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Subseries:

OA/ID Number: 2902
FolderID:

Folder Title:
Global Warming/Ozone

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President Bush's Record on Ozone Layer Protection A Lost Opportunity for Leadership

The most positive thing that can be said about President Bush's record on protecting Earth's ozone layer is that it is better than his Administration's policy on preventing global warming. But one thing is clear: President Bush has not been a leader in worldwide efforts to stop ozone depletion.

While a chronology of events shows that President Bush has begrudgingly allowed U.S. ozone policy to move in the right direction, when compared to some other governments, the U.S. approach has been moderate at best. White House opposition to unilateral action and delayed responses from the President have resulted in lost opportunities for U.S. global environmental leadership.

An examination of the President's actions on this critical issue reveals that the accomplishments the Bush Administration touts as U.S. leadership, such as the CFC tax and the Clean Air Act, were achieved largely through EPA staff dedication, Congressional initiatives, and strong environmental community support. President Bush's major ozone policy announcements in 1989 and 1992, endorsing a CFC ban and accelerated phaseouts respectively, lagged behind other governments and industries which have been consistently quicker in responding to new scientific developments. In areas where the U.S. could have been a leader, such as the negotiations to set up the Multilateral Ozone Fund, the Administration instead had to be dragged along kicking and screaming.

Finally, if ozone protection efforts at home are a test of a government's commitment to solving this problem, then the Bush Administration is, once again, performing poorly. All of the regulations which the EPA is required to have issued by now to implement the stratospheric ozone provisions of the Clean Air Act - the centerpiece of the U.S. ozone protection program - have been published late or are still outstanding. Environmental groups have recently been forced by the Administration's tardiness to notify the EPA of their intention to sue the agency for failing to respond within the required 180 days to their petition to accelerate the phaseouts of ozone-depleting chemicals under Section 606 of the Act.

The United States needs to do far more to stop ozone depletion. Earth's rapidly thinning ozone layer is begging for real environmental leadership in the White House.

Attached is a summary of President Bush's record on ozone protection. Accompanying this document is also a detailed chronology of events and supporting materials.

**March 1989 - President Bush Calls for a CFC Phaseout
A Follower Not a Leader**

On March 3, 1989, President Bush called for the elimination of CFCs by 2000. His call was not a unilateral pledge, but it was support for international action to strengthen the Montreal Protocol. The announcement came at the insistence of EPA Administrator Reilly and followed the European Community's announcement that it unilaterally would phase out CFCs by 2000. The Bush announcement was hardly leadership, considering that Du Pont had already agreed to phase out CFC production by 2000 one year earlier. EPA Administrator Lee Thomas also had called for a CFC phaseout back in September 1988.

**May 1990 - Bush Administration Flip Flops on Ozone Fund
The U.S. Loses an Opportunity for Leadership**

One of the most embarrassing scars on the Bush Administration's environmental record is from May 1990, when the White House opposed creation of an Ozone Fund to enable developing countries to implement the Montreal Protocol. The U.S. took this isolated position despite a promise made in the Protocol to provide financial and technical assistance to these countries, and after months of negotiations during which the U.S. delegation had made a constructive contribution towards the development of a workable financial mechanism.

International and domestic outrage forced the U.S. to back down on June 15th 1990, days before Parties to the Protocol met in London to establish the Fund. The Bush Administration's reversal, however, was contingent on several conditions which offended developing countries and made the London negotiations difficult. While the U.S. ultimately supported the Ozone Fund, the U.S. missed an opportunity to lead the international community to this landmark achievement in global environmental cooperation.

Note: The U.S. has made a good effort to redeem itself on this issue by taking an active role in the Executive Committee which governs the fund and initiating several bilateral projects with developing countries. Eileen Claussen of the EPA is currently Vice Chair of the fund and will become Chair next year. At a Protocol working group meeting this July, the U.S. delegation gained the favor of developing countries by reaffirming its support for the Fund's current structure, despite moves by the Netherlands and the United Kingdom to open up the possibility of merging the Fund with the World Bank's Global Environmental Facility.

**June 1990 - U.S. Blocks Faster Global CFC Phaseout
Fails to Demonstrate International Leadership**

The Bush Administration has failed to join those governments which take the most aggressive positions on ozone layer protection at the international level and has even prevented tougher global action on ozone-depleting substances.

In June 1990, at negotiations to strengthen the Montreal Protocol in London, the U.S. blocked efforts to secure a phaseout of CFCs in 1997 instead of 2000. Also, the U.S. did not initially support a phaseout of methyl chloroform in London, despite the fact that such action was imminent domestically. Prior to the London meeting, both the House and Senate had passed Clean Air bills which included a methyl chloroform phaseout. The U.S. ultimately agreed to a protocol amendment eliminating methyl chloroform in 2005, but the Bush Administration failed to seize the opportunity to demonstrate leadership on this issue.

**February 1992 President Bush Announces New Ozone Policy
Another Case of Overdue and Weak Action**

Bush's decision in February 1992 to accelerate the phaseout of ozone-depleting substances in the United States illustrates how the Administration has failed to respond quickly to a series of scientific reports of worsening ozone depletion. Once again, President Bush's announcement lagged months behind industry's commitments to take faster action. The new U.S. policy is also full of loopholes and does not represent a significant improvement over controls contained in the Clean Air Act. The U.S. is pushing at the international level to include such loopholes, such as a production exemption for the service of existing equipment, during negotiations to strengthen the Montreal Protocol.

(Note: An important exception to the Bush Administration's moderate approach, however, is current U.S. support for a Montreal Protocol amendment to phase out methyl bromide in 2000. The U.S. is the only supporter of a methyl bromide phaseout at the international level.)

**August 1992 - U.S. Drags Feet on Ozone Protection at Home
EPA Misses Several Clean Air Act Deadlines**

During the Congressional deliberations which led to the enactment of the Clean Air Act Amendments of 1990, the Bush Administration consistently opposed unilateral U.S. action on ozone-depleting chemicals. Despite the Administration's preference for working internationally through the Montreal Protocol, Congress enacted comprehensive ozone protection provisions in Title VI of the Act.

The EPA has repeatedly missed deadlines for the implementation of these Clean Air Act measures. The agency was late in issuing regulations requiring production phaseout schedules and mandatory CFC recycling at car air conditioning repair shops. Final rules on nonessential products, recycling and emission reduction programs, and product labeling are all overdue.

Further, environmental groups have recently notified the EPA of their intention to sue the agency for failing to respond within the required 180 days to their petition to accelerate the phaseouts of ozone-depleting chemicals under Section 606 of the Act. The EPA is required by law to speed the phaseout on the basis of new scientific and technical developments.

Liz Cook

7130 Willow Avenue • Takoma Park, MD 20912 • (301) 891-3068 • office/voice mail: (202) 543-5140

August 13, 1992

Katie McGinty
c/o The Honorable Albert Gore Jr.
U.S. Senate
Washington, DC 20510

Dear Katie,

Enclosed please find the materials you requested describing President Bush's record on ozone layer protection. I have written both a three-page summary and a detailed chronology of events.

I enjoyed raking through my files to pull together the supporting documents. Senator Gore has an impressive history of involvement on this issue. During every important ozone related event, he was out front demonstrating leadership.

As I mentioned on the telephone, It was a very happy day when I learned that Senator Gore would be joining the Clinton ticket, especially since I was in Geneva attending the July Montreal Protocol Working Group meeting. I remain more than happy to do anything I can to help the campaign effort.

Please contact me if you would like to talk about these briefing materials or the recent Montreal Protocol Working Group meeting. I would like to see a copy of the Clinton/Gore position on ozone depletion if one exists.

With all best wishes,

Sincerely,


Liz Cook

President Bush's Record on Ozone Depletion
A Lost Opportunity for Leadership

Chronology of Events

President Bush Calls for a CFC Phaseout
A Follower Not a Leader

September 26, 1988 - EPA Administrator Lee Thomas called for a Global ban on ozone-destroying CFCs and related compounds. (Ann Arbor News September 27, 1988)

March 24, 1988 - Du Pont, the world's largest CFC producer, announced that it will phase out CFC production. The company set a goal of eliminating CFC production as soon as possible, but no later than the turn of the century. (Wall Street Journal March 25, 1988, Du Pont CFC/Ozone Update December 1988)

March 2, 1989 - The European Community agreed to eliminate CFCs by 2000. The EC decision committed member states to enact national legislation requiring a CFC phaseout. (New York Times March 3, 1989)

EPA Administrator Reilly urged President Bush to join Europeans in move to phaseout CFCs. (Washington Post March 3, 1989)

March 3, 1989 - President Bush instructed Reilly to support the EC and call for CFC phaseout by 2000 at Prime Ministers Thatcher's Saving the Ozone Layer Conference. Bush's call was not a unilateral pledge, but it was support for international action to strengthen the Montreal Protocol. President Bush also qualified U.S. support for a phaseout by saying that it is contingent on the development of safe alternatives. His policy did go beyond the EC position by including halons. (Washington Post March 4, 1989)

Senator Gore called for the elimination of CFCs within five years. (Washington Post March 4, 1989)

Bush Administration Flip Flops on Support for Ozone Fund
The U.S. Loses an Opportunity for Leadership

September to March 1989 - The U.S. played a mostly constructive role in the Montreal Protocol's Open-ended Working Group on Financial Mechanisms, which aimed to figure out how to make real the protocol's pledge to assist developing countries. EPA prepared case studies to help estimate the cost of phasing out CFCs and related chemicals in developing countries.

May 9, 1990 - At the urging of White House Chief of Staff Sununu and Budget Director Darman, the U.S. opposed the creation of a fund and the allocation of additional resources to assist developing countries implement the Montreal Protocol. Administration officials feared the fund would set a precedent for financial commitments in future global environmental agreements. (U.S. Position Agenda Item 3(b) Elements of a Financial Mechanism, Washington Post May 9, 1990, New York Times May 11, 1990)

June 15, 1990 - After intense criticism, the Bush Administration dropped its opposition to the Fund. The policy reversal included several conditions regarding control and use of funds, voting rights, and the precedential nature of the Fund. (White House Press Statement June 15, 1990, Boston Globe June 16, 1990)

June 20-29, 1990 - Governments agreed on Ozone Fund at London Meeting of the Parties to the Montreal Protocol, but U.S. insistence on a permanent seat on the Fund's Executive Committee and weighed voting rights based on contribution levels made negotiations difficult. (Statement of the U.S. Delegation Regarding the Financial Mechanism, Los Angeles Times June 23, 1990)

June 1991 - Third Meeting of the Parties to the Montreal Protocol elected EPA's Eileen Claussen as Vice Chair of the Ozone Fund's Executive Committee. The U.S. will become Chair in 1992.

July 1992 - At a Montreal Protocol working group meeting in Geneva, the U.S. delegation gained the favor of developing countries by reaffirming its support for the Fund's current structure, despite moves by the Netherlands and the United Kingdom to open up the possibility of merging the Fund with the World Bank's Global Environmental Facility. (Global Environmental Change Report July 24, 1992)

U.S. Blocks Faster Global CFC Phaseout
Fails to Demonstrate International Leadership

May 1989 - U.S. officials presented evidence to the First Meeting of the Parties to the Montreal Protocol in Helsinki on the need to control methyl chloroform and carbon tetrachloride in order to stop ozone depletion. Leadership work by the EPA on this issue succeeded in putting these chemicals on the international negotiating agenda. (Ottawa Citizen April 26, 1989)

November 1989 - At a Geneva Montreal Protocol working group meeting, the U.S. delegation proposed an amendment to the protocol that would freeze methyl chloroform production in 1991 and phase down production from 25 to 100 percent by 2000. (Washington Post November 22, 1989)

Spring 1990 - The Senate and House of Representatives passed Clean Air bills which included a phaseout of methyl chloroform. The Senate bill set a 2000 deadline. The House bill set a 2005 deadline.

June 1990 - As a result of industry lobbying and Commerce Department reservations, the U.S. delegation went to the London Meeting of the Parties to the Montreal Protocol supporting an amendment that would only cut methyl chloroform production by 50 percent by 2000. EPA Administrator Reilly said the U.S. would support a resolution to phase out the substance as soon as possible. The U.S. took this position even though it was almost certain that U.S. industry would be subject to a methyl chloroform ban through the Clean Air Act by 2005 at the latest. By the end of the meeting, the U.S. government decided to support a full phaseout and the Parties agreed to eliminate methyl chloroform in 2005. (Opening Statement by EPA Administrator Reilly)

In London, several governments pressed for a CFC phaseout in 1997 instead of the year 2000. The U.S. joined Japan and the Soviet Union in preventing agreement on the faster CFC phaseout. Thirteen governments, not including the U.S., issued a statement declaring they will phase out CFCs as quickly as possible but not later than 1997. Several of these governments, such as Sweden, Norway, West Germany, Australia, Switzerland, and Austria, had already committed domestically to cutting CFC use by 90 to 100 percent by 1995. (Washington Post June 13, 1990 and June 28, 1990)

President Bush Announces New Ozone Policy
Another Case of Long Overdue and Weak Action

April 4, 1991 - EPA Administrator Reilly announced he would intensify EPA's efforts on ozone-depleting chemicals in response to NASA satellite data which showed that the ozone layer over the United States is thinning twice as fast as scientists previously thought. The statement did not specify any changes in U.S. policy. (Reilly Statement on Ozone Depletion April 4, 1991)

April 9, 1991 - Senator Gore sends a letter to Administrator Reilly, signed by 32 Senators, urging him to use Section 606 of the Clean Air Act to accelerate the phaseout of CFCs and HCFCs. (Letter to Reilly dated April 9, 1991)

October 22, 1991 - Du Pont announced it was accelerating its scheduled phaseout of CFCs and halons in response to UNEP's 1991 Scientific Assessment of Stratospheric Ozone. The report confirmed NASA reports of accelerating ozone loss and revealed that ozone depletion is extending into the summer months. Du Pont said it would eliminate CFCs by the end of 1996 and halons by the end of 1994. (Du Pont Press Release October 22, 1991, Washington Post October 23, 1991.)

November 7, 1992 - Senator Gore introduced Senate Resolution 217 and sent a letter to President Bush, calling on the EPA and the President to accelerate the phaseout of ozone-depleting chemicals. The White House blocks action in the Senate. (Senate Resolution 217, Letter to President Bush November 7, 1992)

February 3, 1992 - NASA released data showing record-breaking levels of ozone-destroying compounds in the Arctic stratosphere and warned that an ozone hole over the North Pole is increasingly likely.

February 6, 1992 - U.S. Senate passed 96-0 Senator Gore's amendment to the energy bill, calling for a faster phaseout of ozone-depleting substances. (New York Times, February 7, 1992)

February 11, 1992 - President Bush announced a new U.S. ozone policy, committing the U.S. to unilaterally moving up the phaseout date of CFCs, halons, carbon tetrachloride, and methyl chloroform to the end of 1995. The policy permits production to continue beyond 1995 for certain essential uses and the service of existing equipment. The President also called on industry to voluntarily reduce 1992 production of these chemicals by 50 percent of 1986 levels. (White House Press Statement February 11, 1992)

Du Pont supports the President's new policy, noting that the company had earlier set a similar goal and had already cut CFC and halon production by 50 percent. The Alliance for Responsible CFC Policy also supported the President and indicated that 15 percent of 1986 CFC production levels would be need to service

the existing equipment base in the U.S. If production were allowed to continue at 15 percent of 1986 levels, the President's new CFC policy would not represent much beyond the Clean Air Act. The Clean Air Act currently permits this amount of production in 1997-1999. (Du Pont Statement on Accelerated CFC Phaseout February 12, 1992, Science News Vol. 141)

April and July 1992 - The Bush Administration sent a delegation to Montreal Protocol working group meetings in Geneva with instructions to persuade the international community to adopt the President's new policy as adjustments and amendments to the Montreal Protocol. The U.S. position included pushing for an essential use exemption that would allow production of ozone-depleting chemicals to continue beyond accelerated phaseout dates. In a positive move, the U.S. supported an amendment to phase out methyl bromide in 2000. The U.S. is the only government supporting a methyl bromide phaseout at the international level.

U.S. Drags Feet on Ozone Protection at Home
EPA Misses Several Clean Air Act Deadlines

1989 to 1990 - During Congressional deliberations which led to the enactment of the Clean Air Act Amendments of 1990, the Bush Administration consistently opposed unilateral U.S. action on ozone-depleting chemicals. (Weekly Bulletin January 22, 1990)

November 1990 - Despite the Administration's preference for working internationally through the Montreal Protocol, Congress enacted comprehensive ozone protection provisions in Title VI of the Act.

November 1991 to present - The EPA has repeatedly missed deadlines for the implementation of Clean Air Act provisions. The agency was late in issuing regulations requiring production phaseout schedules and mandatory CFC recycling at car air conditioning repair shops. Final rules on nonessential products, recycling and emission reduction programs, and product labeling are all overdue.

July 1992 - The Natural Resources Defense Council, Friends of the Earth, and the Environmental Defense Fund notified the EPA of their intention to sue the agency for failing to respond within the required 180 days to their December 1991 petition to accelerate the phaseouts of ozone-depleting chemicals under Section 606 of the Act. The EPA is required by law to speed the phaseout on the basis of new scientific and technical developments. (NRDC/FoE/EDF letter to EPA Administrator Reilly)

Environmentalists hail EPA's new stance on ozone depletion

By GUY DARST
THE ASSOCIATED PRESS

WASHINGTON — Environmentalists hailed a call by the Environmental Protection Agency for a global ban on ozone-destroying chlorofluorocarbons and related compounds.

"We're glad to see they've come around to our way of thinking," said Liz Cook of Friends of the Earth.

The announcement Monday by EPA administrator Lee M. Thomas marked a shift from his view that there was plenty of time to consider what, if any, steps were needed to tighten the terms of an existing international treaty on reducing CFC production.

That treaty, signed by 45 major nations, pledges signatories to a 50 percent cut by 1998.

The CFC compounds are widely used as refrigeration fluids, solvents and foam blowing agents and, outside the United States, as aerosol propellants. Related bromine compounds are used in fire extinguishers. Some can last for more than a century, rising to the stratosphere where they eventually break down to liberate chlorine.

A major study of ozone by the National Aeronautics and Space Administration last March found ozone depletion of as much as 3 percent at mid-latitudes and attributed it to chlorine.

Without cutting off production of CFCs, chlorine and bromine will continue to build up in the atmosphere, destroying high-altitude ozone that protects the Earth from the sun's ultra-violet rays, the EPA said in a new analysis released Monday.

"It is increasingly clear that we as a global environmental community must use the (treaty) to go

even further to eliminate these chemicals which damage the stratospheric ozone layer and threaten our future," Thomas said in a statement.

"Regretfully, our new analysis predicts an even worse scenario than anticipated," he added.

Up to now, Thomas had resisted environmentalist recommendations for a CFC-phaseout. In his remarks Monday, Thomas mentioned no specific timetable for a phase out.

David Doniger of the Natural Resources Defense Council, an environmentalist group, said the EPA announcement "underlines the seriousness of the emergency we are facing."

Doniger predicted the report would "have a lot of impact" on major CFC producers abroad.

Also on Monday, the major trade association of CFC makers and users, the Alliance for a Responsible CFC Policy, announced it, too, now believed the nations of the world should aim at "phasing out . . . CFCs to the maximum extent feasible."

Environmentalist groups have suggested 1995 as a target date for ending CFC production.

John Hoffman, co-author of the EPA analysis, said the failure of computer models to predict past ozone depletion leads EPA to shy away from ozone predictions and to zero in on chlorine buildup instead. Any increases in chlorine raise the risk of ozone depletion, he said.

Currently, EPA estimates worldwide atmospheric chlorine at 2.7 parts per billion. Others last year put the figure at 3 parts per billion, which represents about a 25 percent increase in the past decade. By some estimates, half the total comes from natural sources such as sea spray.



Fluorocarbon/Ozone



Alternatives Development Poses Major Challenges

The following article is based on a presentation given by Du Pont at the United Nations Environment Programme (UNEP) meeting at the Hague, the Netherlands, on October 20, 1988. The report focuses on the many challenges facing CFC producers and users in the development and commercialization of alternatives for fully halogenated chlorofluorocarbons (CFCs).

Du Pont reactivated its programs to develop alternatives to fully halogenated CFCs in 1986 when computer model predictions of ozone change resurfaced concerns of possible ozone depletion if sustained growth in CFC emissions occurred. Our effort was further accelerated following our March 1988 decision to phase out production of fully halogenated CFCs as soon as possible but no later than the turn of the century — a

position based on the scientific findings of the international Ozone Trends Panel.

Since our phaseout announcement, Du Pont has advanced by two years its capability to supply million-pound quantities of three of the new alternatives, a step which should accelerate the phase in of these substitutes into several major market segments. Our goal is to develop alternatives that meet the service needs of both new and existing equipment.

As reported in previous issues of Fluorocarbon/Ozone Update, Du Pont has identified a small number of chemicals that appear to exhibit the properties necessary to substitute for some important uses of CFCs. These chemicals include HFC-134a, HCFC-141b, HCFC-123 and HCFC-124, as well as existing chemicals such as HCFC-22,

HCFC-142b and HFC-152a.

Numerous steps will precede full commercialization of the new alternatives. These include: development of new processes; production of material for application and toxicity testing; completion of needed toxicity studies for short-term and long-term exposures; completion of application studies by user industries; construction of new facilities and restructuring of existing facilities; and phase in by the using industries.

Process Technology

One of the most critical early hurdles is the identification and development of new process technology. A variety of process chemistries are being considered. There are significant differences

Continued on page 2

Du Pont Position

Du Pont's goal is to phase out production of fully halogenated CFCs and Halons as soon as possible through an orderly and safe transition to alternative products.

The company plans to commercialize a series of new products during a three-year to five-year period beginning in 1990. This schedule assumes favorable toxicology (safety), process development, receipt of permits, and plant design. It is expected that CFCs will be phased out of several major market segments in the early to mid-1990s, but complete phaseout may take until the turn of the century.

Du Pont has consistently maintained that decisions on the ozone depletion issue should be responsive to the best available scientific information. This has been illustrated by our early and active support for worldwide ratification of the United Nations Environment Programme (UNEP) Montreal Protocol and by our efforts to develop alternatives to the fully halogenated CFCs.

Our phaseout position is based on the scientific findings of the international Ozone Trends Panel which were released in March 1988. The Panel concluded that CFCs may have contributed to a 2 percent decrease in global ozone since 1970 and, coupled with unique meteorology, probably are the major contributors to a larger decrease over Antarctica since 1979.

Based on this information, Du Pont advocates further global limitations on the emission of CFCs beyond the current provisions of the Montreal Protocol, which now call for a 50 percent phase-down in CFC consumption by mid-1998. We believe the Protocol's assessment process is the appropriate means for considering further restrictions on CFCs and Halons.

By building on the growing international scientific consensus, worldwide policymakers are in the position to act cooperatively, not unilaterally. We believe cooperative action is the only means to ensure adequate and timely ozone protection.

UNEP Meeting Sets Timetable

The United Nations Environment Programme (UNEP), which has responsibility for implementation of the Montreal Protocol, sponsored a meeting October 17-26 at the Hague in the Netherlands to review the science; examine alternate technologies; and develop a timetable for assessing the adequacy of the Protocol's current provisions.

The Protocol currently calls for a 50 percent phasedown of fully halogenated CFCs by mid-1998. The Protocol is scheduled to enter into force on January 1, 1989. Limits on the production, consumption, import and export of CFCs-11, 12, 113, 114 and 115 would then take effect in developed countries on July 1, 1989.

Participants at the Hague meeting agreed that any changes to the current provisions of the Protocol should be ratified by the parties by April 1990, with entry into force by October 1990.

March 3 1989
NYT

12 EUROPE NATIONS TO PROTECT OZONE

Continued From Page A1

States, estimated that the Common Market nations produced 35 to 37 percent of the world's chlorofluorocarbons. The United States produces 30 to 34 percent, the group said.

"It's a global problem," said the French Environment Minister, Brice Lalonde. "It's important to get the rest of the world behind us."

British officials will be hosts for a 112-nation conference on saving the ozone layer that opens here Sunday. Mr. Ridley, who said on Wednesday that Britain hoped to get the conference to agree to an 85 percent reduction in emissions of the chemicals from 1986 levels by 1999, said today that he hoped that the conference would convince many more countries to follow the European Community's lead.

Mr. Ridley said the British government sent out invitations to the conference last fall after concluding that the Montreal agreement was not enough to stop the damage to the environment.

Last September, Lee M. Thomas, then the head of the United States Environmental Protection Agency, called for the elimination of chlorofluorocarbons and other chemicals implicated in the destruction of the ozone layer.

Mr. Reilly, who succeeded Mr. Thomas, cautioned that care was needed in finding substitutes for the chlorofluorocarbon compounds the European community has pledged to ban.

"We need to be sure," he said, "that any C.F.C. substitutes that might be developed do not pose new and unforeseen environmental risks, such as exacerbating global warming."

Substitutes Are More Costly

Elimination of chlorofluorocarbons is technically feasible but none of the current substitutes work as well, and most are more costly.

The Bush Administration's domestic policy council met today to consider the United States position at the London meeting. It decided to offer the President options, including calling for a complete phaseout by the end of the century, but did not make a specific recommendation.

Prime Minister Margaret Thatcher, whose critics often attack her for being more concerned about private industry than about the environment, said in an interview on British television broadcast tonight that she had been responsible for keeping up financing of British scientific research in the Antarctic. Eventually British refrigerators would be required to contain no offending solvents, she said.

She began to attract attention to her pro-environmental policies in September with a speech at the Royal Society's annual dinner, when she expressed alarm about "a large hole in the ozone layer," acid rain and the "greenhouse effect," the gradual warming of the earth's atmosphere brought about by industrial activity.

An aide said Mrs. Thatcher, who studied chemistry at Oxford University, had become persuaded that more action was needed after a report by the British stratospheric ozone review group later last fall. It reported that the amount of chlorine in the stratosphere would double over the next 50 years even if the nations that have ratified the Montreal agreement on a 50 percent cut fully lived up to it.

Caution From Greenpeace

The environmental group Greenpeace said Wednesday that even if all countries stopped producing chlorofluorocarbons by next year, chlorine levels in the atmosphere would not get back to 1985 levels until 2050. Greenpeace also said the United Kingdom was the largest producer and exporter of chlorofluorocarbons in Western Europe.

The British Government is taking the line that the industrialized countries alone cannot halt the danger, because China and other developing countries also produce and use the dangerous chemicals. Mr. Ridley said today that Britain would eliminate all chlorofluorocarbons from aerosol cans by the end of this year and was closer to finding substitutes in refrigeration than other countries were.

"There is still a great demand," Mr. Ridley said. "The Chinese are coming to the conference, but they are increasing their production by 20 percent a year. It is simply not true that this is a matter of the industrial countries doing all the polluting."

12 EUROPE NATIONS TO BAN CHEMICALS THAT HARM OZONE

U.S. MAY JOIN THE ACTION

Community Agrees on a Halt
to All Production and Use
by End of the Century

By CRAIG R. WHITNEY

Special to The New York Times

LONDON, March 2 — In an unexpectedly strong move, the 12 European Community countries agreed today to eliminate by the end of the century their production and use of chemicals that harm the atmosphere's ozone shield.

In Washington, officials of the Bush Administration said tonight that William K. Reilly, head of the Environmental Protection Agency, would strongly urge President Bush to endorse a worldwide phaseout of the chemicals by the century's end.

The action by the 12 European nations was announced in Brussels and was described in London by the Secretary of State for the Environment, Nicholas Ridley, who said he was delighted. Mr. Reilly also hailed the development as "very encouraging news for the world's environment."

Early Cut in Production

A spokesman for the European Community said the environmental ministers from the 12 countries had also agreed to cut production of the chemicals by 85 percent as soon as possible, Reuters reported from Brussels.

The agreement applies to certain chlorofluorocarbons, which are widely used as coolants in refrigerators and air-conditioners, as propellants in aerosol spray cans, in foam insulation and as solvents. The chemicals eventually rise into the stratosphere, where ultraviolet radiation breaks them up, releasing chlorine or bromine atoms that can destroy the ozone layer.

Ozone in the stratosphere protects the earth from harmful ultraviolet radiation. Any increase in that radiation resulting from a thinning of the ozone will cause skin cancer and other harm to humans and damage crops, forests and other natural systems, scientists say.

Alarm Has Increased

Mounting scientific evidence that chlorofluorocarbons have substantially thinned the ozone layer over Antarctica in recent winters, and are present in dangerous concentrations over the Arctic as well, has caused increasing alarm.

The European action goes beyond an agreement reached in Montreal in 1987 calling for a 50 percent reduction in the production of chlorofluorocarbons by the end of the century. Thirty-one nations, including the Common Market countries and the United States, have ratified that agreement, which took effect last December.

Each of the 12 European nations would have to pass legislation to ban production or insure that industry did so voluntarily. The agreement in Brussels committed the nations to do that.

The World Resources Institute, an environmental group in the United

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EPA Chief Urges Bush to Join Allies in CFC Phase-Out Goal

Council to Give President Other Options

By Michael Weisskopf
Washington Post Staff Writer

Environmental Protection Agency Administrator William K. Reilly yesterday urged President Bush to join U.S. allies in Europe in a move to phase out all ozone-depleting chemicals by the end of this century, according to administration officials.

Reilly's recommendation at a White House meeting of the Domestic Policy Council (DPC) was made hours after environment ministers of the European Community voted to eliminate the popular chemicals—chlorofluorocarbons (CFCs)—by the year 2000. An international treaty that goes into

effect in July obligates the world's industrial nations only to halve production of CFCs in a decade.

Reilly is leaving today for an international conference on CFCs hosted by Prime Minister Margaret Thatcher in London that is due to start on Sunday. He is seeking to persuade the Bush administration to take a leadership role at the conference.

But he failed to get immediate endorsement for his proposed phase-out from the council, composed of Cabinet members involved in domestic policy, administration officials said.

Officials said the council agreed

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THE WASH

Bush Urged to Back Allies' CFC Phase-Out Plan

OZONE, From A1

to send several options, including Reilly's proposal, to Bush, who called during his campaign for movement toward a phase-out of CFCs. It could not be learned what other options were sent to the president.

Reilly issued a statement last night endorsing the European initiative as "very encouraging news" and expressing hope that the conference will put nations on the "best possible course for meeting the goal of a safe and efficient elimination of these chemicals." An EPA spokesman said the administration is expected to announce its position "shortly."

A White House spokesman had no comment.

CFCs are a versatile family of gases used as cooling agents in refrigerators and air conditioners, solvents to clean computer microchips, and in plastic foam products. They do not break down in the atmosphere like other chemicals, but float into the stratosphere 20 miles high and erode the gaseous veil of ozone that screens out dangerous solar rays.

As scientists detected increasing ozone depletion over Antarctica and warned of rising skin cancer and warmer temperatures without curbs on CFCs, the industrial nations signed a treaty in Montreal in September 1987 pledging to halve production.

The treaty, ratified by nearly 40 nations, including the United States, the Soviet Union, Japan and most of Western Europe, provides that "additional measures" can be



MARGARET THATCHER
... hosting conference on chemicals



WILLIAM K. REILLY
... would eliminate CFCs by 2000

taken if further ozone damage is demonstrated. The parties to the treaty are scheduled to meet in Helsinki in early May for the first time since the pact was ratified, and proposals to accelerate the schedule for phase-out are expected.

Thatcher's conference of environmental ministers is expected to be a dress rehearsal for the Helsinki session, with officials from more than 100 nations attending.

Since the Montreal protocol was signed, U.S. government scientists have reported significant depletion of ozone over populated portions of North America and Europe and a massive, ominous buildup of CFCs over the Arctic.

Moreover, a treaty provision allowing developing nations to increase use of CFCs in the next decade so as not to interfere with their economic growth could result in as much as a 50 percent rise in world-

wide consumption, according to Irving Mintzer of the World Resources Institute.

Various members of Congress have submitted legislation to eliminate the chemicals by as early as 1996.

CFCs, which account for \$28 billion a year in U.S. goods and services, were once touted by industry as virtually irreplaceable. But last year, E.I. Du Pont de Nemours & Co., the world's largest CFC manufacturer, announced plans to halt production by early in the next century. The firm expects to invest \$1 billion in research and development of substitutes.

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Bush Endorses Phasing Out CFCs by Year 2000

By Michael Weisskopf
Washington Post Staff Writer

President Bush called yesterday for elimination of chlorofluorocarbons (CFCs) by the turn of the century, joining a diplomatic initiative in Europe to phase out one of the most versatile but destructive chemicals of the past 100 years.

Bush, in remarks to winners of high school science awards, said that recent scientific reports indicate that a 1987 treaty in which industrial nations agreed to halve production of CFCs within a decade "may not be enough" to stop the chemicals' threat to the stratospheric ozone layer that protects life on Earth from harmful solar rays.

Bush said he has instructed Environmental Protection Agency Administrator William K. Reilly to support the European Community in calling for a phase-out by the year 2000 at an international conference scheduled to start Sunday in London.

The conference will provide a forum for environmental officials of more than 100 nations and set the stage for a meeting of treaty signatories in Helsinki two months later. The treaty, which becomes effective in July, is not supposed to be revised before April 1990, but European nations are expected to use the Helsinki session to speed up negotiations aimed at a phase-out.

Bush's remarks have little direct significance at home since industry is already planning to phase out CFCs, nearly ubiquitous chemicals used as refrigerants, computer chip solvents and gasses to shape plastic foam products. Bush set as a condition for the phase-out that "safe alternatives are available."

Nor did Bush pledge, as some environmentalists wished, a unilateral U.S. ban on the chemical, which wafts into the stratosphere and eats up the gaseous ozone layer that helps prevent skin cancers, crop damage and higher temperatures.

But by joining the European Community, Bush adds momentum to an effort for further international controls that has inspired little interest from Japan and the Soviet Union. Moreover, a united front by the West, where nearly two-thirds of the world's CFC supply is produced, could increase pressure on developing nations to join the pact.

Reilly said in an interview before leaving for London that Bush's remarks indicate that he intends to continue U.S. leadership on the control of CFCs, which were banned in aerosol sprays in this country in the 1970s. He said the president has staked out an "ambitious position" that reflects sensitivity to the "evolving scientific picture," particularly recent findings that huge masses of CFCs have accumulated in the Arctic stratosphere.

Bush, speaking at the National Academy of Sciences, noted that "scientific advancement" identified the dangers of ozone and the need to "reduce CFCs that deplete our precious upper atmospheric resources." Findings of the ozone hole in Antarctica prompted the treaty signed in Montreal in 1987 and ratified by 36 countries.

"But recent studies indicate that this 50 percent reduction may not be enough," he said, apparently referring to the Arctic findings and a U.S. government report last year detailing significant ozone damage over Europe and North America.

The treaty provides mechanisms for revision but only after studies are completed in August to assess ozone damage, environmental effects and the economics of the 50 percent phase-down. Parties are barred from any changes until April 1990, six months after their representatives meet to consider the studies.

Representatives of CFC users and manufacturers yesterday endorsed the Bush initiative, noting with relief that he called for safe alternatives as a condition.

But senators seeking legislation to speed up the timetable for a phase-out were critical. Sen. Albert Gore Jr. (D-Tenn.), a member of the U.S. delegation to the London conference who wants to eliminate CFCs within five years, said "there is no reason to wait" for further damage to the ozone layer.

A Bold Effort to Save the Ozone Shield

NYT 3/4

Banning widely used chemicals is hard enough, especially in advance of proven harm. Environmentalists have long wondered whether political leaders could find the will to curb the chemical threat to the life-protecting ozone layer in the high atmosphere. But within the space of two days, the European Community and the United States, each of which accounts for a third of global production, have taken giant strides toward such a ban.

It's now up to countries like China, which plans to boost its production of the pernicious chemicals by 20 percent, to re-examine the threat and join the rest of the world in averting it.

The Montreal protocol of 1987 requires signatories to impose an immediate cap on production of the chemicals, known as chlorofluorocarbons or CFC's, and then cut it by half by 1998. But studies of the recently discovered ozone hole that opens up over the Antarctic every year have persuaded many scientists that a 50 percent reduction is not enough.

Last week the 12 countries of the European Community, some of which once resisted the United States' campaign for the Montreal treaty, announced it should be even stricter. They will try to cut their production of CFC's to 85 percent as soon

as possible, and phase out the chemicals altogether by the end of the century.

William Reilly, the new head of the Environmental Protection Agency, then persuaded President Bush to announce the next day that the United States would also try to ban CFC's by the year 2000.

The phaseout of CFC's will be a major undertaking. The chemicals are used as refrigerants, for blowing foam, as cleaning agents in the computer chip industry and in Europe as aerosol propellants.

Acceptable substitutes have already been developed for some uses, but many manufacturers face difficult adjustments. Makers of refrigerators use CFC's both as the refrigerant and in insulating material, and available alternatives are less efficient. Still, the evidence against the chemicals is so persuasive that even Du Pont, the world's largest producer, has already said it will phase them out.

The new initiatives against CFC's are a notable triumph both for the European Community and the new Administration in Washington. They draw the world's attention to the urgency of the ozone threat, and should encourage other countries to sign and ratify the Montreal treaty. They also set a favorable precedent for international action against another global threat, the greenhouse warming of the atmosphere.

WMP NYT 3-4-89

J.S. Delegates 'ould o Oppose European CFC ' a 1

CFC, From A1

first. On global warming, President Bush continues to emphasize the scientific uncertainties of the threat while some European nations already have begun taking steps to curb emissions of man-made gases that trap solar heat.

At an international conference in Washington last month called by Bush, European participants severely criticized the administration for failing to take concrete action to reduce global warming.

The United States did assume a leadership role at the end of the Reagan administration when it pushed for the international accord signed in Montreal in 1987 that called for reducing world-wide con-

sumption of CFCs by 50 percent by 2000.

Even though 54 nations have ratified the protocol and most have pledged to move for elimination of CFCs during treaty revisions this June, efforts to preserve the stratospheric ozone layer that screens out harmful ultraviolet rays will be frustrated if the Third World does not curb its use of CFCs, according to scientists.

China and India, which together make up more than a third of the world's population, have ambitious plans to provide their citizens with refrigerators and other consumer goods that use CFCs, and they question why they should deprive themselves of the cheap, plentiful chemical.

The protocol anticipated such concerns and included a provision in which signatories pledged to "facilitate bilaterally or multilaterally the provision of subsidies, aid, credits, guarantees or insurance programs . . . for the use of alternative technologies and for substitution products" in developing nations.

According to sources, the proposal expected to be introduced today calls for a \$100 million fund to help Third World industries that use CFCs convert to alternative chemicals, cover the extra costs of alternatives and identify additional ways to replace CFCs.

The fund would be administered by an international lending authority, such as the World Bank, and

could be replenished after the first three years of activity.

Sources said Sununu and Darman were adamantly opposed to the plan out of concern that it might become a precedent for demands on the United States to provide far more aid to the Third World to compensate for curbs on global warming gases.

The White House press office did not return a reporter's call.

The administration's opposition is expected to renew congressional criticism of Bush's environmental record. The Senate last month voted overwhelmingly for a proposal by Sen. John H. Chafee (R-R.I.) that called for financial assistance to the Third World to expedite world-wide phaseout of CFCs.



JOHN H. SUNUNU

... concerned about future demands

J.S. ends To Oppose Ozone Plan Sununu and Darman Are Said to Reject Third World Program

By Michael Weiskopf
Washington Post Staff Writer

U.S. delegates to an international conference on chlorofluorocarbons (CFCs) have been instructed to oppose a plan supported by European governments that would provide \$100 million to developing nations to help them reduce the use of the ozone-depleting chemical, informed sources said yesterday.

The plan, expected to be proposed in Geneva today, is designed to encourage such modernizing giants as India and China to join a 1987 treaty calling for drastic reductions by the year 2000 of CFCs, a versatile gas used widely for refrigeration, production of polystyrene and cleaning of computer parts.

Environmental Protection Agency Administrator William K. Reilly and top State Department officials recommended that the United States support the plan, which was developed by a working group of treaty signatories in recent months, sources said.

But their recommendation was overridden by White House Chief of Staff John H. Sununu and Office of Management and Budget Director Richard G. Darman, who are opposed to providing any additional funds outside the existing programs of international organizations such as the World Bank, the sources said. The U.S. share of the fund would be \$25 million over three years.

The U.S. position at the United Nations-sponsored meeting is likely to prompt fresh criticism that the Bush administration is lagging behind other governments in proposing solutions for global environmental problems.

Last year the administration endorsed a phaseout of CFCs only after the Europeans had proposed it

See CFC, A11, Col. 1

WEDNESDAY, MAY 9, 1990

The Washington Post

The New York Times

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Overboard on Ozone

Every President needs a Darth Vader in the White House to thwart special pleaders and scrutinize even apple-pie issues. President Bush's chief of staff, John Sununu, and Budget Director, Richard Darman, have played this role zestfully in curbing what they see as excessive solicitude for the environment. But in their latest foray, an assault on the international effort to protect the ozone layer, they have simply abandoned all sense of proportion and judgment.

The U.S. persuaded the world to reach agreement on phasing out production of CFC's, a class of industrial chemicals that destroy the life-protecting layer of ozone in the upper atmosphere. Many developing countries that signed the Montreal protocol of 1987 asked for help in converting to the more costly substitutes, and Washington agreed in principle to provide it.

An international group in Geneva has been working out the details, and proposed setting up a fund to which the U.S. would contribute around \$20 million a year. The State Department and Environmental Protection Agency urged the Administration to support the proposal. But Mr. Darman and Mr. Sununu have now instructed that it be opposed.

This is not an intelligent decision, for the following reasons:

— There is only one ozone layer, and there are a lot of people in India and China. It's in America's own interest for these and other developing econo-

mies to abandon CFC's as soon as possible. If the price tag is only \$20 million, it's a bargain, particularly as the Treasury is reaping windfall profit taxes of \$5 billion from the CFC industry as it phases down.

□ The considerable damage already done to the ozone layer has been caused by CFC's manufactured in the United States. It's not too much to ask that Americans help less-developed countries avoid the same error.

□ Every speaker from other countries at the Geneva conference expressed dismay at the U.S. stand. It's glorious to stand alone against the world when one is right, less so to cling to a position that puts the U.S. in the doghouse of world opinion.

Mr. Sununu and Mr. Darman are said to fear that modest help on CFC's now would lead to greater demands later if the world agrees to take action against the gases of global warming. But that's an issue for the future, to be dealt with on its merits. The threat to the ozone layer, and all living things on the planet, is present and real.

A Secretary of the Interior in the Reagan Administration once suggested that the way to solve the ozone problem was to continue producing CFC's but let people buy sunglasses and sunscreen lotion to protect against the bath of ultraviolet rays. Mr. Bush risks gaining a reputation for equal profundity unless he quickly instructs Messrs. Darman and Sununu to quit trifling with serious issues.

U.S. Position

Agenda Item 3(b) Elements of Financial Mechanisms

The U.S. delegation was one of those who asked that this meeting be delayed until now so that the work of the Working Group could be reviewed in capitals and positions established on the various matters under consideration, particularly those dealing with assisting Article 5 countries to meet their obligations under the Protocol.

As a result of that review, I can now confirm U.S. support for the following:

- The establishment of a technical information clearinghouse, which would keep an inventory of LDC needs, assist in finding appropriate sources of assistance, hold technical workshops and seminars and assist in arranging for country studies to identify requirements.
- The establishment of a committee of the Parties to the Montreal Protocol which would meet periodically for the purpose of providing guidance and oversight of the arrangements put in place to facilitate the shift away from CFCs by Article 5 countries (LDCs).

Further, the United States agrees, in principal, to support financial assistance for developing countries that are Party to the Convention and the Protocol to help them eliminate the use of ozone-depleting substances, in accordance with Article 5 of the Protocol. Moreover, our support for such assistance includes:

- Support for a mechanism within the World Bank to provide financial assistance to Article 5 countries to meet agreed incremental costs of meeting their obligations under the Montreal Protocol.

Our support for such a mechanism reflects our view that we should make use of existing institutions and not waste time and scarce resources creating new institutions. The World Bank has a proven track record and is in a position to administer the mechanism in an effective, efficient manner.

It is the position of the United States that funds for this mechanism should come from existing Bank resources, and that no additional funding will be required from donor countries, although voluntary contributions should be accepted.

- This U.S. position reflects our belief that a reassessment of existing programs and projects will reveal additional funds that can be re-directed to environmentally sound projects, including projects aimed at eliminating ozone-depleting substances. Such a reassessment encourages a needed consideration of the trade-offs involved in selecting particular projects for funding.
- We need to continue the country case studies to determine the incremental costs associated with implementing the provisions of the Protocol; however, estimates of the initial amounts needed are relatively modest, and the Bank should fund this effort out of existing resources.
- Environmental objectives need to be met in the context of an overall approach to sustainable development, i.e., the concept that economic development and growth go hand-in-hand with environmental protection.
- The United States believes that the health of the global environment is everyone's responsibility, not just one group of countries, and that such a responsibility is appropriately addressed drawing on general funds provided by all members of the World Bank.

The U.S. delegation proposes that World Bank be asked to provide options for creating a mechanism along the lines I have described.

Finally, I want to reiterate the important role the United States sees for the use of existing bilateral assistance programs and the expanded use of technical, and in-kind assistance and our belief that they should be encouraged and taken into account when considering Article 5 obligations.

The Boston Globe

SATURDAY, JUNE 16, 1990

In shift, US to aid world fund on ozone

Opponents, led by Sununu, yield to global pressure

By Dianne Dumanoski
GLOBE STAFF

Bowing to pressure from allies, UN officials and members of Congress, the Bush administration reversed itself yesterday and said it will support a new fund to help poor nations phase out ozone-destroying chemicals.

Many of those pressuring the White House had warned that US opposition to such a fund was jeopardizing global diplomatic efforts to protect the ozone layer, which shields the earth from the sun's ultraviolet radiation.

The 58 nations that are parties to the 1987 Montreal Protocol, which mandates halving ozone-destroying chlorofluorocarbons by 1999, are to meet in London next week to consider strengthening the treaty.

The policy reversal came in a statement issued by John Sununu, the White House chief of staff, who, with director Richard Darman of the Office of Management and Budget, had been leading the opposition to US participation in the \$100 million fund that has been under discussion at ongoing UN-sponsored talks in the past year.

Yesterday's announcement represented the second about-face in administration policy on the issue in the last six weeks. US negotiators had supported the fund-

Bush shifts, will back fund to fight ozone

■ OZONE

Continued from Page 1

ing proposal until Sununu and Darman became involved with the issue in May.

Some administration officials interpreted yesterday's shift as a setback for Sununu, who in recent months has opposed a number of policies for strong environmental protection and has often prevailed in derailing them. One source acknowledged that the fact that the announcement was issued in Sununu's name rather than the president's had a face-saving aspect, though he added, "I don't know if it's that completely."

An administration source said the United States is considering contributing \$25 million to the fund, although the final amount could be lower.

The ranking Republican on the Senate Environment and Public Works Committee, John Chafee of Rhode Island, who had previously urged President Bush to support the fund, greeted the announcement as "tremendously good news."

"This goes a long way to closing the hole in the US ozone policy that the administration itself had opened," said David Doniger, a senior lawyer with the Natural Resources Defense Fund, a national environmental group based in Washington.

"The real question is how they could have taken any other position," he said, adding that "every other

government in the world was against them."

Even in the United States, Doniger said, industry, environmentalists and Congress have all shown strong support for the funding proposal.

Liz Cook, who follows ozone issues for Friends of the Earth, said, "It looks as if the president wants to stop embarrassing himself. The administration is getting on board, but it is still kicking and screaming the whole way."

According to administration sources, Darman and Sununu feared that the fund would set a precedent for more costly programs to address the issue of global warming, which is the subject of a different set of UN-sponsored talks now laying the groundwork for another international treaty.

These fears were evident in Sununu's 37-line statement yesterday, which referred to concerns about precedent three times.

Sununu's statement and administration sources indicated that the White House is willing to go along with the amount of assistance under discussion provided certain conditions are met regarding control and use of the money, voting rights and "the precedential nature of the fund."

Until Sununu and Darman became involved in early May, US negotiators had been working with other countries to develop the overall proposal for \$100 million in assistance over a three-year period.

THE WHITE HOUSE
Office of the Press Secretary

For Immediate Release

June 15, 1990

STATEMENT BY THE CHIEF OF STAFF

The Administration will propose a fund, operated and administered by the World Bank, to assist less developed countries (LDCs) in phasing out the production of CFCs by the year 2000. The President's proposal is intended to allow the parties to the Montreal Protocol to conclude an acceptable agreement on a package of amendments. The proposal includes specific requirements addressing: the uses of the fund; the precedential nature of the fund; the administration of the fund; assessments; control of the fund; and voting rights within the fund.

The President's proposal is structured to reflect the unique circumstances that create the need for a fund specifically designed to assist LDCs in phasing out CFCs in a non-precedential framework. This approach meets the President's essential criteria for any such funding mechanism:

- First, there is adequate scientific evidence of the causes and effects -- in this case, of ozone depletion.
- Second, there is strong evidence that the steps to be taken -- under the amended Protocol -- will successfully address the problem.
- Third, the resources needed to address the problem are reasonable and predictable.

The President expects the parties to the Montreal Protocol to successfully conclude negotiations on a package of amendments to the Protocol next week in London. The Administration's proposal will be offered at that time.

The President's proposal is designed to meet the financial needs of LDCs as they transition from the production of ozone-depleting substances to environmentally safe alternatives. At the same time, it addresses previously stated significant U.S. concerns about the use and management of the fund and the concern that there be no precedent-setting nature to such aid.

-- The United States has been a world leader in efforts to control emissions that adversely affect the ozone layer. The United States: outlawed the use of CFC aerosol propellants in 1978; strongly supported the initial negotiations that led to the Vienna Convention for the Protection of the Ozone Layer in 1985; and was among the first to sign the Montreal Protocol in 1987.

The United States has taken careful note of views of other delegations expressed at our last Working Group Meeting in Geneva in May. In preparing for this meeting we have sought to define a basis on which we could be part of a clearly developing consensus in support of a CFC Fund based on additional contributions from Parties to the Montreal Protocol not operating under Article 5.

I can now report that we are prepared to join such a consensus subject to the following conditions:

1. The Fund must be used only to assist developing countries operating under Article 5 with incremental costs associated with adjustments made necessary by the Protocol and related exclusively to that purpose.
2. The limited and unique nature of the Fund must be explicitly confirmed making clear that the Fund is appropriate because:
 - i. there is a scientifically documented connection between the substances controlled by the Protocol and ozone depletion;
 - ii the Fund and the actions being financed through it can reasonably be expected to address the problem of ozone depletion;
 - iii. the amount of funds needed is limited and reasonably predictable;
 - iv. any financial mechanism set out here does not prejudice any future arrangements the Parties may develop with respect to other environmental issues.

3. The Fund is to be operated and administered by the World Bank.

- i. administration will be accomplished through a contract between the Parties to the Protocol and the Bank;
- ii. direct oversight will be vested in an Executive Committee established by the Parties. The Committee must be limited in size and include balanced representation. As a major donor, the US would expect a seat on that Committee.

Regarding contributions, an indicative scale should be based on the World Bank assessment scale or the UN assessment scale. The size of the fund over the first three years should be agreed to by the Parties taking into account the estimates of requirements over the initial three-year period which were discussed at the May Working Group meeting.

All significant policy guidelines, operational policies, and administrative arrangements must be approved by the Executive Committee. This would include approval of major loans or grants, which in our view would include projects of \$100,000 or more.

Regarding voting rights, Executive Committee decisions would require a super majority, eg: two thirds with voting weighted in a way that takes into account contributions.

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ENVIRONMENT / SAVING THE OZONE

U.S. Has Key Role at Global Talks

By LARRY B. STAMMER
TIMES ENVIRONMENTAL WRITER

LONDON—When environmental ministers arrive here next week to wrap up a major conference on protecting the ozone layer, none will have more work cut out for them than William K. Reilly.

Reilly, chief of the U.S. Environmental Protection Agency, may well become the focus of attention—and the court of last resort—for many countries here who are urging the United States to change its position on a number of problems that have threatened the harmony of the conference.

At stake are major amendments to a three-year-old international accord to protect the Earth's ozone layer from being stripped away by man-made chemicals. The existing accord, known as the Montreal Protocol, calls for a 50% phase-out of those chemicals in industrialized countries by the year 2000.

There is wide agreement that these steps are half-hearted and that there must be a 100% phase-out by the year 2000—perhaps as soon as 1997—of chemicals already covered by the protocol. Further, new chemicals not now controlled must be covered.

The Background

Of particular concern are chlorofluorocarbons (CFCs) and halons. CFCs are used as cooling agents in air conditioners and refrigerators, as blowing agents in the manufacture of foam, and as cleaning agents for electronic components. Halons are used in fire extinguishers.

Over a period of time, they percolate into the stratosphere and are broken down by ultraviolet radiation from the sun. This releases a chlorine atom, which in turn devours up to 100,000 ozone atoms. That is the chemical reaction that is drilling a hole in the ozone layer over Antarctica and is thinning the layer over the North Pole and over North America and Europe.

On these issues there is little disagreement.

The rub comes in establishing a new executive committee of 15 to dispense about \$240 million in funds to help Third World countries afford the more expensive chemical substitutes for CFCs and halons that do less harm to the ozone layer.

Meeting on the banks of the Thames across from Parliament, lower-ranking delegates from 75 nations have been laboring since Wednesday to lay the groundwork for these changes and to reach a consensus to present to the environmental ministers next week.

But in the first three days of the working sessions, the United States has found itself largely isolated by its insistence that it be awarded a permanent seat on the new executive committee and that nations contributing the most money to the fund be given more votes on the committee.

The issue has stirred indignation from Third World countries—the so-called Group of 77—because it is the executive committee that will decide which developing nations receive funds and how they will be used. The U.S. proposal was a “bombshell,” in the words of India’s delegate,

Mahesh Prasad, secretary of the Ministry of Environment.

On Friday, China urged the United States to “radically” alter course, strongly hinting that if the American position won out, China—with 20% of the world’s population and a tremendous potential to help or hinder the cause of ozone protection—would refuse to sign the protocol.

Third World countries are holding out for equal representation on the committee along the lines called for by Mostafa K. Tolba, executive director of the United Nations Environment Program, which is sponsoring the conference.

Tolba has called for a 15-member committee made up of seven representatives from Third World countries and seven from industrialized nations. They, in turn, would elect a chairman, who would become the 15th member.

What the Americans Want

American delegates have been instructed by Washington to hold fast to that position on grounds that the United States would be contributing 25% of the fund—more than any other country. Japan would be second, contributing 11½%. “That does not seem unreasonable,” an EPA aide said.

The United States also wants to be given credit against its 25% share if it sends foreign aid directly to another country to help it switch to more desirable chemical substitutes.

But, in an interview, Prasad of India said a committee controlled by the industrialized West may make mistakes in allocating the funds and specifying ways they are to be used.

Reilly will also hear arguments, dealing with issues not of procedure but of trust and national sovereignty, delegates from the Third World say. Reilly is scheduled to meet with President Bush on Monday before arriving here Tuesday.

While nothing has been said in London about the Third World



Associated Press

William K. Reilly

countries voting as a bloc to deny the two-thirds vote required for approving amendments to strengthen the protocol, a number of delegates, including one from Britain, said that the veto is in the back of everyone’s mind.

At this point, it is unclear whether Reilly will bring with him additional authority to negotiate. But Washington is getting daily diplomatic reports on the sentiment here.

What Washington is being told is that it may once again be alone on an environmental issue of global significance, just as it was until last week, when it changed its position and belatedly agreed to contribute money to the proposed \$240-million ozone depletion fund to assist Third World nations in joining the fight to close the ozone hole.

Global Environmental Change Report

POLICY, SCIENCE AND INDUSTRY NEWS WORLDWIDE, FROM CUTTER INFORMATION CORP.



Policy Trends

No Consensus on HCFCs, Methyl Chloroform at Protocol Meeting

Parties to the Montreal Protocol at an 8-17 July working group meeting agreed that CFCs should be phased out by 1 January 1996 in the developed world, but they could not reach consensus on proposed phaseout dates for HCFCs and methyl bromide. Furthermore, disagreements at the Geneva meeting over the future of the Montreal Protocol's Multilateral Fund reportedly exacerbated tensions between developed and developing countries.

According to Fiona Weir of Friends of the Earth, the European Community wants to leave open the option that the multilateral fund might ultimately be merged with the Global Environment Facility. The UK and The Netherlands support such a move, as do Germany and Japan. But the US opposes the idea and wants to maintain the fund as a separate entity; needless to say, most developing countries agree with the US. The issue "fueled a fairly bad row" at the meeting, Weir told *GECR*, and she felt that it poisoned the atmosphere of the talks.

On HCFCs, Weir said that the US favors phasing out the chemicals in stages, based on their ozone depleting potentials (ODPs). Thus HCFC-141b would be phased out first, followed by HCFC-22, and finally the low-ODP HCFCs such as 123. The EC, on the other hand, is pressing

for a cap on HCFCs based on an ODP-weighted percentage of 1986 production and use. UNEP Executive Director Mostafa Tolba will convene 10 international experts to help him draft a compromise HCFC phaseout proposal that he will present to the parties at their formal negotiating session this November.

On methyl bromide, Tolba initially proposed a production freeze by 1995 and a 50% cut by 2000; Weir told *GECR* that by the end of the meeting he had retreated, advocating only a 25% cut. Developing countries believe most of the costs of a methyl bromide phaseout will fall on them, and they do not want the chemical included in the protocol at this stage. Tolba also changed the base year for methyl bromide production from 1991 to 1992, a move that Weir feels might inadvertently encourage manufacturers to step up their production for the remaining six months of this year.

K.M. Sharma, coordinator of UNEP's Ozone Secretariat, told *GECR* that developing countries want to be exempt from any new amendments to the protocol until a review of technology transfer and the financial mechanism is completed in 1994. Developed countries oppose this move, and Sharma said the group failed to reach a consensus on the issue during the meeting.

New Zealand Announces New CO₂ Actions

The New Zealand government has announced several new actions in its effort to meet its "planning target" of a 20% reduction in CO₂ emissions from 1990 levels by the year 2000.

A mandate to improve energy efficiency will be incorporated into the job descriptions of all government department chief executives, and any proposals that have "significant impacts" on New Zealand's CO₂ emissions are now considered to be of national significance. The government commissioned various ministries to prepare a report on the feasibility of energy efficiency standards and labeling for domestic appliances and vehicles, an evaluation of a proposed public-private "CO₂ partnership" initiative, and an analysis of measures that the government could promote to overcome barriers to increased energy efficiency. Finally, the government will begin a large-scale forest planting program to sequester carbon.

New Zealand has already taken other actions to reduce CO₂ in the transportation sector (a regional gasoline tax to fund public transportation, speed limit enforcement, decision-making directives, and other measures) and in the electricity sector.

Under a business-as-usual scenario, according to the report, New Zealand's CO₂ emissions would increase to 15%-20% above today's level by the year 2000. A 20%

U.S. Stance Criticized At Ozone Conference

Washington Accused of Delaying CFC Ban

By Glenn Frankel
Washington Post Foreign Service

LONDON, June 27—The United States came under strong criticism today from environmental activists and Third World states, who charged that Washington and some other industrialized nations were delaying agreement to accelerate a worldwide ban on chemicals that deplete the earth's protective ozone layer.

The dispute, which surfaced on the opening day of a three-day conference of delegates from more than 100 nations, focused mainly on a timetable under which governments would agree to phase out use of some of the chemicals and the nature and amount of aid industrialized nations are willing to give developing countries to help with phaseout there.

The delegates hope to hammer out a new agreement strengthening the Montreal Protocol, the 1987 treaty regulating substances that harm the stratospheric ozone layer, which shields earth from the sun's ultraviolet rays. They particularly want to speed up a ban on chlorofluorocarbons (CFCs), which are widely used as refrigerants and cleaners, following fresh evidence that these gases and related chlorine-based chemicals are heavily damaging the ozone layer.

William K. Reilly, administrator of the Environmental Protection Agency, told the conference that the United States is committed to a 20 percent phaseout of CFCs by 1993 and full elimination by 2000—the compromise position proposed by the U.N. Environment Program, which is overseeing the meeting. Washington also supports a 50 percent reduction by the end of the century in the use of methyl chloroform, an industrial solvent that also contributes to ozone depletion. Reilly stressed his "heightened sense of urgency," noting that "even if we succeed in our ambitious efforts to phase out ozone-depleting chemicals, [they] will continue to destroy stratospheric ozone long after we all are dead."

But critics here complained that the U.S. timetable is too slow, and environment ministers from West Germany and Canada committed their countries today to phasing out

CFCs by 1997, three years before the American deadline.

David Doniger, senior staff attorney for the Washington-based Natural Resources Defense Council, said the U.S. timetable, if adopted here, would permit more than five times the 1986 production level of CFCs to be manufactured before the final phaseout—twice as much as under the more stringent schedule suggested by the West Germans. Because of the chemicals' stability, the extra CFCs would linger and continue to damage the earth's atmosphere for up to 80 years, Doniger said.

Eileen Claussen, director of atmospheric programs for EPA, called the push for a 1997 deadline "a political gambit" by countries assured that the United States and Japan would block such a move. She said evidence suggested that if CFCs were banned too quickly, new chemicals designed to replace them might prove equally harmful to the environment and less energy efficient.

But Australia's environment minister, Ros Kelly, whose country faces a major increase in the incidence of skin cancer because of a hole in the ozone layer that scientists have discovered in the Antarctic, said the 1997 deadline could work with U.S. support. "If a big country like the United States took the lead in endorsing a phaseout by 1997, industry will respond," Kelly said. "They could meet the target."

Reilly came to London with one major controversy eliminated after successfully lobbying the White House to drop its opposition to creation of an international fund to aid developing countries eliminate ozone depleters. The fund, currently pegged at \$160 million over a three-year period, is considered essential to enlist the support of Third World states, such as China and India, which so far have refused to sign the 1987 pact. The United States is expected to contribute \$40 million.

But several issues remained. Some countries opposed U.S. insistence that it be granted a permanent seat on the 17-member body that would administer the fund because it would be by far the largest donor. A more nagging issue is the question of how far the industrialized states are willing to go in transferring technology to Third World countries to help them develop and manufacture their own ozone-friendly products.

"Our phasing out of CFCs depends on the arrival of technology," said Maneka Gandhi, India's environment minister. "After all, the Third World didn't create the problem. It was created by the West, and you need to pay for cleaning it up. India will sign when these conditions are fulfilled."

EPA'S Claussen said Third World states had come to the conference with the unrealistic hope that industrialized nations would require their companies to pass on technology on a "preferential and non-commercial basis." She said also that these countries had insisted on language that would allow them to abrogate the treaty unilaterally if they believed they had not received enough Western aid. "We understand they may have problems meeting their commitments, but to allow them to decide unilaterally to break the agreement would be deadly from an environmental point of view," Claussen said.

11/22/89

J.S. Targets Industrial Solvent In Proposal to Protect Ozone

Administration Takes Offensive on Global Environment

By Michael Weisskopf
Washington Post Staff Writer

The Bush administration, taking the diplomatic offensive in an effort to protect the stratospheric ozone layer, has begun urging other industrialized nations to freeze production of a popular industrial solvent by 1991 and possibly to eliminate the chemical by 2000.

U.S. officials proposed the phase-down of methyl chloroform at a meeting in Geneva last week of parties to the Montreal protocol, a 1987 treaty to halve consumption of chlorofluorocarbons (CFCs), the coolant and solvent that is the best-known ozone-destroying chemical, by the end of the century.

With the methyl chloroform proposal, the Bush administration gained the diplomatic initiative for the first time on a global environmental issue. Most West European nations have tentatively agreed to a freeze, but they call for further study before any phase-down. Nordic countries favor a phaseout by 2000.

According to U.S. government studies, methyl chloroform is so destructive of ozone that continued unrestricted use would significantly offset a phaseout of CFCs.

Like CFCs, methyl chloroform releases chlorine into the stratosphere 15 miles above ground where it breaks down molecules of ozone that screen out ultraviolet radiation and protect life on Earth. Chlorine levels in the upper atmosphere today are nearly double those in the period before a large seasonal ozone hole first appeared over Antarctica in the late 1970s.

Methyl chloroform is less destructive pound for pound than most CFCs. But the huge amount used by industry every year—700 million pounds in the United States alone to degrease metal and clean electronic circuit boards—makes it a significant source of chlorine, contributing 16 percent of the amount released each year, said Eileen B. Claussen, director of atmospheric programs for the Environmental Protection Agency.

An EPA study shows that without a ban on methyl chloroform, chlorine levels in the stratosphere will remain higher than those detected prior to the formation of the Antarctic ozone hole.

The study united the administration behind a proposal to freeze production of the solvent in 1991 at the level of production of one of the years in the latter half of this decade. Because production has been growing, this would amount to a modest cutback and, therefore, the exact year is under debate.

U.S. officials remain divided over how far to roll back production after 1991. The EPA, according to sources, is pushing for a total phaseout of methyl chloroform by 2000. But

the Commerce Department, reflecting the concerns of industry, is said to be balking at more than a 25 percent reduction.

In Geneva last week, U.S. representatives proposed the 1991 freeze and a phase-down of anywhere from 25 percent to 100 percent. Officials said the proposal will be sharpened by the next meeting of the parties in March and will be ready for a vote when the nations meet to renegotiate the Montreal protocol in London next June.

Industry is lobbying hard against the EPA position. U.S. companies, led by Dow Chemical USA, produce more than half of the world supply of the solvent that is used by a quarter of U.S. industry from aerospace companies to small metal shops.

Dow organized a letter-writing campaign among industrial customers that has resulted in hundreds of letters to the EPA and the Commerce Department opposing restrictions.

Paul Cammer, president of the Halogenated Solvents Industry Alliance, said a freeze in methyl chloroform production alone would create "astronomical" costs to industry.

He said an industry-financed study concluded that a 23 percent reduction in current production would be technically feasible but very costly in developed nations by 2000. Larger reductions would pose severe economic and technical hardships.

According to the EPA, substitutes expected to enter the market in the next decade should ease the phaseout of methyl chloroform. The costs to industry are estimated at \$1.5 billion.

On Monday, EPA Administrator William K. Reilly said the administration is prepared to accelerate talks on a global warming convention if an international consensus forms.

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CORRECTION

An item in Saturday's Business section incorrectly reported that a contract received by Unisys Corp. to provide the Air Force with desktop microcomputers extends to civilian agencies. The contract extends to Department of Defense agencies.

CLARIFICATION

The Virginia Brewing Co., a microbrewery in Clarks Gap in Loudoun County and Virginia Beach, was omitted from a Sunday Style story on beer. Its bottled brand is Gold Cup.



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World

U.S. data to show CFC ban futile

Washington Post story
in the Ottawa Citizen

The Washington Post

WASHINGTON — U.S. delegates to an international meeting next week on protection of the stratospheric ozone layer plan to present new evidence that could significantly offset a ban on ozone-depleting chlorofluorocarbons.

The delegation will present evidence on the harm to the ozone layer being done by the unrestricted use of two popular industrial compounds.

The evidence will be heard at the first meeting of parties to the Montreal protocol, the 1987 treaty that obligates industrial nations to halve their use of CFCs by mid-1998. The session in Helsinki was called to assess the treaty and prepare for revisions.

Previously, CFCs have received all the blame for erosion of the ozone layer, which screens out harmful ultraviolet radiation. CFC gases, used as refrigerants, computer solvents and foam-blowing agents, do not break down until they reach the stratosphere, where they release chlorine that destroys ozone.

The protocol does not go into effect until July, but the United States and the European Community already have called for stronger measures to ban the use of CFCs by the year 2000.

But recent data compiled by the Environmental Protection Agency shows that even with a ban, the chlorine levels in the stratosphere 90 years from now would be quadruple those of 1985 mostly because of two unregulated compounds — methyl chloroform and carbon tetrachloride. According to the EPA, their unrestricted use over that period could account for more than half of that total.

The chemicals, both used as solvents to clean machinery, act like CFCs in the way they release chlorine to the stratosphere.

Last week, the EPA published a notice stating that the upcoming Helsinki meeting was likely to propose that new chlorine-releasing chemicals, specifically methyl chloroform and carbon tetrachloride, be included in the protocol.

The notice warned users of the compounds that a freeze or reduction in their production and consumption "may be forthcoming."

Methyl chloroform is of greater concern to the EPA because it can substitute for CFCs used as computer solvents and for several more toxic degreasers that may be restricted or banned in coming months. Some analysts have predicted a huge growth in its use.

Carbon tetrachloride is used chiefly in the United States to produce CFCs.

Opening Statement by EPA Administrator
William K. Reilly

Second Meeting of Parties
to the
Montreal Protocol on Substances that
Deplete the Ozone Layer

London, England
June 27-29, 1990

6.

minimize if not eliminate the need for halons by the end of the century.

Recognizing the need to expand the list of substances controlled by the Protocol, the United States has been a leader in urging the inclusion of carbon tetrachloride and methyl chloroform. We support an 85% reduction of carbon tetrachloride by 1995 and a complete phaseout by the year 2000, with 1989 as a base year. We support a freeze on methyl chloroform by 1993, a 30% reduction by 1995 and a 50% reduction by the year 2000 with 1989 as a base year. We also support the resolution to phase out this substance as soon as possible.

Finally, we urge action by the Parties on a date certain for phasing out the HCFCs. All Parties recognize, I think, that the timely introduction of HCFCs is essential if we are to phase-out CFCs on the accelerated schedule being contemplated. At the same time, we also recognize that because HCFCs do contain chlorine their use cannot be allowed to increase indiscriminately. Setting a date certain for full phase-out balances these two perspectives -- it provides the certainty needed by companies to invest in making and using these compounds while limiting their time of use in order to be certain that they do not become a long-term threat to the ozone layer. We look toward a phase out of HCFCs by no later than the year 2040.

THURSDAY, APRIL 4, 1991

STATEMENT ON OZONE DEPLETION

BY

WILLIAM K. REILLY
ADMINISTRATOR
U.S. ENVIRONMENTAL PROTECTION AGENCY

I recently received preliminary scientific information from the National Aeronautics and Space Administration (NASA) suggesting that depletion of the earth's ozone layer has been occurring over the past decade at a rate faster than previously thought. In response to this information I am intensifying EPA's efforts on ozone-depleting chemicals in order to minimize the risks of future increases in depletion with the goal over the long term of restoring the ozone layer to prior levels.

The new data on ozone depletion over the past decade were presented by NASA at a scientific meeting last fall. These data suggest depletion of four to five percent has occurred since 1978 over the United States. Past studies had shown about half that amount. New EPA estimates show that as a result there could be 200,000 more deaths from skin cancer in the United States over the next 50 years.

The ozone layer plays a vital role by limiting the penetration of high energy ultraviolet radiation to the earth's surface. Increased exposure to this radiation could increase the incidence of skin cancers and damage plants and aquatic organisms.

Worldwide efforts to limit the use of ozone-depleting substances have progressed rapidly over the past several years. A landmark international treaty, the Montreal Protocol, has now been signed by almost 70 nations and was significantly strengthened at a meeting last June. The amended Protocol calls for a phase-out of chlorofluorocarbons (CFCs), halons and carbon tetrachloride by 2000 and methyl chloroform by 2005. It also established a fund to assist developing countries in meeting their obligations to limit the use of ozone-depleting chemicals.

CFCs have been widely used in air conditioning and refrigeration applications, in making insulating foam and as a solvent. Methyl chloroform is widely used as a solvent for metal cleaning and in adhesives and coatings.

The United States -- government and industry -- has long played a leadership role in efforts to protect the ozone layer. This new information dramatizes the significance of our past achievements and suggests that we may need to do still more. We are exploring the full range of options open to us, including intensifying efforts to assist developing countries and accelerating efforts to bring ozone-safe substitutes on line.

United States Senate

WASHINGTON, D.C. 20510

April 9, 1991

Honorable William K. Reilly
Administrator, Environmental
Protection Agency
401 M Street, SW
Washington, D.C. 20460

Dear Administrator Reilly:

There is disturbing news in the latest satellite data released by Richard Stolarski and his colleagues at the National Aeronautics and Space Administration: the stratospheric ozone layer protecting the earth from the sun's deadly ultraviolet rays is being destroyed more than twice as fast as had been projected. The ozone layer has been severely degraded, not just at higher latitudes or over Antarctica, and not just in winter months, but in the atmosphere over our own backyards in the spring months when we, and our children, are outdoors.

The scientists are predicting that this much-faster-than-expected depletion of the ozone layer will produce massive increases in cases of skin cancer and deaths from skin cancer -- almost twice as many during the next 40 years -- and dramatic impacts on climate and crops. The results are startling. They must move us to immediate action. Human health, human lives, and our environment are at stake.


As a critical first step, the phaseout of chlorofluorocarbons and hydrochlorofluorocarbons must be accelerated. Under the Clean Air Act Amendments of 1990 (Sec. 606), you are required to impose a more stringent phaseout schedule if scientific evidence demonstrates that more vigorous measures are necessary to protect human health and the environment. Clearly, we now have that evidence: the rate of ozone depletion is more than twice what we had expected, and the extent and duration of the damage is significantly more expansive.

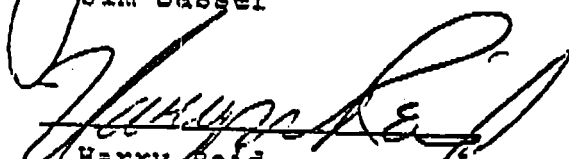
Your recent public comments in response to the new satellite data make it apparent that you agree with our assessment of these findings. "The implications for policy are unavoidable," you were quoted as saying in The Washington Post. The policy choice before you is clear. We urge you to make it and immediately speed the phaseout of ozone-destroying chemicals.

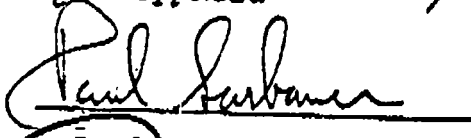
The Clean Air Act Amendments of 1990 also include other measures we believe to be of the utmost importance in minimizing the threat posed by ozone-destroying chemicals. Recycling of CFCs and HCFCs used in appliances and auto air conditioners, and the elimination of these chemicals in nonessential consumer products are critical components of those amendments. In crafting the rules for these provisions, you are charged with their implementation. We urge you to make this rule-making a top priority.

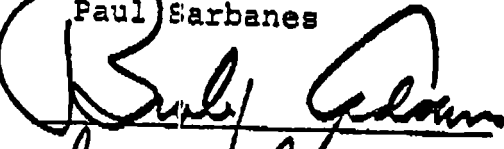
Thank you, in advance, for your prompt attention to these very urgent issues.

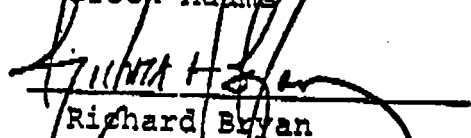
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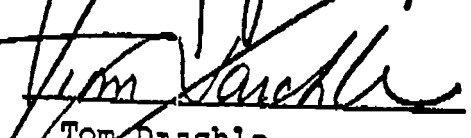

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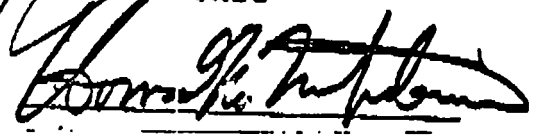

Harry Reid



Paul Sarbanes

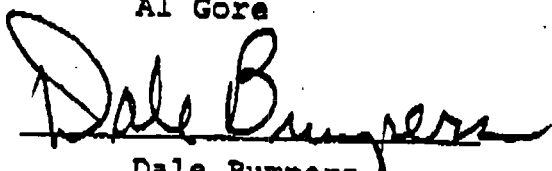

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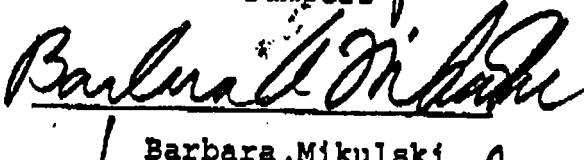

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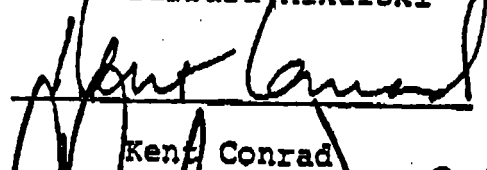

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Howard Metzenbaum

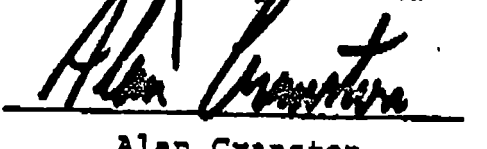

Al Gore

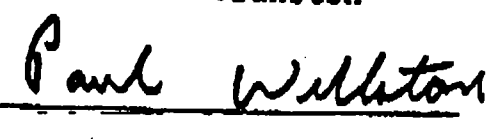

Dale Bumpers


Barbara Mikulski


Kent Conrad


Christopher Dodd


Alan Cranston


Paul Wellstone

Wendell Ford

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John Breau

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John Kerry

Charles A. Robb

Charles Robb

Joseph Lieberman

John Chafee

Paul Simon

Bill Bradley

Tim Wirth

Patrick Leahy

Patrick Leahy

Howell Heflin

Carl Levin

Frank Lautenberg

Max Baucus

Claiborne Pell

Daniel Akaka

Edward Kennedy



Contact: Catherine L. Andriadis
(302) 773-6887

WILMINGTON, Del., Oct. 22 -- Du Pont is accelerating its phaseout of chlorofluorocarbons (CFCs) and Halons by three to five years in response to scientific data released today by the United Nations Environment Programme (UNEP) and the World Meteorological Organization.

The company's stated policy is to phase out CFCs and Halons as soon as possible -- but no later than the year 2000. The policy remains to phase out as soon as possible, but, because of the new science, Du Pont is advancing the end points to year-end 1994 for Halons and 1996 for CFCs.

The position applies to production of compounds for sale in developed countries. Special societal needs, such as medical applications, production for feedstock use and the requirements for developing countries, will be considered in accordance with policies established by UNEP, under the international Montreal Protocol.

"We have always based our actions on credible science," said Joseph P. Glas -- vice president and general manager - Fluorochemicals. "The data included in this recent assessment underscore the urgency for a more rapid and aggressive response. The transition to alternative products -- and

equipment that can use them -- will continue to require excellent cooperation among producers, customers and governments."

Du Pont also announced it will not increase its total global manufacturing capacity for any hydrochlorofluorocarbon (HCFC) with environmental impact comparable to or greater than HCFC-22. Sale of HCFCs used as propellants will be phased out on a global basis by year-end 1994, excluding designated medical and safety applications. Du Pont will discontinue sale of HCFC-22 for new equipment and products in developed countries by 2005. It will continue production of HCFC-22 for maintenance of existing equipment until 2020.

Du Pont's actions are well ahead of the timetable set by the Montreal Protocol, which calls for phaseout of CFCs and Halons intended for sale in developed countries by the year 2000. The protocol's resolution on HCFCs states they be used as transition compounds with targeted phaseout dates between 2020 and 2040. Studies by the National Aeronautics and Space Administration (NASA), the U.S. Environmental Protection Agency and UNEP support the use of HCFCs to expedite the move away from CFCs, which are used in about 3,500 applications, primarily refrigeration and air conditioning.

Most HCFCs have less than 10 percent the environmental impact of CFCs. They are important transition compounds because they can be retrofitted into some of the \$200 billion worth of equipment worldwide that currently uses CFCs and cannot use alternatives as direct drop-in replacements.

Today's announcement reported ozone depletion now exists over populated regions in both hemispheres during the summer months, with certain chlorinated compounds as a probable cause.

In March 1988, Du Pont announced it would phase out production of CFCs and Halons in response to findings of the international Ozone Trends Panel, which linked stratospheric ozone depletion to CFCs. Du Pont will continue to review its policy as additional scientific information becomes available.

Du Pont has invested more than \$340 million to develop and produce CFC alternatives. The company is committed to continue its development of alternatives and to work with customers in achieving a rapid and safe phaseout.

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10/22/91

First Summer Thinning Found in U.S. Ozone Layer

Skin Cancer Risk Increases, Experts Say

By Michael Weisskopf
Washington Post Staff Writer

Scientists reported yesterday the first summertime thinning of the protective ozone layer over the United States, raising the risk of skin cancer as heavier doses of ultraviolet radiation leak to the ground during the time of year when people are most exposed.

E.I. du Pont de Nemours, the world's largest producer of chlorofluorocarbons (CFCs), the most damaging of the man-made chemicals to ozone, responded to the new data by pledging to halt production of the chemicals by 1997—three years ahead of schedule—and to speed the phaseout of substitutes that are less destructive than CFCs but still capable of fraying the ozone layer.

"The data included in this recent assessment underscore the urgency for a more rapid and aggressive response," Du Pont vice president Joseph Glas said in a statement to the media.

Along with a report in April that wintertime ozone has thinned twice as fast as previously projected, yesterday's data is expected also to fuel diplomatic efforts to accelerate the timetable of an international treaty calling for the phaseout of CFCs at least by the turn of the century.

"The problem is more serious than we believed," said Environmental Protection Agency Administrator William K. Reilly. "The world community needs to reconsider the course that it's on, as to whether it's fast enough and whether substitutes can be brought on more quickly."

A vaporous veil lying 15 miles above the surface, ozone shields life on Earth from the damaging effects of ultraviolet rays. Yesterday's findings of significant depletion between May and September when people wear less clothing and spend more time outdoors deepens concerns about skin cancer, experts said.

EPA officials said they factored in

ozone in last April's projection of a near-doubling of skin cancer cases and deaths over the next 40 years. According to the American Cancer Society, there are now more than 600,000 cases of skin cancer a year in the United States and nearly 9,000 deaths.

According to Edward De Fabo, a photobiologist at George Washington University Medical Center, the increased doses of solar rays during the growing season could endanger certain crops and jeopardize planktonic organisms at the base of the oceanic food chain.

Yesterday's report was based on what is considered the most comprehensive data gathered since monitoring of the ozone layer began in 1985.

Readings were taken by National Aeronautics and Space Administration satellites and ground-based spectrometers, and the data were analyzed by a panel of international scientists that was convened by the United Nations Environment Program and the World Meteorological Organization.

The data confirmed earlier findings of winter ozone depletion as high as 5.6 percent in the Northern Hemisphere, including the United States and Western Europe.

But for the first time, the instruments recorded summertime depletion of 2.9 percent to 3.3 percent at latitudes reaching roughly from Florida in the south to central Canada in the north.



WILLIAM K. REILLY
... "more serious than we believed"

According to Jack Kaye, manager of NASA's atmospheric chemistry modeling and analysis program, scientists are uncertain whether the summertime findings result from refinement in analytical tools or from increased atmospheric levels of chlorine, which comes from the breakdown of CFCs and destroys ozone molecules.

He said some scientists believe the destructive chemical reactions may be catalyzed not only by polar ice clouds interacting with the chemicals in the winter but also by sulfate particles all year long. Sulfates, put into the air by volcanoes and burning of fossil fuels, may remove some of the nitrogen compounds that suppress the activity of chlorine, he said.

In another important finding, scientists discovered that ozone loss in the lower stratosphere has a cooling effect on global temperatures, apparently countering the warming effect created by CFCs.

THE WASHINGTON POST

Wednesday, October 23, 199

Ozone-Hole Conditions Spreading

High Concentrations Of Key Pollutants Discovered Over U.S.

By Kathy Sawyer
Washington Post Staff Writer

The danger that a new ozone "hole" could open over densely settled areas of the Northern Hemisphere, exposing the population to increased amounts of harmful radiation, is greater than previously suspected, scientists reported yesterday.

New indications of ozone depletion by NASA satellite and multi-agency airborne instruments are so alarming, the scientists said, that they decided to release them before completion of the data analysis in late March.

Two weeks ago, detectors aboard a converted spy plane flying over New England and eastern Canada recorded the highest level of the ozone-destroying chemical chlorine monoxide ever measured anywhere around the globe. The level—1.5 parts per billion—was approximately 50 percent greater than any previously seen over Antarctica, the site of the infamous ozone hole first discovered in the early 1980s.

Chlorine monoxide, which results from the presence of man-made chlorofluorocarbons (CFCs), is a potent ozone-destroyer by itself. And when combined with small amounts of its chemical cousin, bromine monoxide—which the NASA researchers also found at elevated levels—the effect is enough to destroy ozone at a rate of about 1 or 2 percent per day for brief periods in late winter, said Michael Kurylo, NASA's program manager for the airborne studies.

Ozone in the stratosphere protects the Earth's surface by absorbing much of the ultraviolet radiation that causes skin cancer, cataracts and immune-system damage in humans and devastates many microscopic marine organisms.

Weather conditions permitting, See OZONE, A4, Col. 1

A4 11 JANUARY, FEBRUARY 4, 1992

THE WASHINGTON POST

Scientists Find Growing Evidence of Ozone-Loss Peril Over Northern Hemisphere

OZONE, From A1
Ozone over parts of the Northern Hemisphere could be depleted by 30 to 40 percent, the scientists said. By comparison, about 50 percent of the ozone has been depleted from the ozone hole over Antarctica.

To emphasize how ozone-destroying chemicals have become widespread over populated areas, Kurylo described the experience of the science investigators' flights out of Maine. "There were some flights directly out of Bangor where the aircraft encountered these parcels [of chlorine gas] before it ever got to operating altitudes."

In addition, researchers found evidence of reduced concentrations of nitrogen oxides in the lower stratosphere. Nitrogen oxides help preserve ozone by reacting with chlorine and bromine compounds before they can damage the ozone layer.

"Our conclusion is that the 'immune system' of the atmosphere—its nitrogen-mediated ability to fight

ozone-destroying chemicals—is weaker than we had suspected before," said James G. Anderson of Harvard University, lead scientist for the airborne observations program. "None of the news is good."

Ozone-depleting compounds in the stratosphere from the Arctic as far south as the central Caribbean were found to be much more abundant than computer analyses had predicted. Part of this is a result of the eruption of Mount Pinatubo in the Philippines last June, the scientists said.

The new observations, including some from NASA's new Upper Atmosphere Research Satellite (UARS), suggest that the chemical processes that apparently work to deplete ozone throughout the at-

mosphere are not confined to the polar areas, where conditions are more conducive to ozone destruction.

The Antarctic hole was discovered in 1985. Concern has grown since then that Earth's ozone shield is being destroyed by human industry, primarily by the release into the atmosphere of CFCs used as refrigerants, thermal insulators and in cleaning solvents. These break down into chlorine atoms or compounds, which interact with and destroy ozone.

Ozone is a form of oxygen whose molecules contain three oxygen atoms instead of the usual two—a configuration that gives ozone its peculiar ability to filter ultraviolet rays from sunlight. But highly re-

active chlorine or bromine compounds, atmospheric scientists believe, snatch one of the oxygen atoms away. The remaining two-atom molecules of ordinary oxygen cannot block ultraviolet radiation.

How severely the ozone is depleted depends on weather conditions, especially the size and duration of the so-called polar vortex—a supercold mass of air penned in by high winds swirling around it. When the air is cold enough inside the vortex, ice particles form. These, along with liquid droplets, provide platforms for the ozone-destroying chemical reactions, which are triggered by sunlight.

The vortex over the Arctic is more broken, because of turbulence caused by surrounding mountains,

than is the one over Antarctica, scientists noted. The greatest danger of high ozone loss—a "hole"—over the Arctic will occur when the vortex there remains intact until late February, according to Kurylo.

Based on an estimated 10 percent ozone loss in mid-latitudes during the 1990s, a panel of the United Nations Environment Program reported in November that increased ultraviolet radiation leaking through the ozone layer by the turn of the century could cause 1.6 million additional cases of cataracts and 300,000 additional skin cancers a year worldwide.

Most nations have agreed to phase out CFCs by the year 2000, but some potential replacements also involve ozone destroyers.

The new findings yesterday moved Sen. Albert Gore Jr. (D-Tenn.) to introduce new legislation that would speed the phase-out of ozone-depleting chemicals.

A NASA official compared the decades of bubbling of ozone-destroying chemicals to the very a head of form forms on a glass of beer. The chemicals rise through the lower atmosphere and bubble into the stratosphere.

Scientists noted that, once in the atmosphere, the ozone destroyers are very persistent. Even if CFCs were phased out at once, said Kurylo, to restore the ozone layer to its former health "would take until 2040 or 2070.... This legacy will be with us for a long time."

Senate Backs Faster Protection Of Ozone Layer as Bush Relents

Energy-Bill Amendment Sails Through by 96-0

By PHILIP J. HILTS
Special to The New York Times

WASHINGTON, Feb. 6 — The Bush Administration in a surprise reversal of its public position, today supported a Senate action to greatly speed up the planned phase-out of chemicals that damage the protective ozone layer high in the atmosphere.

A proposal to cease production of the chemicals as fast as possible passed the Senate today by 96-0, a vote that would have been unthinkable without the change of attitude at the White House. Only three months ago the measure was prevented from even coming to a floor vote by Republican senators acting on behalf of the White House.

The White House's change in position has come about through efforts by the Environmental Protection Agency. With John H. Sununu, the former White House chief of staff, no longer in a

position to oppose its initiatives, the agency took advantage of new data released earlier this week that portray a threat much more dire than expected.

Bush's Concern Expressed

William K. Reilly, the E.P.A. Administrator, said today, "President Bush is very concerned about ozone depletion and takes seriously the recent scientific discovery that it is worse than we thought. I expect that the Administration, which is currently reviewing the information, will support moving up the phase-out schedule for various ozone-depleting chemicals by three, four or in some cases five years."

The threatening chemicals, a family of substances known as chlorofluorocarbons, or CFC's, are widespread. They are used as industrial solvents and as the coolant in refrigerators and air-conditioners, among other things. An international agreement, the Montreal Protocol, signed in 1987, calls for production of CFC's to cease by the year 2000.

Eileen Claussen, director of the E.P.A.'s Office of Atmospheric and Indoor Air Programs, said today: "It is obvious we have to move up the dates. The Senate resolution says to move them up as fast as we can. To the extent there is debate, and there isn't much, the debate is over just how early we can fix these dates."

The proposal passed by the Senate today, an amendment to the energy bill, declares that the ozone depletion is occurring at twice the rate previously believed, is occurring both in the Southern and Northern hemispheres and is occurring over both the poles and populated areas. The Senate's work on the energy bill is expected to be finished within a week, and the House's work by the end of March. Support for the bill is also known to be strong in the House.

Some scientists have projected that it could take decades to reverse damage to the ozone layer caused by the chemicals.

Senator Al Gore, Democrat of Tennessee, who was the author of the amendment passed today and who has

Continued on Page A17, Column 1

Friday, February 7, 1992

White House Reverses Stand on Ozone Protection

Continued From Page A1

long urged that CFC production be halted as quickly as possible, told the Senate today: "The President has abdicated his responsibility. This amendment is a wake-up call."

"It is easy enough, after the ozone hole is pointed to and predicted above Kennebunkport, to say, 'O.K., we will now think seriously about doing something,'" Mr. Gore continued. "Where was the President when the warnings came through so loudly and clearly for the last several years?"

But White House officials countered that Administration staff members, if not all the leadership, has aggressively pursued the issue, and that Mr. Reilly has been working out a proposal to hasten the end of production.

One consequence of an accelerated phase-out of CFC's is that industries with existing refrigeration equipment are likely to intensify efforts to conserve the refrigerants already in use.

Instead of simply venting CFC refrigerants into the atmosphere, as was often done in the past, companies are now collecting the materials and sending them to chemical companies, like du Pont, for processing and re-use.

All the various substitutes that have been developed for CFC's will require modifications in the refrigerators, air-conditioners and industrial chillers designed for their use. New appliances will contain the needed changes, but industrial equipment which has a 30-year life span can operate on recycled CFC's until the modifications can be made.

Banking on Substitutes

The quicker phase-out had been strongly advocated by environmental groups and some European nations. Chemical companies, including du Pont, Allied-Signal and the British company ICI, have been building

plants to produce the substitutes, which are hydrochlorofluorocarbons, known as HCFC's, and hydrofluorocarbons, known as HFC's.

HCFC's are believed to attack the ozone layer as well, but with only a small fraction of the power of CFC's. One of the issues still to be resolved is how long production of HCFC's will be permitted, until completely benign substitutes can be developed.

Some industries have been moving in advance of international agreements to eliminate use of CFC's. The Society of Plastics Industry has said its members will cease using the chemicals in foam packaging by 1993 and in insulation by 1995.

Scientists of the National Aeronautics and Space Administration reported earlier this week that a satellite had detected exceptionally high levels of an ozone-killing chemical derived from CFC's over a wide area of the Northern Hemisphere, including large populated areas of Europe and Canada.

Hole Over the Antarctic

The chemical, known as chlorine monoxide, was detected in concentrations of one part per billion, a matter of serious concern since it is comparable to the levels observed within the Antarctic ozone hole.

The Antarctic hole, which has been observed for the last several years, is depleted of about half its ozone. The effect of chlorine monoxide in Northern latitudes cannot be predicted with certainty. Researchers will not know until summer to what extent winds, temperatures and sunlight permit the chlorine molecules to open up a "hole" over the North.

In addition to the Antarctic ozone hole, scientists had already noted that the ozone over such temperate latitudes as North America has also been depleted, although by smaller amounts — by about 3 percent in summer and 5 to 8 percent in winter, compared with a

decade ago.

Activity to reduce CFC production was already under way before today's vote. The Clean Air Act requires that the United States policy to be reviewed. A new threat to the ozone shield is perceived. Under that procedure, an environmental group, the Natural Resources Defense Council, submitted in December a proposal to accelerate the phase-out.

The chief group representing industry, the Alliance for Responsible CFC Policy, also has developed a quicker phase-out policy, which it is ready to submit to the E.P.A. The group did not endorse or oppose Senator Gore's amendment. But the alliance's executive director, Kevin Fay, said today: "Although the amendment contains no dates, in many respects it is consistent with actions we have been recommending. We believe the schedule can be accelerated."

The difference between the industry and environmental group proposals are slight: the N.R.D.C. proposal suggests phasing out CFC production by 1995, while industry suggests 1996.

On a more short-lived member of the same chemical family, hydro-CFC's, the N.R.D.C. has proposed phase-out in 2005, while one industry proposal puts that date at 2010.

Similar differences of date exist for the numerous other chemicals of the same family, which E.P.A. officials say should not be difficult to resolve. It is possible that the Administration could develop a new proposal for deadlines by the April meeting in Nairobi at which nations will revise the Montreal Protocol.

Mr. Fay said that industry has already identified a number of chemical substitutes for the CFC's, which may do the same work in refrigeration, air-conditioning and other uses, but without triggering the same atmospheric reaction.

DU PONT STATEMENT ON ACCELERATED CFC PHASEOUT

In response to an announcement issued by the White House today regarding an accelerated phaseout of CFCs and Halons, Du Pont issued the following statement:

Du Pont supports the Administration position on an accelerated phaseout of chlorofluorocarbons (CFCs) and Halons from year-end 1999 to year-end 1998.

Last October, Du Pont announced an accelerated phaseout timetable for CFCs and Halons, ceasing production for sale of CFCs in developed countries no later than year-end 1996 and Halons by year-end 1994. In addition, the company is accelerating its HCFC-22 phaseout schedule to 2005 for new equipment and 2020 for servicing existing systems. Du Pont will maintain its 1994 phaseout for Halons and will accelerate its CFC end date to no later than December 31, 1998 in developed countries.

The White House also called for voluntary CFC and Halon production cuts by industry to 50 percent of 1986 levels (the base year for the international Montreal Protocol agreement and Clean Air Act).

Du Pont already has reduced its global production and sales of CFCs and Halons by 50 percent of 1986 levels, and commits to continuing reductions as part of its orderly transition to suitable alternatives.

Du Pont also stated that about half of industry's CFC sales today are for servicing existing equipment, some of which has lifetimes of 20 to 40 years. CFC alternatives identified to date cannot be used as direct drop-in replacements in the existing equipment base -- \$200 billion worldwide and \$135 billion in the U.S. The timely conversion of this equipment is crucial to achieving a rapid phaseout of CFCs.

The White House announcement included provisions for review of an accelerated phaseout of hydrochlorofluorocarbons (HCFCs), transitional substitutes for CFCs that have small but measureable amounts of chlorine.

Du Pont continues to support the use of HCFCs as transition compounds because, compared to CFCs, they have significantly reduced ozone depletion potentials, less total global warming impact and shorter atmospheric lifetimes. In certain applications where zero-ozone-depleting alternatives are not yet commercially available, Du Pont

-2-

believes that the use of HCFCs, particularly the shorter-lived compounds, will affect a more rapid transition away from CFCs.

The company continues to work with equipment manufacturers, the U.S. EPA, international agencies and governments and environmental groups to achieve a rapid global phaseout of CFCs and Halons.

2/12/92

The Boston Globe

WEDNESDAY, FEBRUARY 5, 1992

US urged to step up curbs on ozone-depleting chemicals

By Dianne Dumanoski
GLOBE STAFF

Warning that ozone depletion could force people to restrict outdoor summer activity within five years, scientists joined environmentalists and members of Congress yesterday in pressuring the Bush administration to phase out ozone-attacking chemicals more quickly than planned.

On Monday, researchers warned that a significant "ozone hole" may develop in the next month in the northern hemisphere. The hole would allow dangerous levels of ultraviolet B radiation from the sun to reach the Earth's surface.

Two weeks ago, a scientific expedition working out of Bangor measured record high levels of the chemical that destroys ozone over northern New England and eastern Canada.

Based on the data, Harvard University chemist James Anderson said yesterday that he believes ozone loss will be significant within five years and will have a dramatic impact on lifestyles. It is likely, he said, that ozone loss will extend into May and June, when the sun is strongest, and make it necessary for people to limit time spent outdoors.

"We're in a position now where we could be forced to modify our lifestyle," he said.

"If this doesn't jump-start this administration into action, I don't want to think about what kind of devastation it will take to get them going," said Sen. Albert Gore Jr., a Tennessee Democrat. Gore is a leading congressional critic of the Bush administration's positions on global environmental problems.

An industry spokesman, meanwhile, said corporations are already phasing out ozone-destroying chemicals faster than treaties and US law requires.

Although William Reilly, the head of the US Environmental Protection Agency, expressed concern last year about the reports of accelerating ozone loss, he has yet to take any action. Reilly could not be reached yesterday.

Stephen Seidel, deputy director

of EPA's Global Change Division, said yesterday that the agency is reviewing the new information and will propose action within several months.

Anderson, the leader of the scientific expedition that gathered the latest findings, said US leadership is critical to reach global agreement on speeding up a worldwide phaseout of chlorofluorocarbons, halons and other ozone-destroying chemicals.

Since 1987, the United States and 73 other nations have ratified the Montreal Protocol, a global treaty to safeguard the ozone layer. The nations are scheduled to meet in November to review the timetable for the phaseout.

The United States is the world's largest producer of the chemicals harmful to the Earth's ozone layer, and the United States accounts for 30 percent of their worldwide use.

Acting quickly, Anderson said, will affect how much ozone is ultimately lost and how long the ozone layer will remain damaged. Once the release of ozone destroying chemicals stops, scientists say it will take the better part of a century for the ozone layer to recover.

Anderson said the chemical processes that destroy ozone are "non-linear," so "a little more" chlorine "can mean a lot more depletion." For that reason, even shaving a small amount off the peak chlorine levels could be significant.

On Monday, Gore offered an amendment to energy legislation that would speed the phaseout of ozone-depleting chemicals and seek a strengthening of the Montreal Protocol.

In December, three national environmental groups submitted a petition asking EPA to exercise its power under the Clean Air Act and eliminate these chemicals faster.

"The US has not proven to us that they are going to be a strong leader in the international negotiation," said Liz Cook of Friends of the Earth, an international environmental group with offices in Washington. Agreeing with Anderson, she said US leadership is "absolutely essential" to get other nations to go along with an accelerated ban.

"Reilly hasn't done anything. It's another case where the US is dragging its feet on a serious environmental problem," Cook said.

"The warnings have been clear and loud," agreed Gore in a statement, saying the problem has been "repeatedly ignored by an administration that refuses to listen. George Bush has kept his hands over his ears and has closed his eyes."

Even without government action, the phaseout is taking place ahead of schedule, said the director of an industry group that represents companies that make or use the chemicals.

The use of ozone-depleting chemicals "is declining drastically" in the United States, said Kevin Fay, director of the Alliance for Responsible CFC Policy, both because "industry is pushing" on its own and because the economy is in recession. Production of the chemicals has dropped about 45 percent from 1986 levels, said Fay, much more than the 15 percent cut required by now under the Clean Air Act.

Industry is indeed moving faster than the official phaseout schedule, confirmed Seidel of EPA.

"It's not like things aren't happening and the private sector hasn't responded," he said. "They have."

Fay said the accelerated schedule proposed by environmentalists will have only a minor impact on peak chlorine levels.

Infant growth: A sporadic phenomenon

Anthropologist Michelle Lampl, trained as a physician and growth researcher, recalls learning that healthy young children experience "a perfectly regular rate of growth, with no breaks or spurts." Indeed, she says, she recently listened to a growth researcher tell pediatricians that any child who does not grow over a 30-day period must be dead.

But Lampl's own findings challenge the notion of smooth, consistent growth, and instead suggest that children grow in sporadic fits and starts.

Conventional wisdom holds that very young children gain an average of about one-half millimeter in body length per day. But Lampl's measurements of 32 healthy infants and one adolescent indicate that growth occurred in a random series of roughly 1-centimeter spurts, each apparently lasting less than 24 hours. During the two to approximately 60 days that separated successive spurts, she says, absolutely no increases in body length occurred.

Lampl, of the University of Pennsylvania in Philadelphia, described her new study in Chicago this week at a meeting of the American Association for the Advancement of Science.

Over periods of four to 18 months, she visited the homes of the youngsters. With the help of a parent, she stretched out and measured each child — four of them daily, 18 twice-weekly and 11 at weekly intervals. Her daily measurements "provide the most precise description of growth yet reported," she says.

The daily data document long quiescent periods of no growth, suddenly

punctuated by a permanent lengthening of 0.5 to 1.8 cm over a 24-hour period. Lampl describes these nonperiodic, stepwise changes in the growth curve as "saltatory," or abruptly jumping. Because saltatory spurts of similar magnitude showed up in children who were measured weekly or twice-weekly, she suspects that these growth changes occurred over a 24-hour period.

While conceding she used a very small study population, Lampl says she saw no signs of a correlation between infant size and the total number of discrete growth episodes. However, she notes, "there was a distinct correlation between fussiness and [increased] hunger at the time of the growth episodes." Parents also reported signs of increased sleepiness right before growth spurts, she adds.

At the same meeting, Michael Hermanussen of the University of Kiel in Germany described a study of lower-leg length in healthy schoolchildren. He found evidence of weekly changes, with growth spurts following no-growth periods that sometimes lasted more than 60 days (including occasional intervals of shrinkage). "I was not aware of saltatory [changes in these data]," he says. However, he adds, "I'm aware that I might have missed them."

That's not surprising, says Lampl, because until now, growth researchers have lacked mathematical models for stepwise changes that are nonperiodic. Without such models, they have attempted to fit their growth data points — usually collected weeks or months apart — to a smooth curve. But Lampl found that such

a curve didn't really fit her detailed data.

For help in finding a better curve, she turned to biophysicist Michael L. Johnson, handing over her data on a 13-year-old boy whose height she had measured on about 400 consecutive days. Johnson, of the University of Virginia in Charlottesville, reported at the Chicago meeting that a stepwise, saltatory model fits these data better than any previous model. Without Lampl's daily data on dormant periods and growth pulses, the flaws in the old approach remained unrecognized, he adds.

"I would never have imagined pulsatile growth," comments Mark L. Hartman of the University of Virginia School of Medicine, who studies factors affecting growth-hormone secretion and its relationship to human growth.

The body's pulsed secretion of growth hormone can trigger metabolic changes, such as increased protein synthesis, Hartman notes. And since his group has recently shown that growth-hormone pulses occur frequently throughout the day, sometimes at intervals of just 30 seconds, some of his colleagues suspected that these pulses contribute to slow, incremental daily growth. But Lampl's results certainly confound that picture, he adds.

"My mind is going 100 miles a minute trying to explain the new data," Hartman told SCIENCE NEWS. "I think I will have to talk to my colleagues and see if we can generate some new ideas to explain these new findings."
— J. Raloff

Myotonic dystrophy: A short gene is best

For years, neurologists have noticed a strange phenomenon: Patients afflicted by myotonic muscular dystrophy, a muscle-stiffening disorder, often have children with a more severe form of the disease. And their children's children, in turn, are usually affected even more severely, and at a younger age.

What causes this distressing genetic generation gap? Last week, three groups of researchers studying myotonic dystrophy came closer to answering that question in simultaneous findings that they say should allow for better screening tests for the inherited disease.

The three groups of geneticists found that people with myotonic dystrophy have extra bits of DNA at a specific spot on the long arm of chromosome 19. Moreover, they discovered that those with the worst symptoms have the most extra DNA.

In the Feb. 6 NATURE, the researchers speculate that the extra DNA pieces somehow disrupt an as-yet-unidentified gene, one possibly involved in controlling muscle tone. The three teams — led by Duncan J. Shaw of the University of Wales

Ozone concerns prompt phaseout fury

Reacting to last week's news that an ozone hole could open over North America, President Bush announced this week that the United States will halt production of ozone-depleting chemicals by the end of 1995, four years ahead of schedule. But a loophole in Bush's proposed policy would allow significant production of damaging chlorofluorocarbons (CFCs) and other chemicals after that date.

Under the President's plan, companies could continue producing the banned chemicals for "essential uses and for servicing certain existing equipment." The Alliance for Responsible CFC Policy in Arlington, Va., estimates that, to provide for existing equipment, production would have to continue at 15 percent of its 1986 level. If the President's policy allows this production level, the new controls would speed the phaseout process by only one year. Current U.S. law requires companies to limit their production to 15 percent of

1986 levels by the end of 1996.

The Alliance, which represents companies that produce and use CFCs, praised the President's policy for balancing environmental and economic concerns. It estimates that by 1996, the United States will have \$135 billion in equipment that relies on CFCs.

Liz Cook, with Friends of the Earth in Washington, D.C., calls the exemption "a big loophole." Last year, a coalition of U.S. environmental groups called for a total ban on production of CFCs by the end of 1994, with an immediate phaseout of halons and phaseout of other chemicals by the end of 1992.

Negotiators will meet later this year to discuss strengthening the Montreal Protocol — an international treaty governing the phaseout of ozone-depleting chemicals. Like the U.S. regulations, the Montreal Protocol requires a decrease to 15 percent of 1986 production levels by the end of 1996, with a complete phaseout by 2000. — R. Monastersky

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THE WHITE HOUSE
Office of the Press Secretary

For Immediate Release

February 11, 1992

Statement by the Press Secretary

President Bush today announced that the United States will unilaterally accelerate the phaseout of substances that deplete the Earth's ozone layer and called on other nations to agree to an accelerated phaseout schedule. Current U.S. production is already more than 40 percent below the levels allowed by the Montreal Protocol and more than 20 percent ahead of Europe's non-aerosol production phasedown.

Recent scientific findings indicate that emissions of these substances -- major CFCs, halons, methyl chloroform, and carbon tetrachloride -- are depleting the stratospheric ozone layer more quickly than previously had been believed. The President announced that, with limited exceptions for essential uses and for servicing certain existing equipment, all production of these substances in the United States will be eliminated by December 31, 1995. To accelerate progress in the near term, the President called upon U.S. producers to reduce production of these substances to 50 percent of 1986 levels by the end of this year.

Under the terms of the Clean Air Act of 1990, which President Bush signed into law in November of 1990, the Administration has authority to accelerate the phaseout of these substances without new legislation. The President also announced that the U.S. will re-examine the phaseout schedule of HCFCs, and will consider recent evidence suggesting the possible need to phaseout methyl bromide.

The President noted that due in large part to the use of innovative, market-based mechanisms such as production fees and tradable allowances, the U.S. has already reduced CFC production 42 percent below 1986 levels, a reduction beyond that required by either the Clean Air Act or the amended Montreal Protocol. The President pointed out that the U.S. has been a leader in reducing CFCs -- agreeing to a full phaseout of these gases in February 1989, enacting a fee on their production in November of 1989, legislating the full phaseout in November of 1990, and making the first contribution to a multilateral fund established to assist developing countries in phasing out CFCs.

The President called upon those nations which have not yet signed and ratified the Montreal Protocol to do so, and urged other nations to join the U.S. in accelerating the phaseout of CFCs and other ozone-depleting gases even faster than required by the Protocol.

#

U.S. to End CFC Production 4 Years Earlier Than Planned

Schedule for Other Ozone-Protecting Action Reexamined

By Michael Weisskopf
Washington Post Staff Writer

President Bush yesterday announced that United States will stop making certain industrial chemicals four years earlier than planned because of new estimates of their damage to the protective ozone layer over the Northern Hemisphere.

The president's pledge to halt production of chlorofluorocarbons (CFCs) by Dec. 31, 1995, commits the United States to a faster phaseout schedule than most of the industrialized nations that signed the Montreal Protocol—an international treaty that sets a deadline of 2000 for elimination of the chemicals, which are widely used in consumer products.

The White House was quick to characterize the decision as the latest example of U.S. leadership in defense of the ozone layer. But the new timetable will pose little or no hardship to American producers, most of which have long been planning to get out of the declining market for CFCs.

Nor does the decision speed the phaseout of many substitute chemicals already in use that are less damaging than CFCs but still erode the veil of ozone molecules. The ozone layer in the stratosphere screens out much harmful ultraviolet radiation, which can cause skin cancer, cataracts and damage to the immune system.

The president called for a reexamination of plans to stop production of the substitutes by 2030. E.I. du Pont de Nemours & Co., the largest CFC producer, plans to phase out the substitutes 10 years earlier.

Under the terms of the Clean Air Act Amendments of 1990, Bush is authorized to accelerate the phaseout schedule without new laws or congressional action.

"The president has taken at best a half step," said Sen. Albert Gore Jr. (D-Tenn.), who has called for a faster phaseout of CFCs and its substitutes. "His deadline is welcome, but still inadequate."

The destructive power of CFCs was first reported in the 1970s, prompting a U.S. ban on them in aerosol products in 1978. But industry found increasing use of inexpensive gases as refrigerants, air-conditioning solvents and foam-blowing agents. In 1986, the world was producing 1.5 million pounds of the chemicals per day.

Unlike many pollutants, CFCs do not break down in the lower atmosphere. Usually, they waft high into the stratosphere where they come apart

bombardment of solar rays. Chlorine released in the process snares oxygen atoms from three-atom ozone molecules, changing them into conventional two-atom oxygen molecules which do not absorb ultraviolet light.

The CFC explosion of the past 20 years has put so much of the chemicals into the atmosphere that there is no way of stopping continued depletion of the ozone shield. Even with the faster phaseout, the protective layer is not expected by scientists to be restored to its 1970s condition until the middle of the next century.

Last week, NASA scientists reported that a converted spy plane flying over New England and eastern Canada recorded the highest level of ozone-threatening chlorine compounds ever measured anywhere in the world. The level was 50 percent higher than previously seen over Antarctica, where an ozone hole was first discovered in 1985.

Scientists predict an additional 1.6 million cases of cataracts a year and 300,000 new cases of skin cancer as result of ozone depletion by the year 2000.

The Montreal Protocol of 1987, signed by 71 nations, provides for regular reevaluations of whether a faster phaseout is warranted. A working group is scheduled in April to set an agenda for a full meeting of signatories in November.

Germany has pledged to eliminate CFCs by Jan. 1, 1995, and one of the most popular substitutes by 2000. The European Community is committed to a deadline of July 1997.

To keep pace with the phaseout schedule announced yesterday, U.S. industry will have to cut its production to half of the 1986 baseline in the protocol. But industry already has cut output by 42 percent, spokesmen said.

Bush provided for "limited exceptions" to the ban, allowing continued CFC production to service the \$135 billion in existing equipment that uses the chemical. According to industry estimates, 15 percent of 1986 levels will be needed for such servicing.

ALBERT GORE, JR.
TENNESSEE

393 RUSSELL SENATE OFFICE BUILDING
PHONE: 202-224-4944

United States Senate

WASHINGTON, DC 20510-4202

Ozone Resolution Co-sponsors November 7, 1991

- | | |
|------------------------|-------------------------|
| 1. Brock Adams | 12. Edward M. Kennedy |
| 2. Daniel K. Akaka | 13. John F. Kerry |
| 3. Jeff Bingaman | 14. Patrick J. Leahy |
| 4. Dale Bumpers | 15. Carl Levin |
| 5. John H. Chafee | 16. Joseph I. Lieberman |
| 6. William S. Cohen | 17. Barbara A. Mikulski |
| 7. Kent Conrad | 18. Daniel P. Moynihan |
| 8. Thomas A. Daschle | 19. Claiborne Pell |
| 9. Christopher J. Dodd | 20. Paul Simon |
| 10. Albert Gore, Jr. | 21. Paul Wellstone |
| 11. Daniel K. Inouye | 22. Timothy E. Wirth |

Signed on the letter to President Bush November 7, 1991

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| 1. Brock Adams | 13. Edward M. Kennedy |
| 2. Daniel K. Akaka | 14. John F. Kerry |
| 3. Joseph R. Biden | 15. Herbert Kohl |
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| 11. Albert Gore, Jr. | 23. Paul Wellstone |
| 12. Daniel K. Inouye | 24. Timothy E. Wirth |

102nd Congress
1st Session

S.RES. 217

Urging the Administrator of the Environmental Protection Agency to accelerate the scheduled phaseout of ozone-destroying substances in the United States as required pursuant to the Clean Air Act Amendments of 1990; calling on the President to urge the Contracting Parties to the Montreal Protocol to modify the Protocol in order to accelerate the phaseout of such substances; and for other purposes based on scientific findings concerning the degradation of the stratospheric ozone layer.

IN THE SENATE OF THE UNITED STATES
November 7, 1991

RESOLUTION

WHEREAS the stratospheric ozone layer, which protects all living things from harmful ultraviolet radiation from the sun, has been severely depleted in many areas of the globe;

WHEREAS recent scientific data show that the ozone layer over densely populated areas of the United States and other countries in the northern midlatitudes has thinned twice as fast as had previously been measured and as had been projected by theoretical models and the depletion is persisting into the warmer months of the year, and has reached significant levels even in summer;

WHEREAS ozone depletion in the Southern Hemisphere is proceeding even more rapidly than in the Northern Hemisphere;

WHEREAS the incidence of skin cancer and cataracts is expected to rise significantly and the human immune system may be suppressed due to increased exposure to ultraviolet radiation;

WHEREAS increased exposure to ultraviolet radiation threatens food crops and some wild plants, and interferes with the ability of phytoplankton, the microscopic organisms that are at the base of the oceanic food chain, to photosynthesize and to reproduce;

WHEREAS the scientific evidence shows that chlorofluorocarbons, hydrochlorofluorocarbons, and other halogenated chemicals undergo reactions in the stratosphere that lead to the rapid destruction of the ozone layer;

WHEREAS the Administrator of the Environmental Protection Agency is required under the Clean Air Act Amendments of 1990 to accelerate the scheduled phaseout of ozone-destroying substances if it is determined in the light of scientific evidence that a more stringent schedule is necessary to protect human health and the environment;

WHEREAS the recent scientific findings make necessary a reappraisal of both domestic and international policy on the control of ozone-destroying chemicals; Now, therefore, be it

RESOLVED by the Senate of the United States of America in Congress assembled,

That the Administrator of the Environmental Protection Agency should accelerate the interim phaseout schedules and the final phaseout date of chlorofluorocarbons, carbon tetrachloride, methyl chloroform, and halons as required pursuant to Section 606 of the Clean Air Act Amendments of 1990, and shall provide for complete phaseout as early as possible;

That the Administrator of the Environmental Protection Agency should accelerate the interim phaseout schedule and the final phaseout date of those hydrochlorofluorocarbons that have relatively long atmospheric lifetimes, high ozone depletion potentials, or high global warming potentials;

That the Administrator of the Environmental Protection Agency should prioritize efforts to issue regulations, as required pursuant to Title VI of the Clean Air Act Amendments of 1990, providing for the recapture and recycling of ozone-destroying substances as used in appliances and motor vehicle air conditioners, and for the elimination of such substances as used in non-essential consumer products;

That the President of the United States should urge the Contracting Parties to the Montreal Protocol to accelerate the interim phaseout schedules and the final phaseout date of the ozone-destroying chemicals currently covered by the Protocol;

That the President should urge the Contracting Parties to include hydrochlorofluorocarbons within the terms of the Montreal Protocol, and to provide for the most rapid phaseout of those hydrochlorofluorocarbons with relatively long atmospheric lifetimes, high ozone depletion potentials, or high global warming potentials;

That the President should urge the Contracting Parties to amend the Protocol to include recapture and recycling provisions and to prohibit the venting or releasing of ozone-destroying chemicals from refrigeration and air conditioning units into the atmosphere by date certain;

That the President should urge the Contracting Parties, by providing technical assistance and through other measures as appropriate, to

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accelerate the compliance of developing countries with the terms of the Montreal Protocol.

ALBERT GORE, JR.
TENNESSEE

393 RUGGELL SENATE OFFICE BUILDING
PHONE: 202-224-4944

United States Senate

WASHINGTON, DC 20510-4202

November 7, 1991

The Honorable George Bush
The White House
1600 Pennsylvania Avenue
Washington, D.C. 20500

Dear Mr. President:

We are writing to urge you to take immediate action to address the global environmental problems we face. The stakes are high, and we can no longer afford simply to call for further study. Your leadership is critical.

Last month, the International Ozone Trends Assessment Panel sounded a loud alarm. Confirming earlier reports that ozone depletion is proceeding some 200 percent faster than had ever previously been measured or predicted, the scientists also reported that -- for the first time -- they had detected significant levels of ozone depletion in the summer months. The implications of this finding for human health, for the stability of agricultural crops, indeed, for the entire food chain on which all life depends is ominous. We have in fact changed our environment, and in such a way that for our lifetimes and for our children's lifetimes, we will have to take precautions simply to enjoy the pleasure of spending time outdoors.

The Ozone Trends report also has significant implications for global warming. First, the scientists determined that the contribution of chlorofluorocarbons to the enhanced greenhouse effect is, at least in part, mitigated by the depletion of ozone, which is also a greenhouse gas. The implication here is that, in our effort to counter the effects of global warming, we cannot rely on the steps we are taking to phaseout CFC's under the Montreal Protocol or the Clean Air Act. Rather we must redouble our efforts to reduce our emissions of those gases whose radiative effect is not offset by other reactions in the atmosphere -- particularly and most importantly, carbon dioxide.

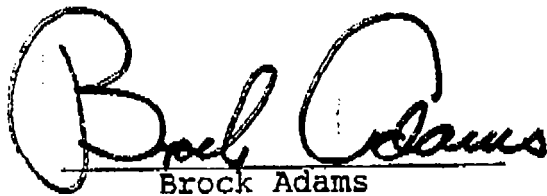
Second, the astonishing and unprecedented rate of the depletion that we are witnessing underscores the message that the scientists have long tried to send us with regard to natural processes. We simply cannot assume that nature will respond gracefully and gradually to the intensifying pressures we are exerting. Dangerous thresholds can indeed be reached, and once we cross these critical points, our ability to mitigate or avoid harmful impacts is extremely limited.


The bottom line: we need to accelerate the phaseout of all chemicals that destroy the ozone layer, and we need to move

aggressively to curb our emissions of carbon dioxide. The Congress has taken action on both of these fronts, and many other nations are far ahead of us in responding to these threats. Leadership from the White House is now essential.


We feel that this situation is of the utmost urgency, and we sincerely hope that you will give it your immediate attention. Congress is moving; the White House must too.


Sincerely,



Brock Adams


Albert Gore, Jr.

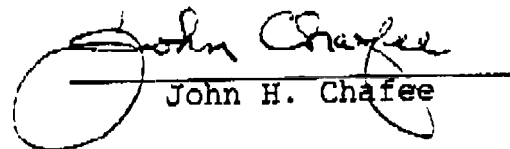

Daniel K. Akaka

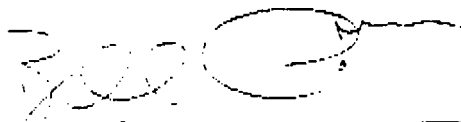

Joseph R. Biden, Jr.

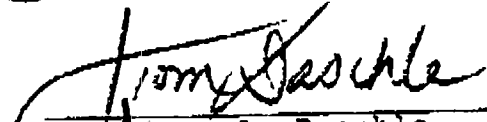

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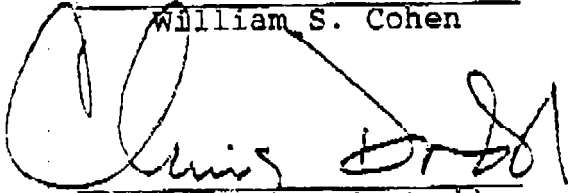

Richard H. Bryan

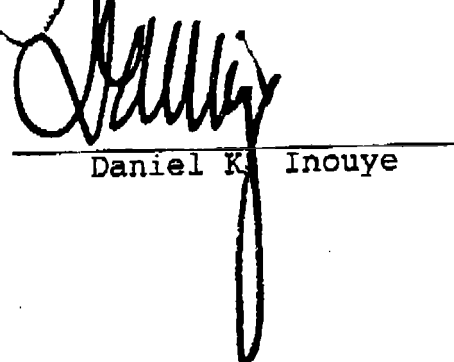

Dale Bumpers


John H. Chafee


William S. Cohen


Thomas A. Daschle


Christopher J. Dodd


Daniel K. Inouye

Ed Kennedy
Edward M. Kennedy

John F. Kerry
John F. Kerry

Herb Kohl
Herbert Kohl

Patrick J. Leahy
Patrick J. Leahy

Carl Levin
Carl Levin

Joseph I. Lieberman
Joseph I. Lieberman

Barbara A. Mikulski
Barbara A. Mikulski

Daniel Patrick Moynihan
Daniel Patrick Moynihan

Claiborne Pell
Claiborne Pell

Paul Simon
Paul Simon

Paul Wellstone
Paul Wellstone

Timothy E. Wirth
Timothy E. Wirth

Global environment**Hearing to review chemicals, ozone**

House Energy's Health and Environment Subcommittee is set to hold a hearing this week on legislation regulating chemicals that destroy stratospheric ozone, a move that signals the impending introduction of such language as an amendment to clean air legislation when Energy marks up the air package.

The subcommittee will discuss a bill (HR 2699) by Rep. Jim Bates (D-Calif.) that would phase out by 1996 a number of chemicals implicated in the destruction of the ozone layer. Committee aides said Bates plans to offer the bill as an amendment when the clean air package goes to the full committee for markup.

"It would be unfortunate to go through all this legislation and not address (the ozone layer) issue," one staffer said. "It seems a logical time to do it."

Another source said if Bates does not have the votes on the full committee, he will offer his amendment when the clean air package goes to the House floor. If that fails, the California Democrat will push for separate passage of his bill.

The bill would put the five most destructive chlorofluorocarbons (CFCs), the three most destructive halons, carbon tetrachloride and methyl chloroform on a phaseout schedule that would immediately freeze production at 1986 levels, reduce production 50 percent by 1993 and prohibit production by 1996.

The bill also would put a limit on the growth of less destructive CFCs and related chemicals by requiring that total ozone depletion be reduced by 1997.

S 1630, the Senate version of clean air legislation, contains language that would require phaseout of the five most destructive CFCs, three halons, and carbon tetrachloride by 2000. Debate on that bill is scheduled to begin Tuesday. (See separate section A story in this issue.) Sen. John H. Chafee (R-R.I.), the author of the CFC provisions in S 1630, is expected to testify at the hearing.

The hearing also is expected to address a variety of issues related to stratospheric ozone destruction, including the

latest scientific discoveries, environmental and health effects, and the Bush administration's position on strengthening the Montreal Protocol on Substances that Deplete the Ozone Layer. In testimony delivered in previous hearings on the subject, administration officials have opposed unilateral action by the United States to phase out CFC use, maintaining that international agreements are the proper vehicles for restricting use of the chemicals. President Bush has called for phaseout of the worst CFCs by 2000.

Officials from the Environmental Protection Agency and the State Department are expected to testify. Scientists from the National Oceanic and Atmospheric Administration will present the latest data on ozone depletion over Antarctica.

When: The hearing is scheduled to begin at 9:45 a.m. on Thursday, Jan. 25, in 2123 Rayburn.

Background: Ozone in the stratosphere acts as a shield that blocks harmful ultraviolet radiation from reaching the earth. CFCs, gases that are used in a variety of industrial applications, are widely believed to destroy stratospheric ozone. Scientists first realized in the 1980s that the ozone layer over Antarctica was thinning, and data now shows that antarctic ozone concentrations decline dramatically each year from September to November — spring in the Southern Hemisphere.

Scientists are investigating whether conditions in the arctic also may lead to a thinning similar to Antarctica's. A recent expedition to the arctic found the same conditions that in the antarctic serve as a precursor to ozone depletion.

EPA in November 1986 estimated that if CFC emissions continued growing at recent rates, the incidence of cataracts and skin cancer in the United States would increase dramatically by 2075.

The Montreal protocol went into effect on Jan. 1, 1989. Under its provisions emissions of the five most destructive CFCs are to be cut by 50 percent in the next decade. As of Sept. 25, 1989, 46 countries, including the United States, had ratified the protocol.

House Energy contacts: Greg Wetstone, majority, x67620; Teresa Gorman, minority, x53641. — *Chris Holly*

**Solid waste/
hazardous substances****House RCRA bill hearings to begin**

House Energy's hazardous materials subcommittee will begin hearings this week on a bill to reauthorize the Resource Conservation and Recovery Act.

The bill (HR 3735) was introduced Nov. 19 by subcommittee Chairman Thomas A. Luken (D-Ohio). The bill, the culmination of several months of hearings held last year, is a comprehensive package that emphasizes solid waste issues.

Since its passage in 1976, RCRA was intended to serve as a comprehensive framework for management of all wastes. However, much of the regulatory and legislative focus has been on managing hazardous waste from its origin to its final disposal.

Meanwhile, the United States has found itself in the midst of a solid waste crisis. Americans generate 160 million tons of municipal solid waste annually, or 3.5 pounds of trash per person, per day.

At the same time, landfill space is steadily diminishing. In the last 20 years, the number of landfills accepting solid waste has dropped from 30,000 to 6,000, and the Environmental Protection Agency estimates that half that number will close within two years.

Some municipalities are turning to incineration as a solution. Environmentalists say incinerator emissions and ash could pose a threat to human health and the environment, and maintain that the federal government should focus on pollution prevention and recycling rather than incineration.

HR 3735: The 176-page Waste Materials Management Act stresses waste reduction as the best way for the country to solve its problem of too much trash and too few places to put it.

At the heart of the proposal is a requirement that states submit comprehensive plans outlining solid waste management strategies for the next two decades. The bill would mandate that within four years of a plan's approval by EPA, a state must recycle 25 percent of the solid waste it generates. The bill adds an ambitious

• Natural Resources Defense Council • Friends of the Earth •
• Environmental Defense Fund •

July 10, 1992

Hon. William K. Reilly
Administrator
United States Environmental
Protection Agency
401 M Street, S.W. (A-100)
Washington, D.C. 20460

Re: Intent to Sue over Failure to Grant or Deny Petition for the Acceleration of the
Phase-Out of Ozone-Depleting Chemicals

Dear Mr. Reilly:

We are writing on behalf of the Natural Resources Defense Council (NRDC), Friends of the Earth (FOE) and the Environmental Defense Fund (EDF) to inform you of our organizations' intent to sue you and the Environmental Protection Agency (EPA) for failing to grant or deny our petition under the Clean Air Act for acceleration of the phase-out of ozone-depleting chemicals, and for related actions to protect the stratospheric ozone layer. You had a mandatory duty to grant or deny the petition within 180 days of the date on which it was filed, i.e., by June 1, 1992. No such action has been taken.

EPA's failure to Perform Non-Discretionary Duty

Section 606 of the 1990 Clean Air Act Amendments directs the Administrator to accelerate the phase-out schedule for ozone-depleting chemicals listed under section 602, if scientific data shows that a more rapid phase out may be necessary to protect human health and the environment, or if information on substitutes shows that a more rapid phase-out is practical. Section 602 also requires the Administrator to place additional chemicals on the list of Class I substances if it is determined that they deplete the ozone layer and have an ozone depletion potential greater than 0.2.

Sections 602 and 606 each authorize citizens to petition the Administrator for action. Under both provisions, the Administrator must grant or deny the petition within 180 days after receipt. The petition for the accelerated phase-out of listed ozone-depleting chemicals was

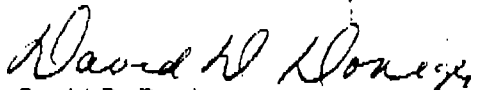
delivered to you and your Agency on December 3, 1991. You were required to grant or deny the petition by June 1, 1992. You have not done so. Thus, you have failed to perform duties that are not discretionary.


Notice of Intent to Sue


Pursuant to Section 602 and 606 of the 1990 Clean Air Act Amendments, NRDC, FOE, and EDF hereby put you on notice of their intent to sue EPA, you, and/or other officials sixty days after the date of this notice for failure to perform these non-discretionary duties. NRDC, FOE, and EDF intend to sue on behalf of ourselves and our members, and may also represent other interested parties.


If you or a member of your staff wishes to discuss the resolution of this matter with us before the complaint is filed, please contact David Doniger.

Respectfully Yours,


David D. Doniger
Senior Attorney
Natural Resources Defense Council
1350 New York Avenue, NW
Washington, DC 20005
(202) 624-9334


Liz Cook
Ozone Campaign Director
Friends of the Earth
218 D Street, SE
Washington, DC 20003
(202) 544-2600


Scott Hajost
Attorney
Environmental Defense Fund
1875 Connecticut Avenue, NW
Suite 1016
Washington, DC 20009
(202) 387-3500


James Tripp
Attorney
Environmental Defense Fund
257 Park Avenue
New York, NY 10010
(212) 505-2100

Dannemeyer Tackles the Ozone Layer

■ **Environment:** Congressman challenges theory that release of chlorofluorocarbons is damaging the Earth's protective zone.

By **ROBERT W. STEWART**
TIMES STAFF WRITER

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In arguing that the nation should reconsider the CFC ban, Dannemeyer contended that public officials have rushed to judgment and taken action that will cost taxpayers billions of dollars, with no proven benefit.

Dannemeyer is the senior Republican on the health and environment subcommittee of the House Committee on Energy and Commerce, the panel most likely to get jurisdiction over the CFC resolution. However, prospects for a hearing on the issue appear remote, because the chairman of the subcommittee is Rep. Henry A. Waxman (D-Los Angeles), one of the strongest environmentalists in the House.

OZONE DEPLETION NETWORK ONLINE TODAY

A Daily Executive Summary Covering World News on Stratospheric Ozone Depletion

LEGISLATIVE & POLITICAL REPORT

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"It is critical that we maintain aggressive examinations of the science pertaining to the ozone depletion theory, however, suggestions that the issue is a 'hoax, supported by a handful of scientists, the chemical giants that control the market for CFC substitutes,' and others, is bordering on the absurd," says Alliance executive director Kevin Fay. "[This] does a great disservice to the thousands of experts who have participated in this process," says Fay.

Industries in the United State have made progress in introducing CFC-free technologies well ahead of the schedules mandated either by the Clean Air Act or the Montreal Protocol. The Alliance estimates that by 1995, virtually all manufacturing relying on CFC technologies will have eliminated their dependence on those chemicals.

"Because of the rapid innovation by these industries, the recovery time needed to eliminate the Antarctic ozone hole has been shortened by more than 30 years," said Fay. However, "critical issues remain in achieving the phaseout of these compounds, including the prompt promulgation by EPA of regulations concerning the recovery and recycling of refrigerants in existing air conditioning equipment, and rules governing the introduction of safe alternatives ... The industry needs regulatory streamlining and continued cooperation, not scrutiny by disgruntled scientists."

(ALLIANCE FOR RESPONSIBLE CFC POLICY PRESS RELEASE: 8/6)

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INDUSTRY REPORT

DU PONT'S NEW TECHNOLOGY TO BOOST HFC-134a OUTPUT

While declining to elaborate on its nature, Du Pont has said that a new manufacturing technology will allow it to increase its HFC-134a capacity by 50% -- from 75 million pounds per year to 110 -- with small additional investment. The company will also start up a modular, transportable unit at Ponca City, Oklahoma to contain "millions of pounds" of HFC-134A. Already at the Ponca City site is an HFC-134a pilot-scale plant, but Du Pont will eventually relocate the modular unit as demand dictates.

The newly developed process will be used at Du Pont's world-scale HFC-134A plant under construction in Corpus Christi, Texas, at its unit in Chiba, Japan, and in Ponca City. The Chiba plant is scheduled to open later this year.

(CHEMICAL WEEK: 8/5)

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SCIENCE & TECHNOLOGY REPORT

CANADIAN WEATHER REPORTS NOW INCLUDE UV-B READINGS

To protect fair and winter-white skins, the cable television Weather Network of Canada and its French-language service in cooperation with Canadian federal authorities have set up a national monitoring system to measure ground-level Ultraviolet-B (UV-B) radiation. The system, using UV-Biometers manufactured by the Solar Light Company of Philadelphia, takes half-hourly readings from 24 monitoring stations from British Columbia to Newfoundland and Labrador to use in its broadcasts.

A spokesperson for the cable networks says that "The networks' key programming philosophy is to explain principal atmospheric phenomena and their impact on our daily lives," and during the debut week of the broadcasts the networks aired introductory reports about UV and depletion of the ozone layer.

The Solar Light Company's UV-Biometer is for use by meteorologists, dermatologists, plant physiologists, oceanographers, epidemiologists, and ecosystem researchers concerned with biologically effective solar ultraviolet radiation. Measurements are reported on four levels: low, moderate, high and extreme, with extreme meaning that unprotected fair skin will turn red in 15 minutes or less of continuous exposure.

(EIN STAFF: 8/10)

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GRANTS AND CONTRACTS

AIR FORCE REQUESTS BIDS TO REPLACE LOW REFRIGERANT PURGE SYSTEMS

The Air Force is seeking applications for contractors to replace the existing purge systems of eight chillers located at the Goodfellow Air Force Base in Texas.

The contractor shall furnish all labor, materials, equipment, transportation, supervision and perform all work to replace the purge systems of eight chillers (York, Trane, and Carrier) which use low pressure refrigerants. The new purge systems will minimize refrigerant losses due to both normal operation and inadvertent operator error and will be in compliance with all EPA regulations, including the July 1, 1992 revisions of the Clean Air Act.

The size standard is \$3.5 million. Only written or faxed requests will be accepted, due by Sept. 24, 1992. The SIC Code is 7623 and the contracting officer is Robert L. Wrice.

For more information, contact SrA Amy J. Carver at 3499 Contracting Squadron, Building 707, Goodfellow AFB, TX 76908-5000 or call (915)654-5215; Fax (915)654-3255.

(COMMERCE BUSINESS DAILY: 8/7)

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The Miami Herald
 MIAMI, FLA.
 D. 428.931
 FL-145

JUN 13 1992

BURRELLE'S

Environmentalists: Bush plan a 'sham'

U.S. just recycling old ideas, they say

³⁵⁹⁵
 RIO DE JANEIRO — (AP) — A six-step global-warming initiative announced by the United States at the Earth Summit is old news, environmentalists said Friday.

"The most charitable thing you can say about it is the administration believes in recycling," said Alden Meyer of the Union of Concerned Scientists.

"It was recycled and it was a sham," said Scott Hajost, of the Environmental Defense Fund.

The administration merely bundled up six previously announced actions and packaged them as a new plan, Hajost said.

The plan was announced Thursday by William Reilly, head of the U.S. Earth Summit delegation.

Here are the plan's elements:

First: Sign the Earth Summit treaty to curb global warming. That was announced weeks ago, after the United States removed from the treaty a provision requiring carbon dioxide reductions.

Second: Submit it as soon as possible to the U.S. Senate for ratification.

Nothing new there, said T.J.

Glauthier of the World Wildlife Fund. The United States would have done that anyway, he said.

Third: Commit to strict, early monitoring of emissions from electrical generating facilities.

"That was required under the Clean Air Act amendments of 1990," said Glauthier. Furthermore, the law said the details of the monitoring plan should have been issued in May, said Hajost. They have not yet appeared.

Fourth: Complete a detailed action plan by Jan. 1, 1993.

The United States had said that the plan would be submitted by June, 1993.

Fifth: Spend \$1.4 billion on research on global warming.

This is money the United States is already spending, not a commitment of new money, Glauthier pointed out.

Sixth: Provide \$25 million over two years to help developing countries monitor carbon dioxide emissions.

That was announced in February. "This is at least the second time it's been announced, maybe the third," said Ian Bowles of Conservation International.



Natural Resources
Defense Council

1150 New York Ave. N.W.
Washington, DC 20005

TO: Katie Mc Ginty
 FAX NO.: 224-0580
 FROM: DAVID Doniger
 DATE: JULY 22, 1992
 Number of Pages, including Cover: 2 1/2
 COMMENTS: _____

If there are problems with this transmission, please call 202-793-7800 and ask for sender on "FROM" line.

Energy Conservation Coalition • Friends of the Earth
 National Audubon Society • National Wildlife Federation
 Natural Resources Defense Council • Sierra Club • Union of Concerned Scientists

July 9, 1992

Honorable Barbara A. Mikulski
 United States Senate
 Senate Hart Office Building
 Room 320
 Washington, DC 20510-2003

Dear Senator Mikulski:

In his speech at the Earth Summit, the President called for industrialized countries to meet by the end of the year to "lay out our national plans for meeting the specific commitments in the Framework Convention [on Climate Change]." The United States has previously outlined part of its plan in the paper "U.S. Views on Global Climate Change," issued on April 24, 1992 during the process of negotiating the convention. Much of the President's plan is based on a series of voluntary government-industry initiatives that have been coordinated by a small staff at EPA. Effective implementation of the entire plan will require adding significant staff and budget resources to this highly promising start at EPA. We urge you to allocate 75 FTE new staff positions and an additional \$20 million to the budget of the Office of Air for this purpose in the FY93 EPA Appropriation. These increases would be in addition to the \$1.157 billion requested by the Administration for EPA salaries and expenses, and to amounts requested for the Office of Air in the Abatement, Control, and Compliance account.

EPA's Green Lights, Golden Carrot Refrigerator, and Energy Star Computer programs provide an excellent foundation upon which to build. These programs are designed to accelerate the penetration of existing energy-efficiency technology and the introduction of new technology through industry-government cooperation. Through voluntary agreements between EPA and individual companies, firms are encouraged to make profitable investments in efficient lighting systems, a new generation of efficient CFC-free refrigerators, or technology to minimize energy consumption when computers are not in use.

These voluntary programs are already beginning to have a significant impact by expanding the market for energy-efficient equipment. In just over one year since its inception, the Green Lights program has already enlisted the participation of more than 400 companies, which collectively control over two billion square feet of office—more than the total in New York, Los Angeles, Chicago, Houston, Dallas, and Detroit, combined. Preliminary results from companies that have completed lighting upgrades indicate that electricity savings of 40-75% have been achieved, exceeding some previously published estimates of the maximum

If the necessary resources are made available, EPA is prepared to launch similar programs aimed at commercial heating, ventilation and air conditioning (HVAC) equipment, industrial motor systems, advanced heat pumps, residential lighting and appliances, and electrical transformers. EPA must move quickly to expand its existing programs, and launch additional initiatives, if the United States is to adopt policies aimed at returning greenhouse gas emissions to 1990 levels by the year 2000. An effective, verifiable, evaluation system is also needed so that Congress and the public can monitor progress toward achieving this goal.

EPA's leadership was essential in developing the strategy outlined in the "U.S. Views" paper, and will be no less critical in expanding and implementing it. Only EPA has the comprehensive pollution prevention mission that is needed to achieve maximum participation and maximum benefits from these initiatives.

In summary, we urge you to make an important contribution to needed reductions in greenhouse gas emissions by providing 75 FTE new staff positions and an additional \$20 million to the budget of the Office of Air for this purpose in the FY93 EPA Appropriation.

Sincerely,



Daniel A. Lashof
Natural Resources Defense Council

on behalf of

Nancy Hersh
Energy Conservation Coalition

Ralph De Gennaro
Friends of the Earth

Brooks Yeager
National Audubon Society

Marry Marra
National Wildlife Federation

Dan Becker
Sierra Club

Alden Meyer
Union of Concerned Scientists