerce any consumer prod-~~
 25 ~~uct in which such substance is stored or transported,~~
~~not required to be labeled under this section unless such prod-~~
on which a substance is placed on a list maintained under
subsection (a) or (b) of section 4005, no container
in which such substance is stored or transported,
no product containing such substance, and no
product manufactured with a process that uses
such substance shall be introduced or

subsection (a) or (b) of section 4005,

~~re-introduced~~ into interstate commerce unless

it bears a label that⁹

1 ~~not~~ meets the requirements of this section and any regula-
2 tions issued thereunder.

3 (c) REGULATIONS.—The Consumer Product Safety
4 Commission, ^{in consultation with the Administrator,} shall issue regulations to implement subsection

5 ~~(a) within three months after the date of enactment of this~~
6 ~~the labeling requirements of this section.~~

7 ~~Act. The~~ regulations shall require the appropriate label to be to be
8 ^{Such} prominently displayed ^{all containers and products which are} on the consumer products subject to

9 ~~this section and to be clearly visible to persons who purchase~~

10 ~~the product at retail~~ ^{and to and introduced or reintroduced}
11 ^{into commerce later than ninety days}

12 (d) ENFORCEMENT.—A product that is not labeled in

13 accordance with this section shall be considered a misbranded

14 hazardous substance, subject to the Federal Hazardous Sub-

15 stances Act (15 U.S.C. 1261 et seq.), except that the penalty

16 for failure to label shall be a fine of 20 per centum of the

17 value of the product, a term of imprisonment of one year, or

18 both.

19 ~~SEC. 9. CHLOROFLUOROCARBON AND HALON RECLAMATION~~

20 ~~(a) RECLAMATION PLAN.—Within eighteen months~~

21 ~~after the date of enactment of this Act, the Secretary shall~~

22 ~~issue a Chlorofluorocarbon and Halon Reclamation Plan. The~~

23 ~~plan shall provide for the most effective way of ensuring~~

24 ~~widespread reclamation, recycling, or regulated disposal of~~

25 ~~all substances listed under section 10 of this Act, contained in~~

~~more than de minimis amounts in any consumer product or~~

~~other item sold in commerce. The goal of the plan shall be to~~

1. fication, after notice and opportunity for public comment,
 2. unless it is determined that the conditions of subsections (a)
 3. and (b) remain satisfied and that the reduction schedule for
 4. each listed substance is in fact being carried out in such na-
 5. tions. Any such revocation shall take effect one hundred and
 6. eighty days after notice of the revocation has been published.

7. (d) INVESTMENT AND EXPORT.—Within one year after
 8. enactment of this section, the President shall prohibit—

9. (1) the export of technologies used to produce or
 10. use a substance listed under subsection (a) of section
 11. 4005; and

12. (2) direct or indirect investments by any person in
 13. facilities designed for or capable of producing or using
 14. any such substance in nations not certified under this
 15. section.

16. (e) FOREIGN AID.—The President shall direct that no
 17. agency of the government provide bilateral or multilateral
 18. subsidies, aids, credits, guarantees, or insurance programs,
 19. for the purpose of producing any substance listed under sub-
 20. section (a) of section 4005.

21. LABELING

22. SEC. 4015. (a) Effective twenty-one months after the
 23. date on which a substance is placed on a list maintained
 24. under subsection (a) or (b) of section 4005, no container in
 25. which such substance is stored or transported, no product
 26. containing such substance, and no product manufactured with

1 a process that uses such substance shall be introduced or re-
2 introduced into interstate commerce unless it bears a label
3 stating either of the following as appropriate:

4 (1) "Warning: This product contains (insert name of
5 listed substance) a substance which harms public health and
6 the environment by destroying ozone in the upper atmos-
7 phere and by disrupting the climate".

8 (2) "Warning: This product is manufactured with (insert
9 name of listed substance) a substance which harms public
10 health and the environment by destroying ozone in the upper
11 atmosphere and by disrupting the climate".

12 (b) The Administrator shall, within eighteen months
13 after enactment of this section and after notice and opportu-
14 nity for public comment, issue regulations to implement the
15 labeling requirements of this section. Such regulations shall
16 require that the appropriate label is affixed to all containers
17 and products which are subject to this section and introduced
18 or reintroduced into commerce later than ninety days after
19 promulgation of such regulations.

20 SAFE ALTERNATIVES POLICY

21 SEC. 4016. (a) POLICY.—To the maximum extent prac-
22 ticable, substances covered by this subtitle shall be replaced
23 by chemicals, product substitutes, or alternative manufactur-
24 ing processes that reduce overall risks to human health and
25 the environment.

SIDE-BY-SIDE COMPARISON OF PROVISIONS CONTAINED IN THE EPW
COMMITTEE PRINT, ATMOSPHERIC POLLUTION FEES, WITH
PROVISIONS IN S. 870, S. 871, S. 872, AND S. 201.

TITLE IV -- ENVIRONMENT AND PUBLIC WORKS
SUBTITLE A -- ATMOSPHERIC POLLUTION FEES

Part A: Control of Chlorofluorocarbons and Other
Manufactured Substances

4005. LISTING OF REGULATED SUBSTANCES

S. 872 requires the Administrator of the Environmental Protection Agency to publish lists of manufactured substances that are known or may reasonably be anticipated to cause or contribute to ozone depletion in the upper atmosphere. The Committee Bill has similar provisions, with some differences in the particular compounds to be included on each list. Following is a summary of these differences (a=priority list; b=other regulated substances):

<u>Compound</u>	<u>S. 872</u>	<u>Committee Bill</u>
CFC-11	(a)	(a)
CFC-12	(a)	(a)
CFC-22	(b)	(b)
CFC-113	(a)	(a)
CFC-114	(b)	(a)
CFC-115	(b)	(a)
CFC-123	---	(b)
CFC-124	---	(b)
CFC-125	---	(b)
CFC-141b	---	(b)
CFC-142b	---	(a)
methyl chloroform	(b)	(b)
*methylene chloride	(b)	---
carbon tetrachloride	(a)	(a)
halon-1211	(a)	(a)
halon-1301	(a)	(a)
halon-2402	---	(a)

Both S. 872 and the Committee Bill require the Administrator of the Environmental Protection Agency to assign an ozone depletion factor to each listed substance. The ozone-depletion factor (ODF) is a numerical value representing the ozone depletion potential of each manufactured substance, on a mass basis, as compared to CFC-11. The ODFs of both bills are comparable.

4007. PRODUCTION PHASE-OUT

S. 872 and the Committee Bill both require the phase-out of the production of ozone-depleting substances, but differ in the schedule for the phase-out and the compounds to be eliminated. Following is a summary of the compounds to be phased-out and the schedule for doing so in each bill:

S. 872:

*** Priority List (a)--**

Within 1 year: Production freeze at each manufacturer's 1986 production level;
Within 2 years: Reduce production to 75% of 1986 level;
Within 3 years: Reduce production to 50% of 1986 level;
Within ~~4~~⁵ years: Total phase-out.

*** Other regulated substances (b)--**

Within 10 years: Total phase-out.

Committee Bill:

*** Priority list (a)--**

July 1, 1989: Freeze at each manufacturer's 1986 production level;
July 1, 1993: Reduce production to 80% of 1986 levels;
July 1, 1998: Reduce production to 50% of 1986 levels;
July 1, 2000: Total phase-out.

*** Other regulated substances (b)--**

the year 2010: emissions of all regulated substances to be reduced to 5% of 1986 levels (see Section 4013: this provision will be superceded by an amendment)

S. 872 prohibits the manufacture, distribution, and use of any ozone-depleting substance except in a totally enclosed manner. The Committee Bill calls for reducing emissions to the lowest level achievable. Both S. 872 and the Committee Bill require that the substance be disposed

of in a way that ensures that the substance will not be released to the environment. They also require that ozone-depleting substances be removed from appliances, machines, or other goods before those goods are disposed of. Both bills state that any item containing an ozone-depleting chemical cannot be manufactured and distributed unless it is equipped with a servicing aperture which will facilitate the recapture of the chemical during service and repair.

Both bills require the establishment of standards and requirements for the use of ozone-depleting substances and prohibit the use, release, or disposal of any ozone-depleting substance in a fashion that permits the release of the substance to the atmosphere.

AMENDMENT: To Insert a New a Section on the Production Phase-out of Other Regulated Substances

Based on information presented in a recent UNEP report, it is concluded that, in addition to eliminating the CFCs currently regulated under the Montreal Protocol as rapidly as possible, additional controls on methyl chloroform, carbon tetrachloride and the HCFCs are required. (Consequently, Section 4013 is deleted. See below.)

[explain 2075 goal]

This amendment replaces the capping provisions of the Committee Bill controlling production and use of other regulated substances (Section 4013), including HCFCs, with a new approach. The previous approach was criticized as too stringent and too complicated to be workable. The new approach involves creating a phase-out schedule for other regulated substances including the (b) substances. In each case, the date of ban represents the year 2075 -- by which time atmospheric chlorine concentrations are to return to 2 ppb (the maximum allowable level if the Antarctic ozone hole is to be repaired) -- minus 2.5 times the lifetime of the substance. For example:

<u>Substance</u>	<u>Year of Ban</u>
HCFC-22	2037
HCFC-123	2070
HCFC-124	2057
HCFC-141b	2055
HCFC-142b	2027
methyl chloroform	2060

Handwritten signature/initials

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Again, this formula is applied to all (b) substances in Section 4005. According to EPW, the new approach maintains

a bias in favor of producing the shorter lived CFC substitutes and creates long-term incentive for developing substitutes which are in no way ozone-depleting. Moreover, the establishment of dates certain for the elimination of these substances will temper the impetus to construct excessive HCFC production capacity.

According to EPW, an important provision of this amendment requires ongoing monitoring with periodic reports to Congress on atmospheric levels of these substances. As scientific understanding of atmospheric chemistry is changing so quickly, it is certainly a possibility that the phase-out dates listed will have to be adjusted to reach the 2075 goal. ✓

[ARE OTHER "OTHER REGULATED SUBSTANCES" NO LONGER PHASED-OUT IN ANY WAY??]

4008. PRODUCTION PHASE-OUT EXCEPTION FOR NATIONAL SECURITY

S. 872 and the Committee Bill allow the production and use of halon-1211 and halon-1301 as may be necessary to protect the national security interests of the United States. The Committee Bill extends this exception to halon-2402. ✓

4009. NATIONAL RECYCLING AND DISPOSAL PROGRAM

S. 870 calls for the development of a national plan for ensuring the most effective means of achieving widespread reclamation, recycling, or regulated disposal of ozone-depleting substances.

The Committee Bill requires the development of regulations establishing standards for the recapture, recycling, and safe disposal of ozone-depleting substances.

AMENDMENT. One amendment to this section clarifies that limitation on venting or release of substances used as refrigerants in appliances or units does not extend to disposal of substances used as, for example, insulation in such appliances or units. } ✕

Another amendment clarifies that a described total ban on trade and use of all priority substances by the year 2000 does not apply to recycled substances or substances that are entirely consumed as raw materials or feedstocks in the production of other chemicals. ✓

4010. MOBILE AIR-CONDITIONERS

The Committee Bill stipulates that all motor vehicle air conditioner servicers must use SAE approved extraction/reclamation equipment by January 1, 1992. It also prohibits the sale of "do-it-yourself" motor vehicle recharge refrigerant canisters as of January 1, 1991. Finally, no new cars having air conditioners using CFC-12 or a similarly harmful refrigerant may be sold or exported as of model year 1994 and January 1, 1994 respectively. There is, however, a clause whereby the EPA Administrator can ask Congress to move the date back on auto air conditioners if technological problems are encountered.

S. 870 begins regulating auto air conditioner servicing within eighteen months, to ensure that chlorofluorocarbons (CFCs) are recaptured and recycled, and not unnecessarily vented to the atmosphere. (About 30% of U.S. emissions of CFC-12 originate from auto air conditioners, and about three-quarters of those emissions occur during maintenance and recharging.) S. 870 also eliminates, within nine months, the sale of CFC-containing air conditioner recharge canisters smaller than 30 pounds. Finally, S. 870 requires, within nine months, that servicers recharging auto air conditioners with CFC-containing fluids first test the system for leaks and repair those leaks before recharging.

AMENDMENT. A proposed amendment would eliminate the 1994 deadline on total phase-out of all CFC-12-dependent auto air conditioning. Although a number of manufacturers have voluntarily agreed to comply with the intent of this provision, not all will be able to do so. Theoretically, such a specific use control is no longer that important in light of the production phase-out, recycling requirements and market forces. 

4011. FIRE EXTINGUISHERS FOR CONSUMER APPLICATIONS

S. 870 bans, within nine months, the sale and distribution of fire extinguishers containing halons or other ozone-depleting substances for routine consumer applications, except in cases where such fire extinguishers are required by federal law. Furthermore, S. 870 directs the Secretary of Defense to eliminate all emissions of halon-1211 and halon-1301 than presently occur during the testing of fire-extinguishing equipment and to investigate the feasibility of testing such equipment by alternative methods.

The Committee Bill calls for a ban, within twenty-four months, on the sale and distribution of fire extinguishers containing halons except for commercial applications. It calls for regulations, also within twenty-four months, to control the commercial use of these extinguishers. It also calls for the reduction to "the maximum extent practicable" of the release of harmful substances associated with training, testing, leakage, or accidental discharges from fire control equipment.

AMENDMENT. The two year ban on sale of halon fire extinguishers for non-commercial use is removed. As in the case of the Section 4010 Amendment, such a specific use control is no longer considered very important.

4012. NONESSENTIAL CONSUMER PRODUCTS CONTAINING CHLOROFLUOROCARBONS

The Committee Bill uses language identical to that in S. 870, except that the ban takes effect in one year and only "non-commercial" cleaning fluid for electronic and photographic equipment is covered.

S. 870 bans, within nine months, the sale and distribution of non-essential consumer products that are capable of releasing ozone-depleting substances into the atmosphere. These products include chlorofluorocarbon-containing plastic party streamers and noise horns, chlorofluorocarbon-containing cleaning fluids for electronic and photographic equipment, and others.

AMENDMENT. The proposed amendment would limit the statutory prohibition on nonessential uses to priority list substances. It would also statutorily prohibit, effective January 1, 1994, use of other ozone depleting substances such as HCFCs for dispersant purposes, explicitly in pressurized dispensers and in most plastic foam products.

4013. LIMITATION ON OZONE DEPLETION POTENTIAL

S. 872 and the Committee Bill both establish production limits for substances covered by their respective titles. Such limits, in both cases, are based on the ozone depletion factor assigned to each substance and 1986 production levels.

S. 872 requires that within one year of enactment total ozone depletion shall not exceed 1986 levels. Within two years, total levels shall be reduced to 75%; within three years, to 50%; and within four years, to 5%. Within five

years, it shall be unlawful for any person to produce any priority substance .

This Section of the Committee Bill is meant to supplement Section 4007 (the production phase-out). Besides establishing the scheduled production caps and reductions applicable to priority list substances (Section 4007), the Bill requires that production of all regulated substances be limited so as to yield not less than a 95% reduction in total ozone depletion potential by the year 2010.

AMENDMENT: To delete section 4013 altogether. According to EPW, this section was designed to allow limited growth in the production and use of HCFCs during the time in which non-ozone depleting alternatives were being developed. According to the Committee, HCFCs are damaging, but not as damaging as the CFCs for which they could be used to substitute. This section had represented somewhat of a concession to industry. *

According to EPW, recently obtained evidence -- particularly from UNEP -- affirms that growth in usage of all ozone-depleting substances must be arrested. Thus, a New Section addressing such issue is inserted as an amendment following Section 4008 in this brief.

4014. CERTIFICATION OF EQUIVALENT PROGRAMS

S. 872 and the Committee Bill both require certification that foreign countries have equivalent phase-out programs in place before allowing products that contain or are manufactured with ozone-depleting substances to be imported into the United States. The Committee Bill goes one step further by directing the President to prevent the United States from transferring technology to, or investing money in, facilities that either produce or increase demand for priority list substances in countries not certified as having equivalent phase-out programs.

AMENDMENT. The proposed amendment makes the President's prohibition of technology transfer to, or investment in, the described foreign facilities conditional upon a determination by the President that substitute products or processes exist that do not contain or depend on such substances. In addition the President must consider whether the proposed transfer or investment will increase use of priority list substances.

4015. LABELING REQUIREMENTS

S. 870 requires that within six months of enactment, consumer products that contain, are produced with, or are produced from an ozone-depleting substance be labeled. These labels should warn the purchaser that the product's contents and/or manufacturing process pose(s) a danger to the stratospheric ozone layer, and that depletion of the ozone layer could lead to increased risk of skin cancer and damage to natural systems, including food production.

The labeling provisions in the Committee Bill are essentially the same, although in some respects they are not as strong. Labeling requirements are to come into effect twenty-one months after the date on which a substance is placed on either the priority or the other regulated substance list. Unlike that in S. 870, the warning stops after stating only that the product's contents and/or manufacturing process pose(s) a danger to the ozone layer. The Committee warning does not list any potential consequences of ozone layer depletion.

AMENDMENT: According to the amendment, beginning January 1, 1991 and following every two years thereafter, the Administrator shall determine whether there exist substitute products or processes for those chemicals listed as priority substances. The Administrator shall require a warning label only for those substances for which this determination is positive.

This amendment limits the labeling requirement in two important ways. First, only products that depend on priority list substances are covered. The Administrator is authorized to require labels for products that depend on other ozone depleting or greenhouse chemicals but is not required to do so. Second, the requirement to label is limited to instances in which consumer choice might be affected (that is a choice between two similar products; not a choice of whether or not to buy). If consumers have no option in a purchase situation but to buy an ozone-depleting product, no label is required.

The original labeling requirement is further weakened by the fact that, for home appliances for which energy labels are already required, the new labeling requirement may be satisfied simply by adding the appropriate language to the energy label.

4016. SAFE ALTERNATIVES POLICY

S. 872 establishes the policy that ozone-depleting substances to be phased out will be replaced, to the maximum extent possible, by chemicals, product substitutes,

or alternative manufacturing processes that reduce overall risks to public health and the environment.

S. 872 calls on the Administrator to review and report on the alternatives being considered. Specifically, the Administrator is directed to identify and describe these substances or alternatives, assess their risks to public health and the environment, and list the earliest date by which each alternative could become available. Additionally, the Administrator shall require all producers of these alternatives to provide the EPA with all available health and safety studies on the alternative they intend to produce, and to notify the EPA no less than 60 days before the plan to introduce the alternative into commercial use.

The Committee's statement of policy on safe alternatives is exactly the same as that contained in S. 872.

As in S. 872, the Administrator is directed in the Committee Bill to recommend Federal research programs and other activities to assist in the identification of safe alternatives. Moreover, in the Committee Bill, he is directed to conduct studies of Federal procurement practices to promote transition by the national government to safer alternatives, and of possible initiatives to promote transfer to alternatives nationally and internationally. The administrator is offered the same provisions as in S. 872 to regulate the manufacture of alternatives. ✓

Part B: Methane Assessment

S. 201 directs the Administrator of the EPA, the National Oceanic and Atmospheric Administration and the National Air and Space Administration to produce a series of reports on:

- the contribution of methane to global climate change;
- sources and sinks of methane;
- methods of controlling methane emissions; and
- the interaction of methane with other atmospheric gases.

The objective of this part of the Committee bill is to identify and analyze options to reduce the risks of tropospheric ozone formation and global climate change by reducing methane emissions enough to keep atmospheric concentrations from increasing; and promoting additional analyses of all potential sources and sinks of global methane. The national goal of the Committee bill is to reduce methane emissions in the U.S. and other countries.

S. 201 also contains directions to amend the Solid Waste Disposal Act by inserting much stricter regulations controlling air pollution, primarily methane, from solid waste disposal facilities. All new sewage treatment facilities are to be designed, maintained and operated in such a way as to minimize methane emissions. Moreover, all already existing sewage treatment facilities are to be modified so as to minimize methane emissions.

According to the Committee Bill, only the EPA is required to submit any reports to Congress. These shall include:

- a report on measures that could reduce methane emissions and that are economically justified with or without consideration of environmental benefits;
- reports including inventories of emissions associated with the following activities in the U.S.: natural gas and coal extraction, transportation, distribution, storage, and use; management of solid waste; agriculture; biomass burning; and other activities deemed significant by the Administrator;
- a plan that could be implemented to stop the growth in atmospheric concentrations of methane from sources in the U.S. and an analysis of U.S. programs that could be used to induce developing countries to implement measures that will reduce methane emissions;
- reports on methane emissions from other countries and on the potential for preventing an increase in atmospheric concentrations of methane from foreign sources;
- reports on methane emissions from natural sources.

The Committee Bill offers no amendments to the Solid Waste Disposal Act.

AMENDMENT. More in accordance with S. 201, all required studies shall be carried out in consultation and coordination with the Administrators of the National Aeronautics and Space Administration and the National Oceanic and Atmospheric Administration, as well as the heads of other relevant federal agencies and departments.

Part C: Offset Of Government Expenses Associated with Implementation of Regulatory Controls and Implementation of Production, Importation, and Distribution Fees on Ozone-Depleting Chemicals

4029-4032. FEE IMPOSITIONS AND SUPPORTING PROVISIONS

The Committee Bill imposes a fee on the production and importation of ozone-depleting chemicals. An ozone depletion potential is assigned to each of the substances, and a fee is set based on the chemical's potential for depleting stratospheric ozone.

The fee imposed by the Committee Bill is to be absorbed by the chemical manufacturers, keeping the price of ozone-depleting chemicals stable. The fee is adjustable, to capture any windfall profits that producers realize as supplies drop during the phaseout period, and thus prevent the manufacturers from inflating the price of the chemicals being phased out.

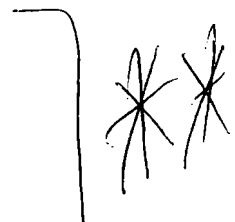
S. 871 amends the Internal Revenue Code of 1986 to impose a manufacturers' excise tax on certain chemicals that deplete the stratospheric ozone layer. The amount of the tax is adjusted for each chemical, depending on the chemical's potential for depleting stratospheric ozone.

The tax imposed by S. 871 can be passed on to purchasers of ozone-depleting chemicals, raising the price of the chemicals; thus, market forces are used to decrease the demand for the more dangerous chemicals. The increased price due to the tax effectively "internalizes" the environmental costs into the costs of the product (similar to the logic of those who would call for a carbon dioxide tax to reduce greenhouse gas emissions). If the price is not raised, no incentive is provided for consumers to demand the less-dangerous chemicals. The higher price also makes the environmentally safer substitutes more economically competitive with some traditionally very-low-cost ozone-depleting chemicals, and will eventually provide users with the incentive to recapture and recycle the most dangerous ozone-depleting chemicals.

The tax does not provide for adjustment to capture windfall profits. Companies are expected to use such profits -- to the extent that they occur -- in order to finance research and development of alternatives. Because the traditional products are being phased out, the companies should require those revenues to finance a substantial research and development effort.

4033. TRUST FUND

The Committee Bill establishes an Ozone Layer and Climate Protection Trust Fund consisting of all taxes received under the manufacturers' excise tax.



The Committee Bill is somewhat more specific as to how such money is to be appropriated. Up to \$100 million shall be available each year, subject to appropriations, for grants related to alternatives to chemical that contribute to ozone depletion or global climate change. The trust Fund shall also be available, as provided in appropriation Acts, to implement the Montreal Protocol and this Act. The balance of these monies are to remain in the Trust Fund and the interest earned shall be available, subject to appropriations, to the EPA: one half for abatement and control activities, and one half for research and development activities.

S. 871 similarly provides that there be established an Ozone Layer Conservation Trust Fund consisting of one-half of the taxes received under the manufacturers' excise tax. The trustees of this fund shall include the Secretaries of the Departments of the Treasury and of Energy, and the administrator of the EPA.

The Administrator shall, within six months of enactment deliver a plan of how money from this fund shall be spent. This strategic plan shall include expenditures for research, development and promotion of safe and appropriate alternatives to ozone-depleting chemicals and processes to be used both domestically and internationally. The plan includes a specific requirement that newly developed and safe air-conditioning products be given preference in government purchasing.

**AMENDMENTS TO COMMITTEE BILL SECTIONS NOT COMPARED TO
EITHER S. 870, S. 871, S. 872, OR S. 201.**

Friday afternoon, evening

* Formula for HCFC $\downarrow$ to

R₀n [Cl] to 2 ppb by 2075 —

2075 - (life_{times} * 2.5) = HCFC present
total

* In Finance Bill — period bill

CFC excise tax — 1250 mg

1244
Fee will be dropped in
conference on Finance
bill

* Pinnerberger amendment on melting of the dome

* Charles amendment to print

* Graham Breyer Summary to object to resolution
is extremely — to 2 ppb level where
I could see some there w/ Charles amendment —