Ozone Plan Splits Administration

The White House must decide whether to support a plan to cut back world production of chlorofluorocarbons or to backpedal and suggest a less aggressive approach

A debate is raging within the Reagan Administration over the U.S. stance on phasing out the use of chlorofluorocarbon (CFC) gases and solvents. At issue are the depth and timing of cutbacks necessary to halt the erosion of stratospheric ozone, which shields the earth from excessive amounts of ultraviolet radiation. A feud has been simmering for several months within the Administration and now the matter is before the White House Domestic Policy Council.

The issue reached the boiling point in the wake of a draft treaty hammered out by 28 countries in negotiations held in Geneva last month under the sponsorship of the United Nations Environment Program (UNEP). The plan has been touted by State Department and Environmental Protection Agency (EPA) officials as a significant breakthrough because European and Japanese governments previously opposed making reductions in CFC use. But a number of American chemical and manufacturing companies complain that the proposal goes too far, too fast. As a result, they say American workers and the nation's economy could be penalized needlessly.

The Domestic Policy Council is now trying to decide whether the United States should support the UNEP proposal. It could cut CFC production worldwide as much as 50%. Manufacturers such as the Trane Company, a maker of cooling and heating equipment, are pressing the government not to go beyond a freeze that would hold CFC production to 1986 levels. Such action would not foreclose cutting back production in the future, argues Kevin Fay, executive director of the Alliance for Responsible CFC Policy, a coalition of chemical manufacturers and user industries. Says Fay, "Everybody in this industry knows that CFCs are on the way out."

Richard Barnett, president of York International, a manufacturer of heating and cooling equipment and chairman of the Alliance, says freezing CFC production at current world levels will be sufficient to spur the production of substitutes. CFC prices will double within a year of the imposition of a freeze and possibly quadruple by the mid-1990s, thereby providing industry with a clear economic incentive to produce replacement compounds. Imposing a cutback prematurely, Alliance officials say, could force industry to adopt CFC substitutes and new manufacturing processes that are less than ideal.

But a freeze is unacceptable to EPA Administrator Lee Thomas, who until now has played a central role in the configuration of the government's negotiating position. In testimony 14 May before the Senate subcommittee on environmental protection and the subcomitttee on hazardous wastes and toxic substances, Thomas emphasized that reductions beyond a freeze are necessary and that reductions in the production of some CFCs "should be automatic."

Thomas is not alone. Richard E. Benedick, the State Department's deputy assistant secretary for environment, health, and natural resources, has advised Congress that a scientific working group, formed as a part of the treaty process, had concluded that reductions beyond a freeze "are necessary in order to prevent long-term ozone depletion." Both officials have taken the position in international negotiations that up to 95% of all CFC production may eventually have to be eliminated to protect the ozone layer.

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If degradation of the ozone layer by CFC-derived chlorine continues unabated, the effects will be far reaching. EPA projects that it will produce millions of new skin cancers and millions of related deaths in humans (*Science*, 21 November 1986, p. 927). It also appears that immune system functions in animals and man could be adversely affected, notes Margaret L. Kripke, chairman of the Department of Immunology at the University of Texas. But plant and aquatic life may be damaged most, she says.

The draft UNEP agreement, which participants hope to adopt formally this September in Canada, would go a long way toward reducing CFC emissions, if fully implemented. The plan calls for:

- Holding worldwide chlorofluorocarbon production at 1986 levels. The affected compounds include CFC 11 and 12, which are widely used in refrigeration, air conditioning, foam blowing, and—outside the United States—as propellants in aerosol spray cans. Use of CFC 113, which is used as a cleaning solvent in electronics, and compounds 114 and 115 would be included, too. Halons 1211 and 1301, commonly used as fire extinguishants, presently are not covered by the proposal, but are expected to be rolled into the agreement.
- Reducing total production of CFCs by 20% in 1992, 2 years after the imposition of a freeze.
- Cutting production another 30% in 1994, if a majority of the participants agree; or automatically imposing this reduction in 1996 unless two-thirds of the countries vote against it. A review of the scientific data, economic implications, and adequacy of the strategy would be conducted before the reduction is implemented.

What has been crafted is a fragile structure for an agreement. Benedick concedes that there are still "major differences separating the United States from the European Community countries, Japan, and the Soviet Union. David Doniger of Natural Resources Defense Council (NRDC), in fact, says the public has been misled. "In reality," he says, "the parties are still far away from any agreement and farther still from an effective one." Doniger contends that the framework might have been stronger were it not for meddling by mid-level political appointees outside of EPA and the State Department.

The split within the Administration became pronounced following the outcome of UNEP negotiations held 23 to 27 February in Vienna. It was there that the European Community indicated it would negotiate in earnest. Behind this development was the general agreement reached by the 28 international participants that the ozone layer was being destroyed by higher than normal

levels of chlorine in the stratosphere. With European Community countries moving toward a consensus on the scientific issues, the stage was set for framing an agreement in Vienna in April on CFC reductions.

About the same time, the Alliance for Responsible CFC Policy launched a lobbying drive opposing a phaseout of CFC substances on the grounds that it was "unjustifiable from a scientific or economic standpoint." In a 20 February mailing, the group instructed companies to write members of the House and Senate and advise them not to support legislation or an international agreement that would eliminate the use of CFCs.

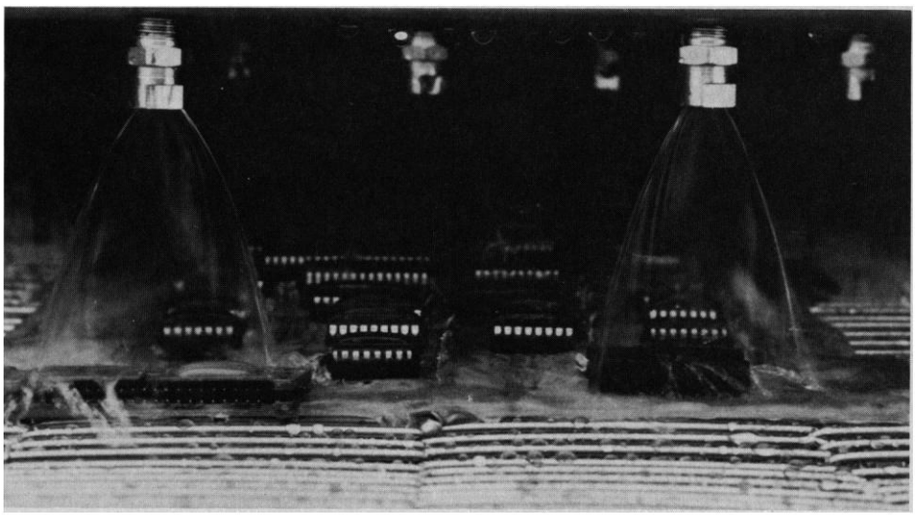
Several weeks later, the Office of Management and Budget decided it needed to reexamine the issue. Although White House personnel had been involved in earlier negotiations and federal agencies had an opportunity to comment on the bargaining position under the State Department's review process, the budget agency started at square one. An intensive set of interagency meetings took place over 2 weeks that included presentations from industry, scientists, and environmentalists. The last one occurred just 3 days before the Geneva meeting.

Martin L. Smith, deputy assistant secretary for policy, budget, and administration at the Interior Department, contends that the review process was needed because some federal policy-makers were not kept fully informed. The Alliance's Fay put it another way. The review was necessary, he says, because the issue previously "had not gotten the attention of people at high levels."

The Commerce Department and the Office of the U.S. Trade Representative have been particularly concerned about the implications of an international agreement on the U.S. economy and trade competitiveness. Cutbacks in the use of these chemicals pose challenges to industrialized countries, especially the United States, the world's largest user of CFCs. These gases and solvents are widely used in the production of foam rubber, high-efficiency insulation, cleaning electronic circuitry, refrigeration, air conditioning, and even beverage cups.

Michael J. Kelly, an international trade specialist at Commerce, says that the United States will be at a disadvantage in trying to comply with a freeze or cutback in CFC use. This is because American industry stopped using CFC 11 and 12 as propellants in most aerosol spray devices in the 1970s, while a majority of Europe has not.

EPA and industry officials estimate that Europe could reduce CFC production as much as 30% by prohibiting their use in aerosols, a relatively cheap and easy task. In contrast, the United States would have to pursue more costly alternatives, such as developing substitute gases to create foam cushions, slab foam board, or new refrigerants. Some officials within the Administration say that the United States ought to get credit for banning CFC use in aerosols.



CFC bath. *Electronic circuit boards are doused in CFC 113 to remove solder flux and other grime. There are few substitute solvents available today, and none appear to be as effective or safe as this chlorofluorocarbon.*

Another looming question is whether some accommodation can be made for certain uses of fire extinguishing Halon gases and for use of CFC 113 to clean electronic circuit boards, until effective substitutes are developed. U.S. trade officials also are concerned that developing countries, which would be allowed to phase out CFCs on a stretched out schedule, would have an advantage over American-based manufacturers of electronic components.

In the larger scheme of things, however, EPA officials argue that these issues can be dealt with. Rafe Pomperance of the World Resources Institute says that the Commerce Department's concerns about the difficulty of complying with a reduction is overstated. U.S. industry is wasteful in its use of CFCs. It could conserve and recycle more than it does now, he contends. David Wirth of NRDC, who attended the negotiations in Geneva, says that such issues should not hold up the agreement. Says Wirth, "Do you want the earth to fry because of a minor inequity that will be resolved anyway in the end."

Administration economic analyses, in fact, show that the costs of shifting away from CFCs is minor compared to the potential economic loss. Officials estimate that between 1986 and 2075 the deaths of 993,000 Americans, whose lives are valued at $1.3 trillion, can be avoided with a 20% cut in CFC use. Transition costs are not thought to exceed $4 billion.

The bickering within the Administration has not gone unnoticed by the Congress. Senator John Chafee (R–RI), ranking minority member on the subcommittee on environmental pollution, questions why agencies such as Interior are even involved in deliberations. Chafee contends that decisions on timing and the strigency of controls should be left to EPA to decide. While some say the Interior's stake in the matter is marginal, Smith says the department's involvement is justified. Increased exposure to ultraviolet light poses risks for visitors to the country's national parks, he says, and because Interior leases offshore oil resource, he adds, it is concerned about the availability of Halon gases to extinguish oil-rig fires.

"I am concerned about what was happening in our government during March and April . . . but I am even more concerned about what may be happening now before we go back to the negotiating table," says Chafee, who is sponsoring legislation (S. 571) to cut CFC use by 95% in 6 years. A 50% reduction in CFC use, he observes, is inadequate because it will still allow a 5 to 10% erosion of the stratospheric ozone layer between the years 2050 and 2060.

Where the United States will go from here is uncertain. Negotiations are scheduled for 28 to 30 June in Brussels and The Netherlands. Members of the European Community are watching to see what the United States will decide to do. At press time the Domestic Policy Council had failed in its first meeting to settle the matter. Even if the White House decides to back the UNEP plan, proponents worry that infighting within the Reagan Administration already has weakened the United State's hand in molding an international agreement. ■

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