

# EPA JOURNAL

## A Tribute to Rachel Carson





# PEANUTS

RACHEL CARSON SAYS THAT WHEN OUR MOON WAS BORN, THERE WERE NO OCEANS ON EARTH

RACHEL CARSON! RACHEL CARSON! RACHEL CARSON!

YOU'RE ALWAYS TALKING ABOUT RACHEL CARSON!

WE GIRLS NEED OUR HEROINES!

## Women, Consumers and the Environment

If I were asked . . . to what the singular prosperity and growing strength of that people (the Americans) ought mainly to be attributed, I should reply: To the superiority of their women.

Alexis de Tocqueville, *Democracy in America*, 1840

In this issue, EPA Journal examines the many and varied contributions made by women

to the environmental movement.

Administrator Douglas M. Costle comments on the inspiration, dedication, and hard work provided by women on an Agency-wide, national and global scale.

Frank Graham, author of *Since Silent Spring*, gives us a thoughtful evaluation of Rachel Carson, the very private person who is credited with providing major impetus to the environmental movement. This year marks the 15th anniversary since, as Graham points out, a Presidentially-appointed Science Advisory Committee substantially supported her position that pesticides were being misused in this country.

Administrator Costle, the chairman of the Regulatory Council recently established by President Carter to improve regulatory management in the Federal Government, discusses the goals of this new organization. Deputy Administrator Barbara Blum discusses regulatory reform advances within EPA.

The magazine also has articles from the heads of the four Federal agencies which are members of the Interagency Regulatory Liaison Group, established in a regulatory reform-related move to improve coordination within the Federal establishment. These agencies are: EPA, the Food and Drug

Administration, the Consumer Product Safety Commission, and the Occupational Safety and Health Administration.

Other subjects include: An article by Assistant Secretary of Agriculture Carol Foreman emphasizes the continuing importance of protecting food from environmental and other contaminants.

An article by Joan Martin Nicholson, Director of EPA's Office of Public Awareness, reviews the effects consumer buying habits can have on the environment.

A report from EPA's Region 10 Office headquartered in Seattle, the last in a year-long series from the Agency's Regional Offices. □

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# EPA JOURNAL

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**Truman Temple**, Associate Editor  
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## Articles

EPA is charged by Congress to protect the Nation's land, air and water systems. Under a mandate of national environmental laws focussed on air and water quality, solid waste management and the control of toxic substances, pesticides, noise and radiation, the Agency strives to formulate and implement actions which lead to a compatible balance between human activities and the ability of natural systems to support and nurture life.

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**Environmentally  
Speaking**

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## **Women and the Environment**

By Douglas M. Costle  
*EPA Administrator*

**L**ong before the first Earth Day in 1970, women were playing a major role in the effort to protect the environment.

They showed up at board meetings to point out that industrial expansion would threaten a trout stream or salt marsh. At city council sessions when the planners talked about the economic benefits forthcoming from the new expressway/high-rise/industrial park, women often asked about the neighborhood park. Their interest in trees, birds, flowers, and insects was legendary. Construction engineers were said to cringe from the specter of these women who campaigned to protect the air, land, and water.

In the 1940's Dr. Florence Sabin, then in her seventies, campaigned to clean up Colorado by combatting diseases spread by contaminated food and water and sewage disposal.

I think that these women symbolized the life-giving and conserving aspect of human nature. What was sometimes portrayed as blind opposition to progress was actually a zeal to protect human health and the quality of life.

One of the most outstanding of these women, Rachel Carson, sounded the alarm about environmental dangers. As a scientist Miss Carson knew the value

of careful, detached research, but it was her unique, empathetic presentation of the workings of nature in *Under the Sea-Wind*, *The Sea Around Us*, *The Edge of the Sea*, and finally *Silent Spring*, that gave impetus to the growing environmental awareness in this country and around the world.

In the following years women played a role in the growing international realization that pollution and environmental damage are problems on a world scale. Diplomat Inga Thorsson of Sweden suggested to the United Nations in 1968 that a conference be held to consider problems of the environment at the intergovernmental level. Secretary General U Thant supported her idea and called for the UN conference on the Human Environment that was held in Stockholm in 1972. Inga Thorsson later headed the Swedish delegation to the Governing Council of the UN Environmental Program, a product of the Stockholm Conference.

Helena Benitez, President of the Philippine Women's University in Manila, chaired a committee at the Stockholm conference, and in 1975 was named President of the Third Governing Council of the UN Environmental Program.

The UN commissioned an unofficial report on the human environment to serve as a factual and conceptual background for the conference at Stockholm. Co-author of the report with Rene Dubos was Barbara Ward, the British economist. Their comprehensive and balanced report, *Only One Earth*, outlined the social, political, and economic dimensions of the pollution problem world-wide.

In this country the late Margaret Mead\* was a shining example of the role women can play in leading public opinion to support the environmental cause. She was a strong supporter of Earth Day and was president of the North American Nongovernmental Organizations Concerned with the Environment.

Throughout my career in environmental work, I have met women who serve the environment not just as organizers and promoters but as scientists and specialists. Limnologist Dr. Ruth Patrick invented the diatometer, an instrument that plots the growth of microscopic algae, which is used to study pollution in bodies of water. Her theories of fresh-water aquatic life are applied to Environmental Impact Statements throughout the world. In 1975, Dr. Patrick won the Tyler Ecology Prize from Pepperdine University for her work.

The appointment of my colleague Barbara Blum as Deputy Administrator of this Agency is an indication of the seriousness of our commitment to let women take their

rightful place as respected professionals within this Agency. Barbara's long history of involvement in environmental activities in her home State testifies to her keen interest in our mission. In addition to working to protect the Chattahoochee River, she served on county planning commissions, advisory boards, councils, and committees relating to the environment. As a chairperson of the Georgia Heritage Trust Commission, a trustee of the Georgia Conservancy, and a member of Save America's Vital Environment, her activities earned a Feinstone Environmental Award in 1977, one of five given nationwide.

Dr. Kay Camin, EPA's Regional Administrator in Kansas City, has a background in economics. Her work before joining the Agency included studies of strip-mine reclamation, workshops on citizen participation in water quality control and the first national study on water pollution generated by the meat-packing industry.

Regional Administrator Adlene Harrison in Dallas was a member of the National League of Cities Steering Committee for Environmental Quality. Her work on the Dallas city council included support for a stringent air pollution ordinance and co-sponsorship of an ordinance to establish a city environmental committee.

In Boston, Rebecca Hanmer is EPA's Deputy Regional Administrator. She has been with the Agency since its inception, and is a former Director of the Office of Federal Activities at EPA headquarters. The EPA Deputy Regional Administrator in San Francisco is Sheila Prindiville, who has served in numerous capacities during her seven years with the Agency.

Here in Washington, I have opportunities to see and appreciate daily the dedication and skill of the women on our staff. EPA's General Counsel, Joan Bernstein, has 25 years of experience as an attorney in government and private practice and served in various capacities with the Bureau of Consumer Protection of the Federal Trade Commission.

Alice Brandeis Popkin, who heads up our Office of International Affairs, came to the Agency from the Antioch School of Law where she served as a professor. She was a member of the original staff that set up the Peace Corps.

Joan Martin Nicholson, Director of the Office of Public Awareness, served on several boards of environmental organizations and founded the Bolton Institute, a non-profit organization dedicated to helping people find practical solutions to environmental problems.

The Director of EPA's Office of Civil Rights, Doris Thompson, has 26 years of government experience with the Department of the Army and the National Security Agency.

In addition to the women who act as administrators and managers, EPA has an increasing number of women technical specialists. Dr. Marilyn Bracken is a Deputy Assistant Administrator in the Toxic Substances Program who is responsible for integrating the Agency's toxic substances activities, coordinating interagency toxics strategies, and for establishing and operating information policies and programs. Dr. Elizabeth Anderson is the Director of the Agency's Carcinogen Assessment Group, the advisory body that assesses the possible health risk of suspected cancer-causing substances that fall under EPA's regulatory authority. In Chicago, the Director of EPA's Great Lakes National Program is Dr. Edith Tebo, a specialist in laser technology.

I am proud of the talent, intelligence, and experience that these women represent. They are all seasoned professionals. Yet they are only a sampling of the more than 3,500 women employed by EPA, 35 percent of the Agency's staff. At the same time I am aware of the concentration of women at the lower levels of the civil service grade hierarchy in EPA, an unfortunate legacy of discrimination afflicting many Federal agencies. The average grade of male employees at EPA is 11.67. The average grade of the female EPA employee is 7.04. The Agency has undertaken to remedy that situation and with it the tremendous waste that results from underutilization of the abilities and contributions of women.

Finally, women traditionally have been responsible for the care and welfare of families, which makes them especially sensitive to the importance of clean air and safe water. As mothers they know that their bodies provide the first environment for a child, and that they will be primarily responsible for the nourishment, safety and well-being of their children.

Homemakers were the foot-soldiers of the environmental movement—the volunteers who gave freely of their time and energy in support of environmental causes. Many important environmental decisions have been based on the concern of local activists, who many times were homemakers. This is not strictly an American phenomenon but occurs anywhere that pollution poses a threat to people; the women of Minamata, Japan, were in the forefront of the battle against mercury poisoning in their fishing village.

The work many women initiated continues wherever people care about their world. □

\*See Editor's Note, Page 38.



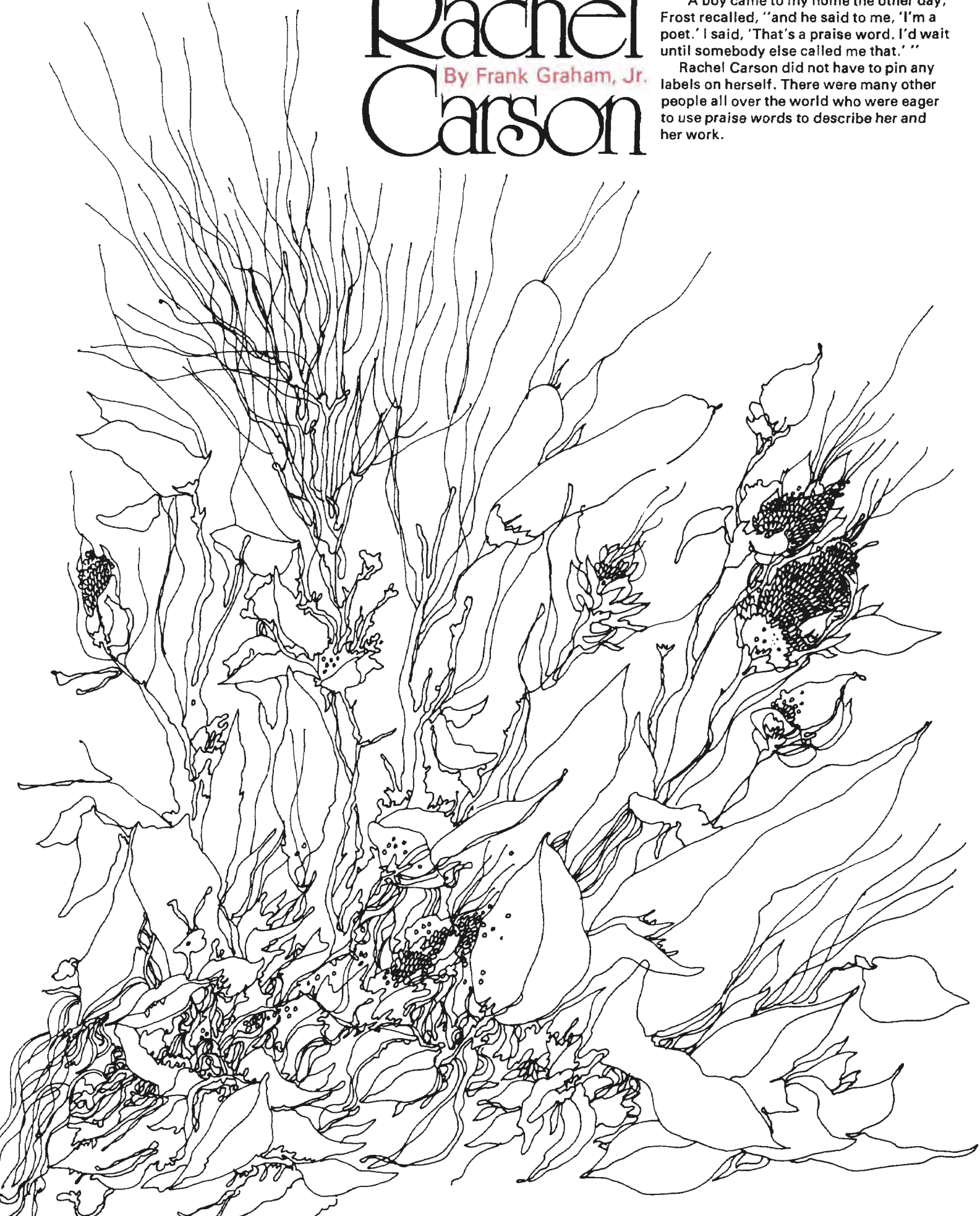
# Rachel Carson

By Frank Graham, Jr.

Robert Frost liked to make a point with an anecdote as well as with a poem.

"A boy came to my home the other day," Frost recalled, "and he said to me, 'I'm a poet.' I said, 'That's a praise word. I'd wait until somebody else called me that.'"

Rachel Carson did not have to pin any labels on herself. There were many other people all over the world who were eager to use praise words to describe her and her work.

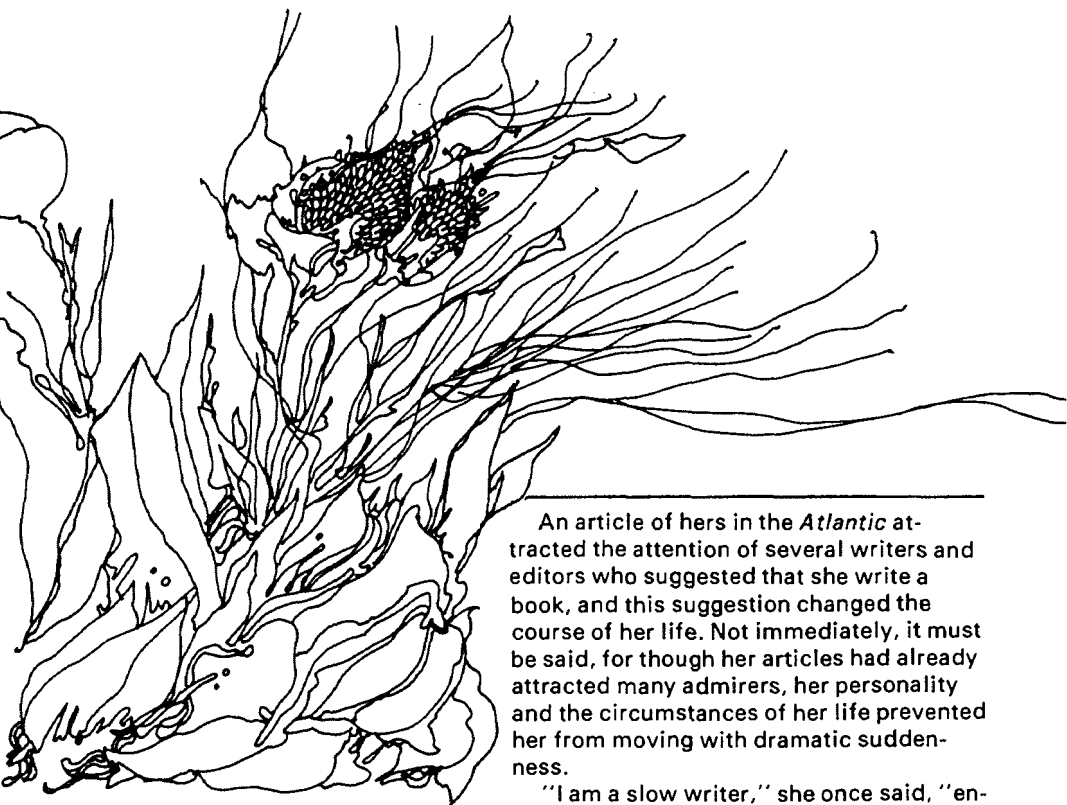


Poet was one of them, for she wrote prose with a poet's passion. Scientist was another. As a marine biologist who worked for the old U.S. Bureau of Fisheries and later for the Fish and Wildlife Service, she gathered the background to write those distinguished books on the sea that were read by millions here and abroad.

Conservationist was still another. No one in our country's history believed more profoundly in the aim of conservation—as an attempt to understand and preserve the capacity of land, water and wildlife for self-renewal, in all their diversity and complexity. Nor was anyone in our history able to create among the public an "ecological conscience" as ably as Rachel Carson did.

Yet this intensely private person, whom her superiors at the Fish and Wildlife Service remembered as being so shy originally that she could hardly get out the words to discuss a new project, became the center of one of the most bitter public controversies in the post-war era. As she lay dying of cancer at the age of 56 in 1964, other labels still swirled about her. "A nun of nature, a votary of all outdoors," some over-enthusiastic admirers gushed, while from much less friendly quarters came epithets like "mystic," "food faddist," "health quack" and "bird-lover." A dispassionate look at both her personality and achievements suggests that of these characterizations, coined in the heat of battle by both friend and foe, only the last was accurate.

Rachel Carson was an unlikely crusader. Born in Springdale, Pa., far from the sea with which she was later so closely identified, she spent her childhood absorbed in books and in the wild things around her home, to which her mother had lovingly introduced her. Her first inclination was toward poetry. She apparently produced a smattering of the poetic effusions common to many sensitive young people, but all that survived at her death was a sheaf of rejection slips from the magazines to which she sent her poems. At that stage she was a poet in search of a subject.



A subject revealed itself part way through her undergraduate course at the Pennsylvania College for Women, when her romantic attraction to the sea coincided with a growing fascination for biology. She went on to study biology and genetics at Johns Hopkins University, where she earned her master's degree in 1932. (Her doctorates were honorary.) For a time she taught zoology at the University of Maryland and spent her summers working at the Marine Biological Laboratory in Woods Hole, Massachusetts. She became a Federal aquatic biologist in 1936.

It was during those Depression years that Carson, intent on making a living, unwittingly was preparing herself for the drama ahead. Though taken up with her detailed studies of small aquatic life (her master's thesis was entitled "The Development of the Pronephros During the Embryonic and Early Larval Life of the Catfish *Ictalurus punctatus*"), she never lost her early vision of the complexity and majesty of the sea, or indeed, of nature itself. To the end of her life she kept close to her the books by writers she thought captured those qualities—Melville, Thoreau, Conrad, Richard Jeffries, Henry Beston, H. M. Tomlinson—and letters to her closest friends were filled with references to them.

Immersed in her science, her imagination resonant with phrases from favorite books read and read again, Carson began composing short articles about what she knew best, the natural world. She became a contributor to a Baltimore newspaper while sharpening her skills writing official government publications. In later years she was given the title Biologist and Chief Editor in the Fish and Wildlife Service.

An article of hers in the *Atlantic* attracted the attention of several writers and editors who suggested that she write a book, and this suggestion changed the course of her life. Not immediately, it must be said, for though her articles had already attracted many admirers, her personality and the circumstances of her life prevented her from moving with dramatic suddenness.

"I am a slow writer," she once said, "enjoying the stimulating pursuit of research far more than the drudgery of turning out manuscript."

Moreover, Rachel Carson, for all her craving for privacy, was never free to act utterly independently. Even in the hours away from her demanding job at the Fish and Wildlife Service, she had a home to run. Though she did not marry, she cared for her mother through most of her own mature years and later adopted an orphaned grand-nephew. The first of her books, *Under the Sea-Wind*, was published late in 1941, but aside from some welcome critical acclaim it went almost unnoticed in the uproar that followed Pearl Harbor.

It was not until 1951 that the general public came to share the admiration of critics and scientists for Carson's many skills. She had chosen as her subject nothing less than the sea itself, and when her book, *The Sea Around Us*, appeared, the response stunned even this artist-scientist. The book remained on the best-seller list for 86 weeks, was picked up by book clubs and magazines, and was translated into 33 foreign languages.

"Great poets from Homer down to Masefield have tried to evoke the deep mystery and endless fascination of the ocean," the *New York Times* said of her book. "But the slender, gentle Miss Carson seems to have the best of it. Once or twice in a generation does the world get a physical scientist with literary genius. Miss Carson has written a classic in *The Sea Around Us*."

Though celebrity terrified her at first, she learned to deal with it. She was one of those writers who inspire affection as well





as respect among her readers, and certainly a reason for the painfully slow pace at which she wrote her later books was the bulky correspondence she insisted on responding to with courtesy and thoroughness. Moreover, she had the unique ability to transform, through the alchemy of her prose, cold scientific facts into the stuff of wonder and delight.

"The pleasures, the values of contact with the natural world are not reserved for the scientist," she wrote. "They are available to anyone who will place himself under the influence of a lonely mountain top—or the sea—or the stillness of a forest; or who will stop to think about so small a thing as the mystery of a growing seed."

Carson's stature grew in succeeding years with the re-publication of *Under the Sea-Wind* and the writing of a new book, *The Edge of the Sea*. A future full of honors and tranquility seemed assured to her. But late in the 1950's something began to gnaw at her, a sense that events in the world had taken an ominous turn, that mankind in its ingenuity and arrogance had suddenly gotten hold of the power "to change drastically—or even destroy—the physical world."

Her own wide reading and her conversations with other scientists led her to focus on the misuse of chemical pesticides as the symbol of what had gone wrong. Only a few years earlier those new chemicals, especially DDT, had been hailed as humanity's savior, weapons that would finally solve the age-old problems posed by noxious insects and other pest organisms. Massive doses of the new chemicals, often spread by planes, became the prescription for all pest problems. It became apparent after a while that many kinds of animals besides insects were affected by the chemicals, and, as Carson realized, no one had any idea of their ultimate effect on the foundations of life itself.

"I may not like what I see," she wrote, "but it does no good to ignore it, and it's worse than useless to go on repeating the old 'eternal verities' that are no more eternal than the hills of the poets. So it seems time someone wrote of life in the light of the truth as it now appears to us."

At first she had no intention of writing a book about pesticides. She suggested the idea to others, but got little response. Eventually it became clear that she was the leading candidate to tackle the subject, for no one else had such excellent credentials—her scientific background, her love for the natural world, her writing skill and her stature in American letters.

The "brief book" on the subject that she had envisioned grew as she began to dig

into the evidence that mankind had badly misused these toxic substances. Despite the fact that she was already suffering from the illness that would kill her, she pushed on for four years—reading, asking questions, writing and re-writing. When her book, *Silent Spring*, was published in 1962, the uproar it caused and the influence it exerted was compared to that of an earlier classic, Harriet Beecher Stowe's *Uncle Tom's Cabin*.

Why was a writer who spoke out against the contamination of the environment so savagely attacked from many quarters? In part it was because of the nature of her subject. Chemical pesticides, used in the right way, have been a valuable tool, increasing agricultural production and protecting human lives. A number of men and women of good will saw in *Silent Spring* an attempt to turn back the clock, depriving humanity of a weapon against pests at a critical moment in history.

But Carson did not call for the abandonment of all chemical pesticides. She asked for a ban on the more insidious, long-lasting chemicals like DDT, against which there was increasing evidence of harmful effects to many living things. She asked also that the other chemicals be used more judiciously and that the regulations for their manufacture and sale be considerably tightened. Finally, she asked that scientists redouble their efforts to find alternative methods of fighting pests, such as biological controls, so that the flow of deadly poisons into the environment might be restricted.

Despite the initial flood of hostile criticism, Carson's argument has stood the test of time. As early as 1963, President Kennedy's Science Advisory Committee substantially supported her position that pesticides were being misused in this country. Laws and regulations have been tightened, and most of the chemicals whose use she criticized have been banned.

*continued on page 38*

#### **Rachel Carson Trust**

Soon after Rachel Carson's death, friends and colleagues with whom she had discussed the possibility formed the Rachel Carson Trust for the Living Environment in 1965. Purpose of the organization is to advance her causes and philosophy by promoting public interest in and knowledge of our environment; encouraging enlightened conservation measures; and serving as a clearinghouse of information for scientists and the general public. The trust's focus is chemical contamination, especially from pesticides. The trust is an independent, non-profit scientific organization. Further information can be obtained by writing to the Rachel Carson Trust for the Living Environment, Inc., 8940 Jones Mill Road, Washington, D.C. 20015.

Frank Graham, Jr. is author of *Silent Spring*, an account of the impact of Rachel Carson's book. He also is author of a book on water pollution, *Disaster by Default*.

# Better Government Service

By Barbara Blum  
*EPA Deputy Administrator*

One of the biggest problems we have at the Environmental Protection Agency is the suspicion—sometimes well-founded—that the way we have to set up our regulations, rules, procedures and paperwork costs business, industry and local and State governments more than it needs to in time and money. We can do a better job of cleaning up the environment, and get more cooperation, or at least less opposition, if we clean up our own regulatory act, too.

That is why regulatory reform is a very important part of our job at EPA, and why the friendly attention we got for one set of those reform initiatives announced in September is worth the notice of all of us who are committed to a cleaner environment. We announced a streamlining of pollution control permit procedures that will save time and money for industries that must undergo environmental reviews, by making it clearer, sooner, just what has to be done to get all the necessary permits.

What may be more important than the details of what we did was the way we got there. These changes did not start with a blinding flash of inspiration here at headquarters. They began when an industrialist, W. W. Dodge of Caterpillar Tractor, wrote me last year to complain of the uncertainties and costs involved in obtaining multiple permits for building new factories.

What Mr. Dodge said made sense, and we set up a task force with him and other industry figures, representatives from environmental groups, and the officials here who write and administer the procedures. When we announced the results, Mr. Dodge was with me in Washington to help explain the results of our work and say how they would reduce the costly uncertainty industry faced with the previous lengthy procedures.

These changes should be even more valuable for smaller firms, less equipped than big companies like Caterpillar to find their way through what sometimes seem to be bureaucratic mazes. First of all, in each of our Regional Offices, one person will

keep track of all phases of a company's application for pollution control permits. Only thirty days will be allowed for the initial review of applications, the review needed to make sure they are complete, and a permit tracking system is being set up to make sure we act as swiftly as possible.

EPA and the companies involved will meet early in the process to make sure that the multiple permit requirements are thoroughly understood, and then at EPA we will coordinate the review of the multiple applications. Beyond that, we will work with State and local governments to eliminate unnecessary duplication where dual requirements for permits exist.

In addition, we are working to develop a single application form for the various permits needed for the construction of plants that will be new sources of air pollution, the discharge of water pollutants, the treatment and disposal of hazardous wastes, the control of underground injection of pollutants, and dredge and fill activities. Because these permits are required under several different laws, involving different

time requirements, a single construction permit is not feasible, but we think we are working toward the next best thing.

In developing these changes, the government listened—and found responsible industry leaders eager to cooperate with us once they knew we valued their experience and insight. Without their help, we could not have done the job.

This is one concrete example of how regulatory reform has worked at the Environmental Protection Agency—an accomplishment noted by the Washington papers, the *Christian Science Monitor*, and conservative commentator James Jackson Kilpatrick. We found ways to administer the laws at less burden to American industry, and at less burden to government—thus at a saving to the American people in both cases.

Our agenda for regulatory reform is long, but another set of changes is well advanced—a number of initiatives we







group under the term "offset strategies." Taken together, these concepts develop the idea that not all methods for controlling pollution are created equal, and that industry should be encouraged to find the most efficient ways to do the job.

Taken in its simplest terms, the idea behind this concept is that the total pollution in the environment is what matters, not the sum from any individual machine or smokestack. Thus, if a company wants to build a factory with two processes, one of which we have determined should spew no more than eight pounds of pollutant per hour into the air and the other no more than twelve, we should find a way to allow one to spew five and the other fifteen, if that is more economical for the industry.

This, in simple terms, is an approach whose implementation is getting easier because the technology of measuring discharges is improving. Allied with it are several other concepts, such as allowing an industry to "bank" pollution control accomplishments beyond the minimum requirements, so that it can be confident

future expansion or extra shifts will be permitted.

We are looking into ways of trading or selling those pollution control accomplishments between industries in a given area. And we have developed a policy where a firm can build in a non-attainment area—where air quality does not meet Federal standards—even though it adds to the pollution, if it can find some way of cleaning up other pollution sources so that the total pollution is reduced, not increased, with the addition of a new factory or plant.

There are many other elements of our regulatory reform effort, from trying to shorten time periods to what Doug Costle calls "making English the official language of EPA."

They have intrinsic merit, for there never has been a good reason for government to make people's lives more complicated than

necessary. They have a timely political value, for the distrust of government shown in various elections across the country in 1978 needs to be dealt with constructively or else it will be dealt with destructively, again and again. And they have a particular merit for this agency, which has been entrusted with a regulatory assignment that will not be simple or cheap when we do our best, the duty of administering a series of laws that have imposed new and often costly requirements on industry and government in a time of serious inflation.

We are not going to sacrifice the environment for any quick savings for the economy, or any small part of it. But a healthy economy is a concern of environmentalists just as seriously as it is a concern of industrialists, for without resources, the expensive job of cleaning up the environment will be left incomplete. So whenever we can find a way to cooperate with industry and the others we regulate to save time, money and jobs *without damage to the environment*, we will. □



## The Caretaking Consumer

By Joan Martin Nicholson  
*Director, Office of Public  
Awareness*

**M**uch of American capitalism relies on two factors that are not given wide consideration in the development of U.S. economic policy. The first is the capital provided by Nature—air, land, and water. In his book *Small Is Beautiful*, E. F. Schumacher notes that modern economics, which is so largely market-oriented, often ignores human dependence on the natural world.

The second fundamental of our economic system is the consumer. In this country, as in many industrial-urban societies, women have assumed the role of chief consumer. As more of the world moves from agrarian to industrial society, what are the implications of this role for

women? And what impact will women have on the natural systems and primary resources that sustain life?

The ultimate well-being of this planet and the people who inhabit it are intricately linked to the role of women as consumers in industrial societies.

In the past when America was largely an agrarian society, women played a key role in the production, refinement, and distribution of the food and other items that were daily necessities. They worked as an important part of a family unit in the fields, home, and marketplace, assuming a share of the labor, responsibility, and the benefits of the farm-based economy. The production aspects of society were a part of each woman's daily existence.

The "Women's Liberation" movement is very much a protest against the loss of these functions in women's lives. Our technical-industrial society has isolated women into "kept consumers." Many women are seeking to balance the child-centered, consumer-focused lifestyle with a production-related, adult-oriented world.

Economic power in America particularly determines the choices available to us, which ultimately define the quality of our lives. In highly industrialized societies, the modern woman makes important economic statements through exercising consumer choices. Unfortunately, it has not always been used effectively, for most women do not perceive its implications.

What we consume determines which natural resources are depleted and how long these limited quantities will last. What we consume also determines who is employed, and at what level of pay and skill. What we consume determines our dependence on imported resources, and our supply of domestic resources. These resources include the world's supply of fossil fuels.

The wastes from the products we buy often last long after we have finished using them. Consumer habits determine which wastes are returned to the Earth's natural systems to be broken down and absorbed. And the sad fact is that many places on Earth are showing signs of severe stress. They are no longer able to absorb and convert these modern industrial wastes.

In our market-place we increasingly see goods with built-in, planned obsolescence,



requiring expensive repairs and skills. There are items that cannot be recycled, or which may and often do pose hazards to human health. The question that arises here is: How do women relate to it all?

Women are, by tradition, the caretakers, the bearers of wide-ranging skills and broad-range emotional systems. Somehow, in the complexity of our frenetic modern existence many women have lost sight of their most obvious mandate—that of a caretaking consumer.

Unfortunately as they become more mobile in the world, and begin to enter policy forums, even as a token force, women tend to emulate the vocabulary of men, to accept their definitions of the problems, and to adopt their structures for resolving the challenges that confront people. But there are other ways of looking at problems and dealing with them. Women must redefine their role in these new times and make better use of their consumer power: the ability to decide when and where the family will spend its money.

The credit card, the checkbook, and the dollar should be perceived as ballots with which to vote products in and out of people's lives. The cumulative impact of their choices as consumers determines the destiny of their environment and the final price that people will pay in determining the quality of life.

While there is much positive work being done around the world to meet human needs, we should make certain that the negative aspects of the U.S. market are not exported to developing nations seeking industrial and technological growth. America has a moral obligation to share our good fortune with other countries that have traditions much longer than our own. But we must also make them aware of the potential abuses to land and people from modern technology.

Women in the developing countries play a significant role in landbased economies. Unfortunately, some of these countries are faced with the problem of multinational corporations that create economic dependence on their goods. Even in this country we are just beginning to understand that those goods have negative as well as positive aspects.

The role of women in molding the future is equally important in the less-developed countries of the world. Many developing nations are beginning to move toward our technical-industrialized way of life. Millions of people face different choices, for which they are ill-prepared, en route to urbanization. The fate of those changing societies pivots on the size and well-being of the families who live within their borders, and the main determinant in those families will be women.

According to John Gilligan, Administrator of the Agency for International Development, 87 percent of the world's population will live in the less developed countries by the year 2000. These people face an increasing food deficit. The great majority are subject to disease and malnutrition. Some 800 million people are illiterate—and most of them are women.

Gilligan notes the ties between education, population growth, and economic development. Birth rates decline when women realize it isn't necessary to have so many children to ensure help in the fields and care for their old age. Also as people increase their education levels, the number of children per family declines. The change especially accelerates with the education of the mother. In Latin America, studies indicate that women who have completed primary school will average about two children fewer than those who have not. The AID administrator points out that the education of women in developing countries is an imperative if population growth rates are to be reduced.

Gilligan adds that the role of women in Third World food production is directly related to U.S. prosperity and security. It is unlikely that the West will be able to make up the difference in the world food deficit projected for 1985. That will have to be done by the millions of subsistence farmers scattered around the globe—most of whom are female. In many Third World countries 40 to 70 percent of agricultural labor planting, hauling water, tilling, harvesting, and marketing is done by women.

As more men are drawn to the cities and factories by the lure of wealth, more of the burden of food production will fall on women. If they are to cope with the burgeoning task of feeding increasing populations, many barriers must be crossed. Not the least of these is the tendency of Western development advisors to assume in their assistance programs that all farmers are men and to ignore women. Women must be taught in these emerging lands to use improved seed and fertilizers, irrigation systems, and agricultural machinery. They must have roads and transportation, food processing and storage facilities, and access to economic structures like credit.

A little education in nutrition and health can go a long way, as well, in some deeply impoverished areas where more food and medical care may not be forthcoming soon. According to AID, nutrition experts in Africa found that in most villages women could find the right food or combinations of foods for their families if they knew what to look for and how best to prepare it. Likewise, an elementary knowledge of sanitary precautions could prevent many health problems.

Do American women, who are too often "kept consumers" chasing a dream of the land of plenty, have some moral obligations to these emerging cultures opting for

an industrial/technical society? The answer is yes.

Technology, economics, employment, energy, and the welfare of the environment are part of the same web. The tradeoffs among them determine the fate of each. Each individual consumer should be able to perceive that by foregoing certain levels of natural resource indulgence, availability of these resources for future generations can be assured.

Who is to lead us in this new code of group morality?

In the past, women have followed the road to highly urbanized industrialized living without evaluating for themselves the implications of development. The consequence is that there are few female critics monitoring society's evolution from a female perspective. And it is time women assumed this role in society.

What are the options? In light of the direct correlation between Earth's survival and our own survival as a species, the immediate need is for the massive education of women about their potential as "caretaking consumers."

How does one become a "caretaking consumer?" When making a purchase women might stop for a moment and consider whether their choice of products will influence these broader goals:

- Avoid or mitigate harmful impact on the environment;
- Encourage beneficial impact on the environment;
- Reduce consumption of limited natural resources;
- Conserve limited energy resources;
- Encourage the use of natural materials or recyclable products;
- Avoid planned obsolescence;
- Encourage self-sufficiency;
- Protect life from toxic and carcinogenic substances.

Women are one-half of the population, controlling more than one-half of the wealth. But are women half of the economic and political power structure? The quality of human existence in the present context says not. One woman acting alone has little effect. But ten, twenty, or a thousand women making educated choices can turn consumer policy into social, political, and economic statements about our destiny as a people. Our environmental future could well be determined by the "caretaking consumer." □





# Nursing Mothers and Environmental Contaminants

By Molly Broughton Peter

**T**he U.S. Environmental Protection Agency is preparing a follow-up investigation of 1,500 women tested in 1975 as part of a major study of pesticide residues in mothers' milk.

EPA scientists now are looking into the dietary habits of the women at the time of their pregnancies to see if there was a correlation between diet and pesticide levels in breast milk. Using questionnaires, they also will seek to determine whether the children of the original test group have had any pesticide-related health problems.

Since widespread use of synthetic pesticides began in the mid-1940's there has been a controversy among researchers about the health implications of traceable levels of chemical residues in human milk. Scientists are concerned not only for the women who carry these contaminants but also about the effects they might have on nursing infants.

Most researchers agree that it is extremely difficult to determine cause-and-effect relationships between ambient exposure to chemicals and health problems. They would probably also agree that until recently there have been limited methods for assessing many environmental health effects, particularly in dealing with low-level dosages. People do not keel over after one low-level exposure to most pesticides. The hardest fact may be that this kind of research has not been a priority within Federal agencies or the medical research community. More funds are needed for monitoring and research. Because this type of research takes so long, the sad news is that we may not know much more in ten years than we know now.

Since their introduction pesticides have brought real benefits. Because of their broad application, low cost, and effectiveness they have been of great importance in both agriculture and public health. Pesticides have reduced diseases such as malaria, yellow fever, and typhus. They also have helped to increase crop yields by reducing pests and protecting stored food-stuffs.

However, one characteristic that some pesticides, such as the chlorinated hydrocarbons, have is persistence or longevity in the environment. Because they do not break down easily, some pesticides tend to accumulate in the food chain, contaminating it at various levels. These residues are a world-wide phenomenon. They have been detected in virtually all animal tissues and even in regions far removed from areas of pesticide use. We are all exposed to pesticides whether we live in urban, suburban, or rural areas. The major routes of human exposures are through food, air, and water.

When pesticides were found in mother's milk, public concern naturally arose as to what effect this might have on breast-fed infants. The World Health Organization calculates acceptable daily intake levels of pesticides, and these levels are believed sufficient to protect adults against chronic poisoning by ingestion of pesticide residues in food. Although comparable acceptable intake levels have not been calculated for infants, they would probably be lower, since immature livers are less able to filter out these substances. EPA does, however, generally consider those people (including infants) whose diet is largely milk when it sets tolerance residues for cow's milk.

Many early studies were limited to determining the presence of DDT in breast milk. Most of the studies were based on relatively few samples (some tests involved only five women), and analytic procedures varied widely.

What research is underway today in the area of the health effects of pesticide residues? The following is a summary of the major work being done. This new body of research and monitoring may illuminate new directions to be followed to resolve the controversy.

In 1975 the Human Effects Monitoring Branch of the EPA Pesticide Program began the largest survey program of its kind, analyzing milk samples of 1,500 women. The purpose was "to estimate the distribution of selected organochlorine pesticide levels in human milk among nursing mothers giving birth in general care hospitals in the United States."

Factors taken into account in obtaining

samples were: the geographic distribution of mothers, their age, occupation, race, and whether anyone living in the household was employed in a pesticide-related industry.

The compounds analyzed in the study were: DDT, dieldrin, chlordane, heptachlor, heptachlor-epoxide, mirex, oxychlordane, BHC, HCB, TransNonachlor and polychlorinated biphenyls (PCB's).

The EPA found detectable levels of three pesticide metabolites in the milk of the nursing mothers. Dieldrin appeared in 80 percent of all the milk samples, heptachlor-epoxide in roughly 63 percent and oxychlordane in 74 percent.

EPA has since curbed the use of all those pesticides. As a result of EPA's ban on DDT in the early 1970's, there has been a significant decrease in traceable levels of DDT in fat tissues. This may also happen in the cases of aldrin, dieldrin, heptachlor, chlordane, and their metabolites in human milk, since the Agency has now restricted their use. These actions were not a result of the breast milk study but rather because of persistence, bioaccumulation and other effects in animal testing and wildlife studies.

EPA is awaiting the results of its follow-up study of 1,500 women while the Agency continues monitoring pesticide residues in human milk.

The EPA monitoring program begun in 1972 also included PCB's, a carcinogenic industrial chemical of growing concern to researchers working in the area of human milk studies.

Nine years ago more than 1,000 Japanese were poisoned when they cooked with rice oil accidentally contaminated with PCB's. Their symptoms included severe acne, temporary loss of vision, darkened skin, and neurological disorders. Dr. James Allen at the University of Wisconsin Medical School has been studying the effects of PCB's on infant rhesus mon-

*Continued on page 13*

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# Volunteerism and the Environment

By Mary DeCarlo

**T**wo social forces have converged to accommodate women as leaders in protecting the environment. Awareness of the contamination and destruction of the natural environment systems and resources launched environmental interest groups. Concurrent with that awareness was the emergence of the women's movement. Two approaches emerged in the environmental movement. One is voluntary and the other institutional. Institutional support came in such forms as the establishment of environmental education curricula, research programs, and institutes. Voluntary action was the mode for local resistance to environmentally destructive practices.

From these forces women have emerged as leaders in the environmental movement. Beginning with Rachel Carson and her book *Silent Spring* and continuing with the recent appointment of Ruth Clusen, who was named Assistant Energy Secretary for the Environment, women have been prominent in the articulation of issues related to the environment.

Environmental activism is also a logical transition point for many women. Volunteering in community work is a traditional sharing in the shaping and defining of community issues.

Matilda Koval watched her Baltimore neighborhood deteriorate as the older ethnic population moved out and those who moved in took little pride in

caring for their homes, yards, and streets. Instead of moving out as she originally intended, Koval decided to organize her neighbors into a self-help project for block-wide improvement. For her, voluntary action was more than working for an organization. She created her own volunteer job; in a sense acting as a one-person volunteer association.

Neighborhood spirit runs high in Baltimore, and Matilda Koval, along with her newly-mobilized neighbors, joined together with other like-minded groups in Baltimore to obtain money for neighborhood projects and increased city services. Koval worked hard to improve the physical environment of her community and the city at large. She worked to stop further spread of pollution through encouraging code enforcement, restoring land and water, creating playgrounds and parks, cleaning up litter, getting rid of rats, abating noise, and operating recycling centers.

Matilda Koval through perseverance, motivation, and enthusiasm inspired others. She left behind her a testimony to women as volunteers combining traditional concerns with environmental activism.

According to the Task Force on Women and Citizen Participation Report—completed for the Alliance for Voluntarism—studies found that women tended to be better represented on boards (policy-formulating bodies) in environmental groups than among other more established agencies devoted to education, health, and social services.

The women's movement pro-

vided a new impetus for women to assert leadership in behalf of matters that affected the quality of their lives.

National organizations such as the League of Women Voters, American Association of University Women, National Federation of Business and Professional Women's Clubs, Association of Women in Science, National Organization for Women, Women's Active Alliance, etc., are vital organizations drawing on the female population. In some cases, these organizations have major study or work programs in the area of energy and conservation. Some are doing contract work on environmental issues for EPA. A recent grant from the Office of Solid Waste at EPA has enabled the league of Women Voters in seven communities to inform, educate, and involve citizens in a recycling program that will continue through volunteer efforts after the grant has run out.

The League, which has an increasing number of members who are men, is active in all stages of policy formulation locally, statewide, and nationally. In addition to providing support for environmental legislation, League members have published over fifty environmentally-related pamphlets and magazines as well as information bulletins to awaken the public to the environmental issues facing this Nation.

According to Herta Loeser, author of *Women, Work, and Volunteering*, many women have developed careers in voluntarism. Viewed as a continuum, a voluntary career may progress through a hierarchy or ranking system of positions in voluntary action. For many vol-

unteers the opportunity to participate may develop into a general volunteer equivalent of an occupational career. Often as one progresses through a volunteer career, skills are developed and reinforced that are comparable to those found in the mid- or upper-management levels in paid organizations.

In much the same way, a person moving up the volunteer ladder assumes greater influence relative to organizing, directing, or managing voluntary activity. A volunteer manager may develop a technical expertise in areas such as research, finance, or public relations. The flexibility of the volunteer activity allows for the pursuit of individual preferences.

Many women build on their volunteer experience to develop and create jobs which they in turn occupy before moving to other career opportunities. Jean Crolus started her volunteer career as an unpaid executive director of a small preservation organization. Simultaneously she enrolled in the University Without Walls (which is under the aegis of the Union of Experimental Colleges and Universities in Maryland). Her work came to the attention of the Academic Dean at Goucher College in Baltimore, Md., who asked her to draw up a B.A. program in Historic Preservation. This was one of the first programs of this kind in the country.

Jean Crolus continues to serve as Vice President of Preservation Action, Inc., member of the Board of Governors of Citizens Planning and Housing Association, head of the Baltimore City Committee of the

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Maryland Historical Trust, and is continuing her education at Antioch University where she has developed her own individualized course of study.

The social needs of this country are beyond the capacity of public funds to meet them. The voluntary actions of individuals have served well to provide not only leadership, but direct services, and have stimulated policy alternatives, increased accountability, and public awareness.

According to the Survey of Need for Volunteers commissioned by ACTION, the need for volunteers will continue to grow. With regard to the future roles of women in the environmental movement, women's groups and environmentalists will increasingly participate together in ways that will move consciousness from protection to anticipation to prevention.

Women dedicated to voluntary action are increasingly forming community coalitions and formulating "plans of action" to create an "environmental state of the community." This will include increased surveillance of the quality of the air and water as well as issues related to solid waste and toxic substances. And in this way, they will continue to educate themselves, and obtain an increasing awareness of the environment and the interrelationships between those various components affecting the community. This knowledge will indeed continue to be an underpinning to government-citizens dialogue about important values.

Volunteers, working together in community after community, contribute much to a more healthful environment. □



# Food Safety and the Consumer

By Carol Tucker Foreman

*Assistant Secretary of Agriculture for Food and Consumer Services*

There is a tendency for every generation to think itself in some sense unique. Perhaps that is why we usually think of the consumer movement as something of recent origin. It may be true that the term "consumerism" has only recently become part of the American vocabulary, but the concern for consumers and by consumers is not something that suddenly emerged on the national scene in the 1950's.

Long before Ralph Nader first appeared before a Congressional Committee, Senator Porter J. McCumber of North Dakota made the following statement on the floor of the Senate: "One of the prime objects in reference to the power of Congress over interstate commerce is to protect the people—not only to protect their pocketbooks, but to protect their lives." The year was 1906, and Senator McCumber was speaking in support of the proposed Pure Food and Drug Law, a measure that was passed and signed by President Theodore Roosevelt later that year. A broad-based coalition of groups including labor organizations, the American Medical Association, the Federated Women's Clubs of America, and the Consumers League played an active role in promoting and lobbying for this landmark piece of consumer legislation.

There is also a tendency for us to think that many of our

present day problems are totally new. A good example is the mounting public concern over the presence of chemical adulterants in our food supply. Without question, the dangers of chemical additives, animal drugs, and environmental contaminants have been greater during the post-World War II era than at any other time in history. As EPA Administrator Costle pointed out in the September issue of this Journal, we have undergone a chemical revolution in this country in the past 30 years. This revolution has made our society a "chemical addict" and now poses problems of the first magnitude.

It does not minimize the seriousness of our present concerns, however, to point out that even at the time of the passage of our first national pure food law, the driving concern was the presence in the food supply of harmful chemical additives. We commonly associate the pure food law of 1906 with Upton Sinclair's *The Jungle*, a vivid portrayal of the filthy conditions in the meat packing houses. But much of the committee testimony leading up to passage of the bill dealt with substances such as boric acid, sulfuric acid, benzoic acid, formaldehyde, and potassium nitrate.

The final legislation reflected the desire to keep the American food supply free of harmful chemicals. One of the key provisions in the 1906 law prohibited the addition of any substance that *may* be poisonous or harmful to human health. The strict language of this provision has served the American consumer well over the years. In fact, the adulteration provisions of the present meat and poultry inspection acts have language that is much the same as the wording of the original pure food law.

The situation facing us today differs from the concerns of the turn of the century mainly in terms of the sheer number of chemical contaminants that have been found to threaten the public health. The widespread use of pesticides and animal drugs in the post-World War II era has brought the benefits of agricultural abundance. But it has also brought the threat of

harmful chemical residues on fruits and vegetables or in meat and poultry. For example, the use of sulfa drugs in swine feed has reduced illness in hogs and has thus resulted in increased pork production. However, we have also found that 10 percent of the pork going to consumers contains sulfa residues that may cause allergic reactions or present long-term risks to human health.

We have also found in recent years that some additives once thought to be safe and to serve a useful purpose may, in fact, be dangerous. Sodium nitrite has been used for many years as a curing agent in such popular products as bacon, ham, and hot dogs. Scientists discovered in the late 1960's that when bacon is cooked, nitrite can combine with other chemicals to form substances known as nitrosamines, which are potent cancer-causing agents. More recently, a study at MIT has indicated that nitrites by themselves can cause cancer in laboratory animals.

It seems as though we are confronted almost daily with new evidence of another hazardous chemical in our food. As a result, we are now hearing the argument that our present food safety laws are too rigid to deal with the discovery of small amounts of potentially harmful chemicals. According to this view, the law should be changed so that only the highest risk chemicals are strictly

prohibited. It is true that modern science has made us aware of an increasing number of hazardous substances. But this fact would seem to be an argument for stronger food safety laws, rather than the reverse. A deleterious chemical in the food supply becomes no less deleterious simply because the law no longer requires government action to eliminate it. Unless the government does act to assure food safety, agricultural producers as well as consumers will suffer. Farmers will have strong markets for their products only if consumers have confidence in the safety of those products.


The present laws on food safety are strict, and there may be other means of dealing with the problem of dangerous chemicals in food. But a better way has not yet been demonstrated. In the meantime, the present law has been flexible enough to enable the Department of Agriculture to launch a cooperative program with farmers that should result in the elimination of sulfa residues in pork. It has also enabled us to take regulatory action to reduce significantly the amount of nitrite in bacon. In a joint effort with FDA, we also are now formulating a regulatory course to eventually phase out entirely the use of nitrite as a food additive. In sum, the present food safety laws put us in a strong position to take the effective action that an increasing number of consumers are demanding.

Some argue that consumer sovereignty in the market place should permit consumers to purchase anything, no matter what its health effects. But in other areas, the Federal government does not fall back on that argument as a way out of its responsibilities. The Federal government regulates dangerous or toxic chemicals. We attempt to control water and air pollution. Government funds the construction of municipal sanitation systems. Federal programs help protect people from disease via vaccination and inoculation campaigns. Government should play a no less responsible role in the food system. □





### Living with the Kudzu



**A**s one of the world's most vigorous plants rests through the winter months its networks of tangled brown vines keep their grip on the red earth and nearby trees and telephone poles along thousands of miles of Southern roadways.

With the return of spring temperatures and more direct sunshine the Kudzu, a vine imported from the Orient, will once again begin its astounding growth.

The introduction of this plant provides a classic illustration of the need for careful study of an import's overall environmental impact.

The Kudzu was brought to the U.S. a century ago and planted in the Florida panhandle. From there it has gradually spread over about one million acres of land in the Southeastern States.

At first the plant, which can grow as much as one foot a day and 100 feet in a year, was regarded as a savior of the South. Its advantages included:

The growth of great billowing waves of Kudzu washing over fields and highway embankments helped control soil erosion.

The vine, a member of the legume family, helped fix nitrogen in the soil.

Cattle, goats and other livestock would eat this plant. Its deep-probing roots help aerate the soil.

For many years it was regarded as a miracle crop that would help restore the South's worn and eroded soil. Conservationists and others joined in a crusade to help promote distribution of this marvel crop.

One of the plant's main boosters was Channing Cope, former long-time agricultural editor of the Atlanta Constitution, who proclaimed "Cotton isn't king here any more. Kudzu is King."

In the 1950's, however, farmers began to become disillusioned with this exotic crop. They noticed after the vine was planted it often began to intrude into neighboring fields where it ruined other crops.

Telephone poles were sometimes pulled down by the vine and power companies were forced to spray Kudzu with herbicides periodically to prevent it from climbing high-voltage towers, and causing damage.

Good lumber and pulpwood trees were destroyed when the thick foliage on the climbing vine shut off the sunlight needed for growth.

Also substitutes were found which were considered better than Kudzu for pasture and soil erosion control.

However, by the time cultivation of the vine had stopped it had leapt fences and run wild. There are parts of Mississippi where highways slice through countryside so completely enveloped with Kudzu that all other vegetation has been killed. A traveler feels

he has entered another and somewhat ominous world.

James Dickey, the noted Georgia poet, referred to the plant in his poem "Kudzu" as "green, mindless, unkillable ghosts." The poem states:

"In Georgia, the legend says,  
That you must close your windows  
At night to keep it out of the house,  
The glass is tinged with green,  
even so . . ."

In areas where it is necessary to control the plant, along highway right-of-ways, for example, the Kudzu is mowed. The chemical 2-4-D is also frequently used to check the spread of this plant.

Gale A. Buchanan, a former editor of the magazine, *Weeds Today*, and agriculture professor at Auburn University, has conducted many experiments on controlling the plant.

Regarding the future of Kudzu, Buchanan said: "I don't see it taking over much more territory. I think it has probably reached its limits. It is a problem along highways, but not in cultivated fields where cows, for example, can kill it by over-grazing. However, cows can't chase it up telephone poles.

"There are chemicals and other control measures that can be used to keep it in check. The level of effort being made now to control it is probably adequate. The lesson we need to learn from the Kudzu experience is how careful we must be about importing new plants into our environment."

—C.D.P.

# Regulatory Council Goals

The new Regulatory Council will help meet statutory goals at minimum economic costs and regulatory burden without undermining the Administration's commitment to the protection of public health, safety, and the environment.

This explanation was given by EPA Administrator Douglas M. Costle after he was named by President Carter to his second high Federal post—the chairmanship of the new Council that will monitor the economic effects of government regulation.

The President said that Costle will head the Council until Jan. 1, 1980, and that during that period he will continue as EPA Administrator.

The Council is part of the anti-inflation package President Carter recently adopted. In announcing the creation of the Council, Carter said it "will help inform me, the public, and the Congress about the cumulative impact of regulation on the economy."

To help in this key job, the Council will publish twice a year a calendar of governmental regulations, listing their goals, benefits, legal requirements, and expected life, along with available estimates of economic impacts. The first calendar will be published by February 1, 1979.

At a press conference after his appointment, Costle said that the Council will be "an important new tool for managing the government's overall regulatory program."

He added that the President had personally assured him of his strong support for better and more informed government action while protecting regulation's social goals.

Asked what he would like the Council to accomplish over the next 18 months, Costle said first would be gaining more cost effective regulation; second, getting the regulatory job done that Congress directed; and third, be forthright in suggesting changes in the regulatory mission where needed.

While pointing out that the Council is just getting started, Costle gave his "preliminary thoughts" on its strategies.

"The first important step is to get a good grip on what is going on in Federal regulation," the Administrator said. He called it finding out "where all the moving pieces are."

To get informed, the Council will give top priority to the calendar of major regulations, giving the President and the public for the first time a comprehensive list of proposed Federal rules.

Second, Costle saw the need for the Council to identify areas of potential duplication and overlap in regulations, coordinate efforts to eliminate such duplication, and pinpoint opportunities for joint development of rules.

Third, Costle said the Council will address issues and problems that require cross-agency attention or resolution. These include combined economic impact on specific industries, opportunities to share data and information and thus reduce reporting burdens on industry or State and local government, and consistency of agency policies.

For example, Costle pointed to the need for a consistent national policy for the regulation of carcinogens.

Costle emphasized that the Council can't interpose its own suggestions where a Federal law has prescribed a certain approach. But where there is flexibility, he expected the Council to be "quite influential" in regulatory decisions.

However, "none of this means we are going to use a meat ax on the body of Federal regulation," he said. Regulations implementing acts of Congress "have brought us some very important successes in recent years."

For example, the Administrator noted that the Nation's air today has half the dirt in it that it had in 1970, and that rivers that were contaminated in some instances are now open to fishing and swimming.

Turning to another concern, Costle said that while regulation's impact on inflation will be considered by the Council, it won't be the "sole emphasis."

Regulation imposes costs, Costle said, both on the government which designs and enforces the regulations and on cities, States, industries, and businesses. But these costs are not inflationary if the benefits exceed the outlay.

For instance, he cited rules requiring power plants to stop emitting sulfur dioxide from their smokestacks. "If those near the plant save more through reduced medical care charges, less crop loss or lost wages than they pay in higher electric bills to amortize the investment in smokestack scrubbers, clearly the regulations are not inflationary."

But regulations can be inflationary in certain cases, Costle added. One example would be if costs exceed benefits. Another would be if costs are greater than needed to do a job. For instance, when many communities did not permit the use of plastic pipe, homeowners were forced to use expensive, sometimes scarce, copper pipe.

Such inflationary problems will be on the Council's agenda, Costle said, along with opportunities to use regulatory authority to do a better job of attaining national goals that laws seek to achieve.

The Council will be made up of representatives of all Executive Branch departments and agencies with major regulatory responsibilities. Independent regulatory commissions will be invited to participate.



# A New Direction in Interagency Cooperation

By Douglas M. Costle  
*EPA Administrator*

Showing the scope of Federal regulatory activity, Costle said there are now more than 179 rulemaking bodies in the government, with 120 in departments and 59 outside, including EPA.

The idea for the Council grew from cooperative, ad hoc arrangements among several Federal regulatory agencies. One key source is the Interagency Regulatory Liaison Group, with four health agencies, including EPA. The EPA is recognized as a leader in regulatory reform.

The job of directing the new Council will "consume a great deal of my time," Costle told the press conference. "I am just going to put in extra hours." But, he added, he has very able Assistant Administrators and a very able Deputy Administrator to help in the EPA responsibility.

Looking at Federal regulations over the long range, Costle said the Council represents "a logical and necessary next step."

With the piecemeal growth of regulatory authority over the last decade, in response to serious national problems, a vast number of regulatory programs has been built up, Costle pointed out. Now, he said, it is important to have "a clear overview of the full range of regulatory activity by the Federal government and be in a position to recommend informed practical reforms and improvements."

Explaining the regulators' role in the overview effort, Costle said, "we've got to involve the people who are themselves doing the regulating, who are responsible day to day for running regulatory programs."

"President Carter established the Regulatory Council because he believes we can, over time, do a better job of regulating, and at less cost," Costle said. "I share that belief, and I am honored that he has made me the Council's first chairman." □

Nearly a year and a half ago the heads of four Federal agencies sat down together at lunch to see if there were some way to coordinate the implementation of the numerous statutes that their agencies are responsible for carrying out. In time, I would expect that everyone reading this article will be affected in some way by the outcome of that luncheon.

The four agency heads included myself; Eula Bingham, Assistant Secretary of Labor in charge of the Occupational Safety and Health Administration (OSHA); Don Kennedy, Commissioner of the Food and Drug Administration (FDA); and John Byington, Chairman of the Consumer Product Safety Commission (since replaced by Susan King).

Each of us had some very challenging laws to implement, particularly where those laws dealt with controlling toxic and hazardous substances. The President, in his Environmental Message of May, 1977, had emphasized the importance he placed on dealing with such substances. But none of us was confident about getting together the resources needed to do the job. Faced with these common problems and common goals, the four of us agreed to pool our resources and coordinate our programs in order to mount the most effective attack we could with the limited resources available.



We set up a coordinating body comprised of two high-level people—who were to act as "surrogates" for each of us—from each agency, and gave it the title of the Interagency Regulatory Liaison Group, or IRLG.

The surrogates launched an intensive round of meetings during which they wrestled with such questions as the feasibility of establishing common testing standards; the feasibility of a common approach to assessing the risks posed by toxic and hazardous substances; the possibility that all the agencies could regulate specific substances in a consistent way; and many more. Generally, the surrogates set in motion a broad-scale effort to identify areas where the four agencies could best cooperate, with the basic aim of making each of their programs more effective while reducing the unnecessary costs resulting from duplication of effort.

On the basis of this initial work, we agreed to establish eight interagency work groups. Each was assigned the responsibility for promoting cross-agency consistency in one of the following issues: testing criteria and policies, risk assessment, information collection and exchange, research and development policies (possibly including methods of sharing costs and facilities), joint regulation and regulatory development activities, compliance and enforcement procedures and policies, public communication and education, and epidemiological practices and procedures.

Since setting their initial goals, each of the work groups has been meeting frequently throughout the year. Each surrogate works with one of the work groups, and my three colleagues and I each sit on two of the work groups. The eight surrogates also meet weekly to ensure that the IRLG efforts are progressing smoothly, and my colleagues and I meet at least once a month on IRLG matters.

**A**t the same time that we were setting up this structure in Washington, similar relationships were being established in each of the regions. We believe that some of the IRLG's most significant accomplishments will occur as our field offices share laboratory space, coordinate inspection and enforcement efforts, share technical expertise, undertake cooperative public education programs, coordinate their responses to emergency situations, and so forth.

The fruits of our efforts are beginning to appear. They should become more and more evident over the coming months. Here are some examples:

- The Testing Standards and Guidelines Work Group has already completed five draft guidelines. These are now being reviewed within each of the agencies, and eight more are expected to be completed soon. By establishing testing procedures that are acceptable to all four agencies, the confusion facing private firms that submit test data to more than one of our agencies should be substantially reduced.

- The Research Planning Work Group has completed an inventory of all toxic substances research being supported by the four IRLG agencies and three research institutes—the National Cancer Institute, National Institute for Environmental Health Sciences and the National Institute for Occupational Safety and Health. The group has also done detailed analyses of research efforts in both the toxicology and metals areas. Partly as a result of this work, EPA and FDA have agreed to establish a joint neurotoxicological program in North Carolina.

- The Information Exchange Work Group has sponsored a series of studies on how we can improve the exchange of information among the agencies. A lack of communication was one of the more serious problems we turned up when we created the IRLG. In an effort to correct it, the work group is investigating the possibility of developing a regulated chemicals directory, which would provide information on all toxic substances regulations, standards, and guidelines in the four agencies.

It's also studying the idea of developing common codes for chemicals and other products. In addition, the use of common codes for business firms is being tried in one of the regions where the four agencies operate. The idea is to make it possible to cross-reference permits, inspections, and information given to businesses or plants by the different agencies.

- The Compliance and Enforcement Work Group is developing a nationwide "hot line" system to improve the Federal response to such chemical emergencies as the Kepone incident in Virginia and the problem with chemical wastes dumped in the Love Canal near Niagara Falls in New York. This group, working with agency field offices, is also looking at possibilities for making use of one another's inspectors. Cooperation of this kind offers a promising avenue for making our programs substantially more effective with little increase in cost.

- The Regulatory Development Work Group has collected the regulatory development plans for 24 different substances from different agencies. It is devising ways to make sure that the agencies are aware of one another's efforts on each of these substances and that the efforts are coordinated. It's also looking at how the agencies can coordinate the way they set priorities in such areas as: responding to petitions for rule-making; conducting joint public hearings; and determining the most appropriate laws to rely on in rule-making actions.

- The Education and Communications Work Group is developing general curriculum guides on hazardous substances for schools. It has also been coordinating public information efforts on the regulation of hazardous substances.

- The Epidemiology Work Group is preparing a directory of epidemiology programs and personnel in the government. It has also been drawing up guidelines for conducting epidemiological studies, and will prepare a dictionary of all epidemiological research supported by the Federal Government.

- The Risk Assessment Work Group has been developing detailed guidelines for the assessment of cancer risk. This will be used by all four agencies in making decisions about whether a particular chemical substance should be regulated. This project may be the most ambitious one presently being completed. It would require the agencies to conform to a common set of principles even though they are dealing with different situations, and often are working with different requirements in their respective laws.

**S**o far, some of the most evident progress has been in the agency field offices, which is in fact where we hope for some of the biggest gains. The fact that agencies are working more closely together is reflected both by day-to-day communications, and by the fact that they are participating in one another's management meetings at the field-office level.

# OSHA and the American Working Man and Woman

By Eula Bingham  
*Assistant Secretary of Labor  
Occupational Safety and  
Health*

There are a number of cases where field laboratory work is being carried out jointly, and where cross-agency inspection referrals are occurring. Another source of potential savings is the idea of combining small field offices that the individual agencies are now supporting in areas such as Alaska.

In addition, there has been a substantial improvement in alerting of all the affected agencies about emergency spills and other emergency health problems in several regions. Before the IRLG, an agency such as FDA might not have been told by EPA if a hazardous spill occurred in a stream. Now it's informed promptly, so that FDA officials can move quickly to make sure the spill doesn't contaminate the water used, for example, by a downstream food processing plant.

These are only some of the accomplishments we are beginning to see as a result of our luncheon in the summer of 1977. We expect to see many more in the months ahead. And the idea is catching on. Montana, for instance, is working out an IRLG arrangement at the State level. We hope other States will follow suit.

We realize that there are still a number of problems to overcome. Our progress will not be as fast nor as extensive as some might have wished. But these cooperative efforts will make each of our agencies more effective, and they will save the government money.

I think it's clear that the four agency heads remain as committed as ever to the goals established a year ago. We intend to continue to push our agencies to realize the advantages that improved cooperation can bring. And we look forward to a time when every employee in our agencies, in all of his or her work, will automatically think of how it should be coordinated with the other three agencies, and how this coordination will make the job easier and the results better. □

Perhaps never in history have the average American working man and woman faced a more conflicting world than they do today.

On the one hand, the chemical revolution since World War II has radically changed lives. We take for granted the conveniences it has made possible—from polyester knits to pest-free crops.

But all of us, especially those in our mills, factories, and various plants, are aware of the price being paid for this "progress." Thousands of new chemicals have been poured into the workplace and into our air, water, and soil without testing for health effects and without understanding their ultimate impact on the environment.

Almost invariably, the workers who produce and handle hazardous substances are the first and worst exposed. At least 100,000 working men and women die each year from occupational diseases.

Sometimes the link between the job and disease is clear. A rare form of liver cancer, angiosarcoma, is directly related to vinyl chloride. Mesothelioma, a cancer of the lining of the lung, is caused almost exclusively by exposure to asbestos. Benzidine

has been indicted in cases of bladder cancer. Coal dust and cotton dust are responsible for "black lung" and "brown lung" diseases.

Often the cause-and-effect relationship is clouded by the combined effect of multiple exposures. One substance, for example, may increase the carcinogenic or other toxic effects of a second substance. Asbestos workers who smoke are eight times more likely to get lung cancer and cancer of the esophagus than those who don't smoke.

Moreover, many experts in the field fear that present-day knowledge represents only the tip of the iceberg. Results of exposure to some substances, particularly carcinogens, do not become evident for 15 or 20 years or even longer.

Far too often in our modern age, OSHA is alerted to a hazard through the suffering of a specific group of workers. For example, animal studies some number of years ago strongly suggested that vinyl chloride was harmful. But it took a dramatic announcement in 1974 about workers dying from liver cancer to convince us of its devastating effects.

More recently, we witnessed the tragedies of workers poisoned by the pesticides Kepone, leptophos and DBCP. In the past few months, a chemical catalyst used in the manufacture of polyurethane foam products has caused physiological and neurological problems among workers in Maryland and Massachusetts.

Far too many workers suffer from progressively disabling and often fatal lung diseases caused by asbestos, silica, beryllium, cotton and coal dusts. The retired cotton mill worker in South Carolina whose lungs are so weakened that he or she cannot walk a block is every bit as much a workplace victim as is one suffering from occupational cancer.





Pulmonary sensitization, though rarely fatal, profoundly affects the lives of many workers. Skin sensitization is a source of chronic discomfort or worse for thousands of workers who handle corrosive and irritant substances.

Usually considered minor annoyances, skin problems consistently are the leading cause of lost work time. In addition, there is evidence that skin absorption is a major route of exposure for many toxic substances. Sterility, caused by the fumigant DBCP, for example, is suspected of resulting from absorption through the skin and lungs.

Unfortunately, occupational illness does not stop at the factory gates. Wives and children and other relatives of asbestos workers have died of cancer from exposure to asbestos on work clothes. Children of some lead workers, exposed to dust on their fathers' clothes and shoes, have high levels of lead in their blood. Wives and children of Kepone workers in Virginia became ill; communities surrounding copper smelters have unusually high rates of lung cancer, possibly because of arsenic in the air.

Occupational disease extends even to future generations. The National Institute for Occupational Safety and Health, for example, estimates that of the 16 million working women of childbearing age, about one million are exposed to chemicals that could harm their unborn children.

**R**eproductive hazards, however, are not limited to women. Lead, Kepone and DBCP can cause sterility and impotence in men. Both sexes are susceptible to genetic damage that can show up as a birth defect in their children later on. Evidence shows that the wives of workers exposed to lead,

vinyl chloride, and anesthetic gases used in hospital operating rooms often have higher than average rates of miscarriages and birth defects among their children.

We at OSHA feel we can no longer afford simply to react to occupational and environmental damage. We must shift the emphasis from cleaning up after the fact to preventing exposures from happening. The pace has been too slow. During its first six years, OSHA issued only four major health standards—covering asbestos, vinyl chloride, coke oven emissions and a group of 14 carcinogens. We have increased the tempo significantly and set standards to protect workers from exposures to DBCP, benzene, acrylonitrile, inorganic arsenic and cotton dust. A new standard for inorganic lead is expected in the near future.

But it has become obvious that setting standards for one substance at a time will not contain the threat of the ever-growing number of toxic substances. About 2,000 of the 30,000 commercially available chemicals are suspected of causing cancer, but only a few hundred have been adequately tested. Moreover, industry begins using a new potentially hazardous chemical every 20 minutes.

OSHA currently is in the midst of developing "generic standards" for controlling all work-place cancer-causing substances. The proposed policy, will establish a systematic way for identifying, classifying and regulating all potential carcinogens in American workplaces so that OSHA can respond with greater speed and efficiency to these threats to worker health.

**C**ancer, of course, is one of our greatest concerns since despite our medical advances, the death rate from cancer continues to increase. More than 1,000 persons a day die from cancer, making it the second greatest cause of death in America. But at the same time, the World Health Organization estimates that from 60 to 90 percent of the cancer cases are

caused by environmental factors and that at least 10 percent are thought to result from exposure on the job.

OSHA also is developing a generic standard to protect workers who produce the more than 33,000 registered pesticides in this country. Also, an advisory committee has been formed to study skin hazards and recommend a work practices standard for the safe handling of irritant and corrosive agents.

OSHA currently is preparing a standard that will require all hazardous substances entering the workplace to be clearly identified and labelled. Employers will be required to inform workers about the dangers they face.

In the drive for a better informed populace, OSHA has awarded \$6.4 million in grants to labor unions, universities, trade associations, citizens groups, and other non-profit organizations to help develop health and safety programs.

Within the Federal government, OSHA and the three other regulatory agencies with similar problems and goals—the Environmental Protection Agency, the Consumer Product Safety Commission, and the Food and Drug Administration—are working together to share information, to avoid duplication of effort, and to make sure that serious hazards aren't overlooked.

OSHA also is in the midst of revising its various standards. We have revoked more than 1,100 provisions in the general industry standards which have little or nothing to do with worker safety and health. Other OSHA standards for agriculture, construction and the maritime industry are being reviewed. □

# Consumer Safety and Regulation

By Susan B. King  
*Chairperson, Consumer Product Safety Commission*

In 1971, the National Commission on Product Safety found that 20 million injuries, resulting in 30,000 deaths and 110,000 permanent disabilities were associated with the use of consumer products. The National Commission also concluded that many such injuries could be avoided. These findings prompted the Congress to pass the Consumer Product Safety Act and create the Consumer Product Safety Commission. The five laws we administer give us broad powers and a variety of regulatory tools to promote product safety and reduce needless deaths and injuries from product-related hazards.

While the primary aim of the Commission is to protect consumers we are not unaware of the complications that can arise as a result of government regulations. The Commission is working to reduce the burden of government regulatory actions through our active and fruitful involvement in the Interagency Regulatory Liaison Group. The group consists of this Commission, the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. These agencies came together to coordinate activities in the area of toxic substances/chemicals. We are

working to share information, to avoid duplication, and to develop consistent regulatory policy. The positive actions taken by these agencies cannot help but reduce confusion and potential adverse impacts on business and industry. Common problems can be identified and addressed jointly, thereby conserving the resources of all of us.

As we work to minimize problems caused by regulation it is appropriate and necessary that we take a long hard look at what we have tried to do, and to evaluate where we have failed or succeeded, and why.

Last spring, rumors began to appear in the papers that there were plans to abolish the Commission and transfer its functions elsewhere. While the agency has been criticized in the past—some of it warranted, much of it not—this proposal seemed to us to be both ill-conceived and ill-timed.

I am happy to say that President Carter, several key members of Congress, representatives from business and industry, and the consumer organizations all came to the defense of the Consumer Product Safety Commission. They recognized that consumer safety regulation is essential and that the Commission has the independence and authority to ensure the public gets the protection it needs. After three days of Senate Commerce Committee hearings and public testimony from many witnesses, it became apparent that Congress was not interested in abolishing the agency but rather wanted to give the newly constituted Commission a fair opportunity to prove itself.

Today, the CPSC is the only Federal agency whose primary purpose is to protect consumers from unsafe products in their homes. Obviously, there are other agencies, like the FTC, that have strong consumer affairs programs, but we are the only organization concerned exclusively with consumer interests.

The legislation that created the Commission transferred existing product-safety responsibilities from the Commerce Department, the Federal Trade Commission and the Food and Drug Administration. It also gave the new 5-member commission the mandate to reduce "unreasonable risks of injury associated with consumer products."

The Commission has the power to:

- set mandatory product safety standards, using procedures which fully involve consumers and outside parties;
- ban products from the marketplace when a safety standard would not adequately protect the public;
- act quickly if the hazard is imminent and remedial action cannot await lengthy administrative proceedings;
- require industry to take corrective action, such as repairing, replacing, or refunding the purchase price of a product, or providing public notice if the Commission finds it presents a substantial hazard;
- work with industry to foster voluntary safety standards;
- issue informational, educational, or warning materials to consumers to aid them in selecting products and using them safely.

Over the past five years, the Commission has been involved with product recalls affecting over 7 million individual items, from toys to electrical appliances to flammable clothing. The agency has banned products such as flammable contact adhesives, unstable refuse bins, and certain products containing asbestos, which may cause cancer. We have issued safety standards for products such as matchbooks and architectural glass such as that used in patio doors.





# Regulatory Reform and FDA

By Donald Kennedy  
*Commissioner, Food and Drug Administration*

Unfortunately, we can't always quantify the impact of our activities. We can't always engage in the numbers game that so many people like to play. We have no way to measure how many accidents didn't happen, or how many deaths were avoided. We do know, for example, that 34% fewer children accidentally ingested poisonous substances. As a result, as many as 200 to 300 children's deaths were prevented between 1973 and 1976. We believe this to be attributable in large measure to the Commission's administration and enforcement of requirements for childproof closures on prescription drugs, many over the counter drugs, and a number of dangerous household products. However no financial benefit can be directly tied to this accomplishment.

Right now, inflation is a matter of enormous concern, and it is a very real and serious problem. It is also apparent that government regulation has been singled out, by critics in both the public and private sectors, as a major cause of inflation. More importantly, a chief target of inflation fighters seems to be safety, health, and environmental areas. Why? Is it because these activities are among the largest and most burdensome activities ever undertaken by government? Certainly not.

Outlays for public health and safety programs comprise less than one percent of this year's Federal budget.

It is particularly inappropriate, in my view, to single out safety, health, and environmental regulations as targets right now. Take this Commission as an example. We focus on hazards which are serious, often unforeseeable and often unavoidable.

Market forces do not operate to ensure consumer protection from unsafe products. We've learned this lesson over and over again. The costs imposed on industry to ensure product safety may in some instances be high. But what of the costs to society associated with the deaths and injuries caused by unsafe products? What

does it cost to replace a home destroyed by fire caused by old technology aluminum wiring? What cost shall we assign to each person who suffers or dies from cancer? We should all be aware that if consumer protection activities are cut back, we will all bear the costs in other ways.

Ultimately, the bottom line question becomes one of how, and when, certain costs will be distributed in society. Health and safety regulation is by definition preventive in nature. It may be expensive, but so is treatment after the fact, as we are learning the hard way with regard to some modern chemicals. In sum, I believe we have a responsibility to anticipate problems and to prevent potential tragedies to the greatest degree possible. I also believe that business and industry share in this responsibility.

It is critical that, in trying to deal with the legitimate questions of government waste, duplication, and over-regulation, we not throw the baby out with the bathwater. We have come to the end of an era in which we viewed our resources as infinite, and no problems unresolvable if only sufficient governmental money and muscle were applied. Uncle Sam is no longer Uncle Deep Pockets.

We recognize an obligation to attempt to understand and better define the relationships between the separate entities of burdens, risks, and benefits. This can only result in better decisionmaking. We intend to carefully consider the benefits and burdens of our actions, and we can promise you that we'll be fair, reasonable, and rational. We also intend to be tough where toughness is called for. □

*This article was excerpted from speeches given by Susan King before the FTC Workshop for Women and the Public Affairs Council. Complete texts of the speeches are available from the Media Relations Office, Consumer Product Safety Commission, 1111 18th Street NW, Washington, D.C. 20207.*

Regulatory reform is more than a slogan; it is a reflection of a deep desire on the part of the American people to gain a greater degree of control over their own lives and to get from government what they pay for: service rendered quickly and without waste.

Organization is always the key to more productive systems, whether they involve energy locked up in the ground or energy locked up in the Federal establishment. It involves sorting out what we have so that we don't waste limited scientific resources re-inventing the wheel, coming up with brilliant solutions to problems solved last week somewhere else, failing to use what is already available or, worse, coming up with four different solutions to the same problem.

And I believe excellence in organization is nowhere more crucial than in the area of protecting the public and the environment from hazardous chemicals. That is why I consider the interagency agreement signed September 26, 1977, by EPA, CPSC, OSHA, and FDA to be so important.

As you know, that agreement signalled an intention, indeed a determination, to work together in eight specific areas of cooperation, and to explore ways of co-operating in a ninth.



Let me review these:

*First*, devising testing protocols, criteria for interpretation, quality assurance procedures and other policies relating to the testing of toxic and hazardous substances;

*Second*, working out common approaches to the assessment of risks and benefits;

*Third*, agreeing on methods of obtaining, analyzing, storing and exchanging information;

*Fourth*, establishing common research and development policies;

*Fifth*, coordinating regulations and regulatory development activities, such as joint public hearings or rulemaking;

*Sixth*, developing compliance and enforcement procedures and policies;

*Seventh*, establishing public communication and educational programs and informational services to industries affected by our regulatory activities;

*Eighth*, stimulating the flow of epidemiological data; and

*Ninth*, exploring cooperation among general counsels, Congressional affairs, personnel, and public information offices; regional coordination; planning and evaluation; environmental impact study and good laboratory practice groups; and budget coordination. Some specific activities in the ninth area include mutual training programs, personnel exchange programs, and jointly-sponsored contracts or grants.

To advance these goals, eight task forces, made up of representatives of each of the agencies, have been working to develop and carry forward specific plans for increased cooperation and coordination. Since much of this activity is designed to overcome the unfortunate side-effects of overcentralization, it would be a contradiction in terms as well as a violation of good sense to ignore the fact that most of the knowledge needed to make this effort work resides in each of the ten regions, and I want to emphasize that regional initiative is a key element in this entire effort.

This is certainly true in the key area of toxicity testing and toxicological research. Given the dynamics of modern chemical synthesis and the speed with which we are able to analyze more comprehensively, even the most efficient use of resources may fall short. And it is obvious that resources were not being used efficiently, but were instead characterized by inconsistency in testing guidelines. These demands have too often strained the patience of those we regulate as well as their physical resources to conduct these experiments. More importantly, duplication has caused delay in the testing of many substances about which important safety information is still lacking.

In an effort to reduce unnecessary duplication of testing by industry, each of the four agencies already has begun to re-evaluate and improve its standard setting procedures. At FDA, for example, I have directed that new Toxicology Testing Guides be developed for industry to explain FDA's new testing policy in five different areas—genetics and reproduction, implantation toxicity, metabolism studies, long-term or low-exposure toxicity studies, and short-term tests for neoplasia. FDA scientists are currently working with other experts to design these testing guidelines.

A principal goal will be to insure that these testing guidelines are compatible with those established by the other agencies.

In designing this compatibility into our testing guidelines, we will have to answer these kinds of questions:

- What are the problems of meshing separate regulatory authorities into one scientific policy?

- Do we really need more testing on a certain chemical or group of chemicals, and if so what kind?

- If we need more tests, how do we design them so that the results will be relevant to the broadest range of regulatory decisions?

- How can the agencies determine together the proper use of short and long term tests and the proper extrapolation of this data to health effects in man?

- How can we develop new initiatives for improving the quality of toxicity testing research in the private, as well as the public, sector?

Answering such questions will not lead to one simple set of tests for industry to follow in every circumstance. It will, however, help develop a common and reasonable data base upon which industry can build additional information to serve separate agency needs. I am not saying that all duplication can be avoided, but needlessly duplicative and unnecessary costs of regulation—and of compliance with regulation—can and will be reduced.

All of the testing and all of the regulations that are our concern are designed to tackle perhaps science's most baffling question: How do we measure the risk to humans of any given chemical in our increasingly chemical society? We face the added problem of trying to explain what we are trying to do to a confused and sometimes skeptical public. It is not easy to heed a warning about asbestos—a substance that may take 40 years from the time of exposure to result in human cancer.

We are therefore faced with a real credibility gap in the business of assessing risk. The problem is further complicated by the fact that the methods for evaluating risks in people are still poorly defined and inexact; and may require extrapolation from animal studies. The saccharin case illustrates that public confidence is difficult to retain even when the quality of the science is good.

The resources of the FDA, EPA, CPSC or OSHA *alone* will never be enough to restore and reinforce public confidence. Working together, we have a chance—and to me, this is more than ample justification and incentive for the program we are working on. □

*This article is excerpted from a speech given by Donald Kennedy to the Inter-agency Orientation Symposium.*



## Dr. A. F. Bartsch

He has been awarded EPA's highest honor, the Distinguished Career Award. Dr. Bartsch, who retired as Director of the Agency's Corvallis Environmental Research Laboratory in October, was commended for 31 years of "dedicated and distinguished service to the Federal Government." He joined the government as a biologist with the U.S. Public Health Service, and is recognized as a worldwide authority in aquatic biology and water pollution control research. In 1962 he organized the cooperative Washington State-Public Health Service pollution investigations on Puget Sound. He was appointed Director of the Pacific Northwest Water Laboratory in Corvallis, Ore. When the lab was incorporated into EPA in 1970 Dr. Bartsch was named Director. In 1969 he received the Department of the Interior Award for Meritorious Service. Dr. Bartsch received his B.A. in botany from the University of Minnesota and his Ph. D. in aquatic biology from the University of Wisconsin.



## Patricia Berger

She has been appointed Chief of Information Resources and Services Branch at EPA. Her previous service includes extensive experience in managing government and corporate libraries.

Mrs. Berger had served as Chief of the Library Division, National Bureau of Standards, 1976-78. From 1972 to 1976 she served as Chief of the General Reference Branch and subsequently Deputy Chief Librarian of the Patent and Trademark Office, Department of Commerce. Previously she was Chief Librarian for the Commission on Government Procurement; consultant on information security and library programs for Systems Planning Corp., and Chief of the libraries of the Lambda Corp., Institute for Defense Analyses, Center for Research in Social Systems, CEIR, and General Research Corp.

She holds an A.B. degree from George Washington University and a Master of Library Science degree from Catholic University. She is the author of numerous articles on library and information systems. For her work on the Commerce Department International Women's Year program, she received the Department Special Achievement Award in 1976.



## Thomas J. Charlton

An EPA official who won a gold medal for the U.S. in the 1956 Olympics rowing championships, Charlton is looking forward to his 30th season of competitive rowing next year.

Charlton, 44, who has been rowing for the Potomac Boat Club of Washington, D.C., since 1971, reached the semi-finals last summer in an eight-oar event at the Henley Royal Regatta in England.

An engineer with EPA's Division of Oil and Special Materials Control, Charlton also took part in several other rowing events in the past few months in the U.S. and Canada. He was part of the four-oar team that took a first while representing the South at the National Sports Festival in Colorado Springs sponsored by the U.S. Olympic Committee.

## Gary N. Dietrich

He is the new Associate Deputy Assistant Administrator for Solid Waste.

Dietrich joined EPA in 1971 after serving with the Federal Water Pollution Control Administration, one of EPA's predecessor agencies, the U.S. Public Health Service, the Los Angeles County Sanitation Districts, and the Dallas, Tex., Water Department.

Before his new EPA post, Dietrich had served as Special Assistant to the Assistant Administrator for Water and Hazardous Materials (now Water and Waste Management) and as Associate Deputy Administrator for Resources Management. Dietrich joined EPA in 1971 as Director of the Division of Program Analysis in the Office of Resources Management.

He is a graduate of the California Institute of Technology with a B.S. in Civil Engineering and has done graduate work at Cornell University.



## Ivan W. Dodson

He has been appointed to direct Region 7's new Montana Operations Office in Helena. His post with EPA since 1973 has been Chief of the Pesticides Branch in the Air and Hazardous Materials Division. Dodson joined the government service as Head Range Conservationist for the State of New Mexico with the USDA in 1954, and served with the Federal Water Quality Administration from 1967 to 1970. He received his B.S. in agriculture from New Mexico State University and completed graduate work there in biology and ecology.



**Dr. Hend Gorchev**

She is serving on detail to the World Health Organization in Geneva, Switzerland to assist in the revision of international drinking water standards. Dr. Gorchev has been an environmental scientist in the EPA Office of Research and Development, Office of Health and Ecological Effects.

A native of Egypt, she received a Bachelor of Science degree in industrial chemistry from Alexandria University, Egypt, in 1955, a Master of Science in sanitary chemistry in 1957, and a Ph.D. in sanitary engineering in 1961, both from Radcliffe College.

Dr. Gorchev was a Research Fellow at the Harvard School of Public Health 1964-65 and served as a technical assistant, sanitary engineer, and programs specialist with the Federal Water Pollution Control Administration from 1967-1971 when she joined EPA as a Research and Development Program Specialist in Region 1. She transferred to Headquarters as a physical scientist in 1972 in ORD. She participated in the Congressional Fellowship Program in 1975-1976.

**Robert L. Humphries**

He has been named Director of Congressional and External Affairs in EPA's Atlanta Regional Office. Before joining EPA he was the Environmental Information Manager for Georgia Power Company. Humphries was a biologist in fishery research with the North Carolina Wildlife Resources Commission from 1955-64. He was employed by Curtin Scientific of Atlanta, Ga., from 1964-73. He also has worked as a consultant in real estate investments. Humphries earned a B.S. and M.S. in zoology from the University of Georgia. In his new post he directs the Office of Public Awareness, the Office of Congressional and Intergovernmental Relations and the library.

**Ritchie R. Julian**

He has been named Director of EPA's Personnel Management Division at Research Triangle Park, N.C. Before coming to EPA he was Chief of Labor and Employee Relations at the Defense Mapping Agency, St. Louis, Missouri. His experience there included Supervisory Personnel Management Specialist and Chief of Classification and Wage Administration. Julian received the Exceptional Civilian Service Award for program results in Equal Employment Opportunity while serving with the Defense Mapping Agency. He received an undergraduate degree in education from the University of Nebraska, a master's in management from Chapman College, Orange, Cal., and is presently working toward a doctorate in human behavior studies.

**Dr. Barbara Metzger**

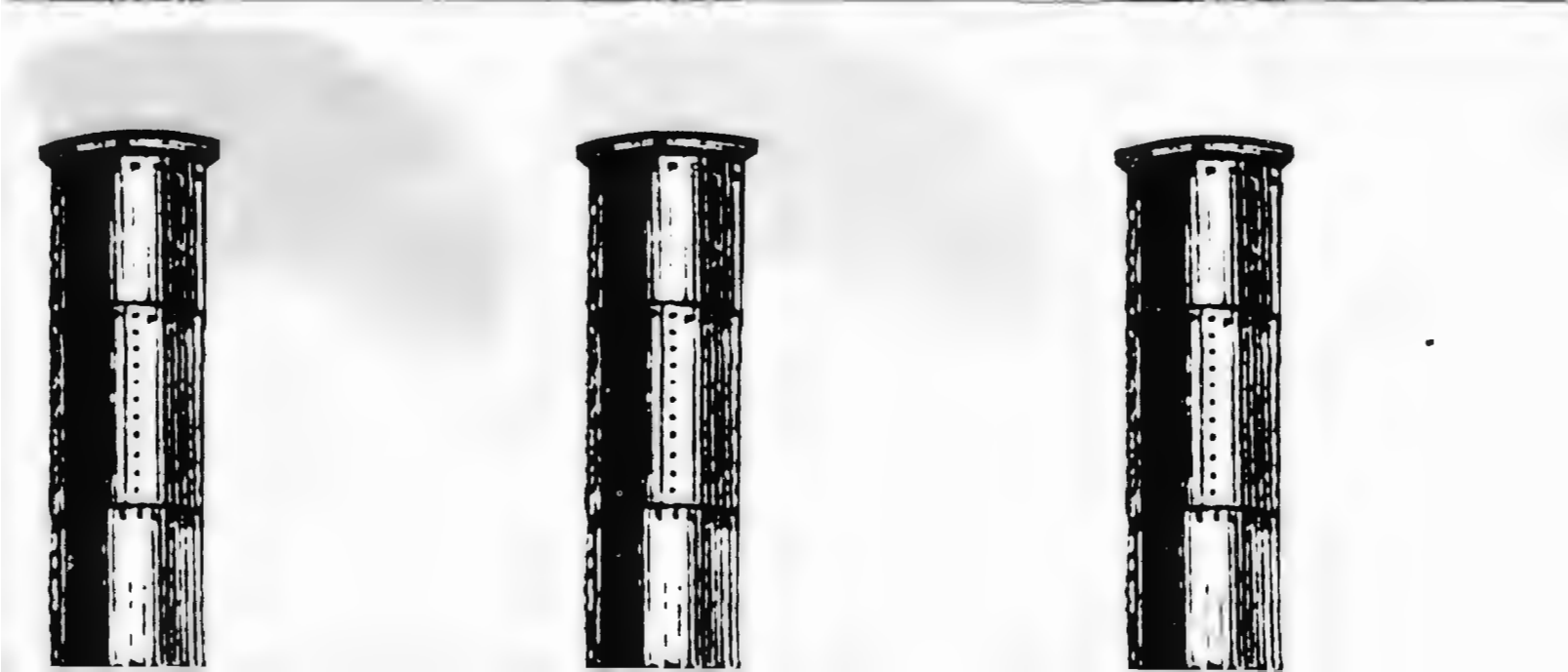
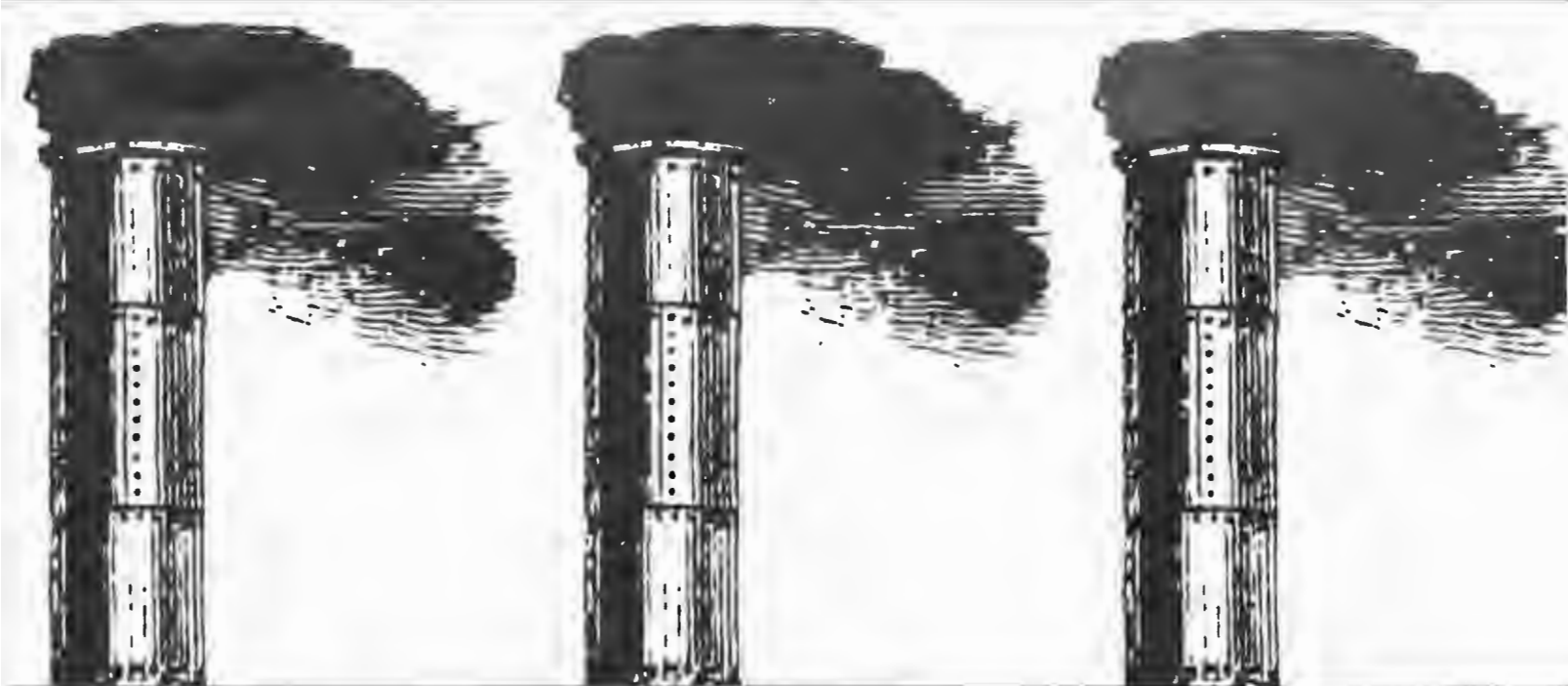
She has been named Director of EPA's Region 2 Surveillance and Analysis Division at Edison, N.J., replacing Dr. Richard Dewling. Prior to being named Acting Director of the Division last June she had been chief of the Environmental Impacts Branch in the New York Regional Office for nearly three years. Her previous government experience began with an EPA predecessor agency, the Federal Water Pollution Control Administration in 1970. Dr. Metzger has three degrees from Rutgers University, including a Ph.D. in environmental science.

**William W. Rice**

He is the former Chief of the Planning, Management and Administration Staff at EPA's Industrial Research Laboratory at Research Triangle Park, N.C., who has been named Director of the Surveillance and Analysis Division in the Agency's Kansas City Regional Office. Rice held the North Carolina post for six years after joining the Agency as a sanitary engineer in 1970. Prior to that he was an industrial engineer for the Raychem Corporation, Menlo Park, Cal. He has a B.S. in industrial engineering from Oregon State University and an M.S. in management from Duke University.

**Vivian A. Skinner**

She has been given an award of excellence by the Association of Records Managers and Administrators. A management assistant in EPA's Region 6 headquarters office in Dallas, Tex., Skinner saved the Government nearly \$20,000 by her records disposition work over a 15-month period.





The Republic Steel Corporation is investing more than a quarter billion dollars for modernization and pollution controls at its Mahoning Valley District plants following an agreement with the Environmental Protection Agency.

The massive new capital improvements will not only bring the company's Warren and Youngstown, Ohio facilities in compliance with air pollution requirements by 1982, but also will assure continued employment for some 6,400 people in the troubled Mahoning Valley.

Administrator Douglas Costle, in a White House news conference, said the agreement "represents a long-term commitment to the vitality of the Mahoning Valley. It will mean cleaner air and water for the citizens in Ohio and neighboring States."

The modernization program will include \$75-85 million of pollution-control equipment at the plants. This agreement requires Republic to put in water pollution control equipment at its coke-making facilities by December 31, 1981, 18 months sooner than would have been otherwise required. By agreeing to the expedited schedule, Republic received a credit which fully offset the \$3.1 million in penalties EPA claimed was due for air pollution violations.

In a joint appearance with W. J. De Lancey, Republic president, and Lloyd McBride, president of the United Steelworkers of America, Costle declared:

"Republic Steel has made a major commitment in this agreement to the economic and physical health of the citizens of Mahoning Valley, and we felt it was time that the citizens in that valley had some good news."

Noting that he had met with the company president earlier in the year to discuss the complex problems of the mills, the Administrator congratulated Republic on its "far-sighted and

*(Truman Temple is Associate Editor of EPA Journal)*

cooperative attitude" in working out the agreement. Discussions between EPA and Republic extended over several months in 1978 before agreement was reached.

The pact was considered of special significance since it was a comprehensive agreement including a modernization program that EPA had reached with a major steel company since the 1977 amendments to the Clean Air Act were enacted. In addition, there had been widespread concern in the industry about the Mahoning Valley economy because of complex issues involving not only pollution clean-up but aging equipment and



*The Mahoning River flows past a Republic Steel slab storage*

ting down, and have talked to the people there, you hardly can appreciate the importance of what is happening here today. As we see it, this reverses this trend."

The Senator praised government, industry, and labor representatives for working out solutions to the problem and making it possible for Republic to continue operations in the area.

Echoing those comments, McBride, the Steelworkers president said, "We feel that this demonstrates what can be done in terms of meeting problems of environment, competitiveness, and job security which I think is absolutely necessary

*yard and hot strip mill in Warren, Ohio.*

competition from imports of foreign steel.

The valley derives its name from the Mahoning River, which flows southeast from Warren through Youngstown into Pennsylvania. The area is so heavily developed with iron and steel plants that it has been nicknamed America's Ruhr Valley.

Senator John Glenn of Ohio, who also spoke at the White House press conference, described the situation this way:

"Unless you have gone into a place like the Mahoning Valley at a time when layoffs are occurring, and industry is shut-

for any community."

Under the agreement, Republic will build a new electric arc shop, a new sinter plant, and a new hot metal desulfurization unit and expand its blast furnace capacity at Warren. All the new facilities will meet the lowest achievable emission rate at this time. Republic will also close an old sinter plant there and keep shut down an old sinter plant as well as close a coke battery and three blast furnaces at Youngstown. The controls to be installed there will be in full compliance with

existing air pollution control requirements by December 31, 1982. The company also will halt the use of dirty water quenching at both plants and will treat coke plant wastewater previously used for quenching at a new water treatment facility to be built at Warren by December 31, 1981.

Quenching water is employed to cool the coke after it emerges from ovens where it is produced. For this procedure, some steel companies have used process water that has been recovered as a product of distillation of the coal in the coking process. However, the various dissolved solids in this water are released into the atmosphere during the quenching process as part of the large volume of steam that rises from the coke, and thus the operation can create an air pollution problem. Using clean water for quenching is one way to help reduce air pollution.

The company anticipates that the modernization program will enable it to produce steel more efficiently and therefore will have a positive effect on the price of its steel products. "This program," De Lancey said, "will have a marked impact on stabilizing employment in the Warren-Youngstown, Ohio, area and will help insure Republic's continued competitive capability in the Mahoning Valley well into the future."

He added that the modernization would not result in any significant change in Republic's overall employment in the Mahoning Valley over the long term.

A major environmental effect of the investment will be almost a 50 percent reduction in emissions of dust and smoke in the Republic facilities. The plants now emit about 2,700 tons of particulates a year, and the figure is expected to drop to about 1,400 tons annually. Other benefits related to sulfur oxides control and water pollution control also are expected.



*Sparks fly as saws cut into continuous lengths of pipe at a steel mill in Youngstown, Oh.*

"I think the company found us willing to be reasonable and responsive in meshing the laws and environmental requirements with their modernization plans," Costle declared. "This is a significant example of our efforts to work out agreements with the steel industry for meeting pollution control requirements that will enhance employment opportunities and long-term economic growth."

The agreement will require approval by State authorities in Ohio and Pennsylvania since both States are impacted by the pollution. It must also be approved by the Federal District Court in Cleveland, where the

consent agreement was filed and lodged for public notice.

The steel industry as a whole has been the subject of close scrutiny and concern by the Carter Administration in the past year and a half. On December 6, 1977, an Interagency Task Force headed by Under Secretary of the Treasury Anthony M. Solomon submitted a special report on the industry with a series of recommendations dealing with prices, modernization, environmental regulations, transportation, research and development, labor problems, and other aspects.

The proposals involving environmental regulations noted that the steel industry was "one of the largest contributors to air and water pollution in the nation" and produced 20 percent of all man-made particulate pollution from major sources in 1975 in the United States. The report also pointed out that steel plants discharge solids, acids, heavy metals, arsenic, cyanide, phenols, oil, grease and heat into local waters, and that some of these pollutants must be removed by expensive treatment facilities to protect drinking water supplies of communities downstream.

The report emphasized that funds for pollution control in the industry should be spent "in a way that results in the most clean-up possible per dollar."

"The current financial plight of the industry should not deter us in seeking a cleaner environment," the task force declared. "We also recommend against differential or more lenient treatment in the regulation or enforcement for the steel industry."

It was against this background that the EPA-Republic agreement was reached. □



## Letters to the Editor

### The Impact of Coal

I am concerned by the unqualified statement by Lester R. Brown in his article "Redefining National Security" in the EPA Journal, June 1978, which notes that "A U.S. National Academy of Sciences study recently pointed out that the burning of coal in the quantity necessary (to circumvent the impending shortage of energy supplies)\* would eventually lead to a several-fold increase in atmospheric carbon dioxide and an associated and possibly catastrophic rise in the average global temperature."

Many of your readers will probably find this statement to be alarming and question the wisdom of using coal to overcome some of the present and future world energy shortages. The facts surrounding this matter are that the National Academy of Sciences study\*\* showed that *if* the world population increases from the present 3.9 billion to 10.7 billion by the year 2075, and *if* the per capita energy consumption increases from 52.5 million Btu per year in 1973 to 125.5 million Btu per year by the year 2075, and *if* all this increased energy (5 times current levels) was produced from the burning of fossil fuel (mainly coal), the carbon dioxide released to the atmosphere would *probably* exceed that absorbed by the oceans and plant growth and cause an increase in the atmosphere which *might* lead to an increase in global mean air temperature of more than 6°C by AD2150-AD2200 and by 10°C in the latter part of the 22nd century. This increased air temperature *might* result in adverse consequences with respect to world climate, rising sea levels and an overall detrimental effect on agriculture.

The assumptions on increased population and energy requirements in the future are

highly speculative and, as noted in the NAS report, "A 100 year projection must offhand seem foolhardy. It probably is." The report also admits that the mathematical model used to arrive at the predictions is greatly oversimplified and "does not take account of four climatic feedback mechanisms that could change the calculated results: atmospheric-ocean carbon dioxide interaction, cloud reaction, ocean temperature and heat transport changes and aerosol interactions." In addition, it must be obvious that not all the future energy requirements will be made available only from the burning of coal. Some of the energy requirements will undoubtedly still be supplied by oil, natural gas, and hydroelectric power, and the increased requirements by coal, nuclear, solar and geothermal plants.

I would appreciate publication of this letter so that your readers may judge for themselves how small is the likelihood of actually ever reaching the NAS climate scenario attributed to utilization of the world's abundant coal reserves.

Mr. Brown's paper itself recognized the world's intense energy needs. How ironic it is, then, that he approaches the problem of preserving civilization by foreclosing our most powerful energy option, increased reliance on coal, well before the climate research program has actually assessed the reality of the presupposed threat.

Leonard Harris  
Director of Research & Development  
Newmont Mining Corporation  
300 Park Ave.  
New York, N.Y.

### Brown Replies

It is of course true that the National Academy of Sciences used a number of qualifying parameters in preparing their assessment of the impact that increased use of coal would have on global climate. These parameters are based on current trends in population and energy use and are presented as being the National Academy's best estimate of energy use patterns if "coal conversion" is

vigorously pursued into the next century. As the National Academy notes, it is currently impossible to predict with certainty the impact that greatly increased use of coal might have on global climate. However, the Academy study shows that the potential for a catastrophic rise in average global temperature is all too great. As the study goes on to say, "Unfortunately, it will take a millennium for the effects of a century of use of fossil fuels to dissipate. If the decision is postponed until the impact of man-made climate changes has been felt, then, for all practical purposes, the die will already have been cast."

Fortunately, massive reliance on coal is not the only energy alternative open to the world. Increased reliance on conservation and the use of renewable energy resources are now important options, holding out the possibility of adequate long-term energy supplies without the threat of climatic disaster.

Lester Brown  
President  
Worldwatch Institute

## EPA JOURNAL

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\* Parenthesis by writer.  
\*\*"Energy and Climate",  
NAS, 1977.

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## Noise

### Noise Control Visit

The noise from traffic bothered more people in Darlington, England, than any other source, according to a recent survey. Representatives of the city recently visited the U. S. to discuss the survey and other aspects of an experiment to make Darlington quiet. The Britons visited Allentown, Pa., where the EPA is sponsoring an experiment similar to the one in Darlington to find ways to reduce noise.

## Pesticides

### DBCP Controls

EPA has proposed ending some uses of the pesticide DBCP but allowing other uses to continue under strict precautions. The pesticide has reduced sperm levels among workers producing it.

The proposal would make permanent an action the Agency took in October, 1977, when it temporarily suspended most uses of DBCP on vegetables, but permitted other crop and commercial treatments, if made by trained applicators wearing protective clothing.

Public concern over the pesticide's safety arose in 1977 when it was identified as the cause of sterility and low sperm levels among production workers at the Occidental Chemical plant in Lathrop, Calif. EPA was already investigating DBCP as a suspect human cancer agent.

At press time the proposal had not yet become final.

### Pesticide Policy

Steps need to be taken to combat the problem of disease and crop damage caused by insect pests

making a comeback, said Administrator Douglas M. Costle recently. But it is "overly simplistic" to advocate a return to long-lasting, potentially dangerous pesticides such as heptachlor, dieldrin, and Mirex, he said.

"A better solution probably lies in the opposite direction—in the development and use of more selective pesticides or natural controls that kill the pests but do not harm beneficial insects, wildlife or people," Costle said.

"In addition, more investigation into the relationship between pest populations and farming practices, such as growing the same crop on hundreds of acres year after year, may yield other methods for discouraging insect explosions," he said.

## Toxics

### Fluorocarbon Action

At press time, EPA had forbidden further bulk production of fluorocarbons for use in most aerosol products. The Agency also is joining the Food and Drug Administration and the Consumer Product Safety Commission in a next step—banning the manufacture of most fluorocarbon spray products as of Dec. 15.

With a planned third step April 15, the process of banning fluorocarbon gases in spray cans is expected to be complete. According to a theory first advanced in 1974, fluorocarbons used as propellants in ordinary household spray cans drift up to the stratosphere to destroy ozone, leading to added risks of skin cancer in humans, possible damage to crops and wildlife, and long-term changes in climate.

### Trees to Get Human Drug

Peach, cherry, and nectarine trees in Michigan and New York will be treated with the drug Tetracycline, normally prescribed for humans, to protect them from a malady called "X disease," the EPA recently announced. The disease kills leaves, spots branches, causes fewer, smaller fruit, and can eventually destroy the trees.

EPA has given the two States emergency permission under Federal pesticides law to inject up to 27,000 trees in 30 counties with the antibiotic, often prescribed for people to clear up bacterial infection. At the moment, the medicine seems to be the only practical, economical weapon for controlling "X disease," said Steven D. Jellinek, Assistant Administrator for Toxic Substances.

## Enforcement

### Gas Switch Damages Car Cleanup

The emission control systems in nearly 4 million U. S. cars have been rendered ineffective since 1974 by switching to leaded gas, EPA officials estimate.

Under Federal law, if someone is caught the only person liable for prosecution is the service station operator where the car owner filled up. But individuals could be prosecuted under many State laws.

If auto emission systems are properly maintained they should work indefinitely, said an EPA spokesman. This means lead-free gas, good tune-ups, oil changes, and air filter and spark plug changes.

But the clean-up systems are ruined if the car owner knocks out a restriction device in the filler neck of the gas tank and uses a few tankfuls of less expensive leaded gas.

### Gasohol Potential

Administrator Douglas M. Costle said recently that the Agency is encouraged by the prospect of energy savings from the use of Gasohol, and will continue to analyze its environmental impacts. Gasohol is 90 percent gasoline and 10 percent ethanol. It is now being produced and sold experimentally in about 65 gas stations in Nebraska, Illinois, and Iowa.

Under the Clean Air Act, certain fuel additives such as Gasohol are automatically banned unless EPA grants a waiver. The Agency is expected to finish its review of the

waiver question by December 16, the deadline. In the meantime, EPA is not enforcing the ban on Gasohol.

### Fuel Additive Turned Down

EPA recently disapproved an Ethyl Corporation request to continue selling a chemical called MMT as an additive in unleaded gasoline. EPA turned down the request because MMT increases auto emissions. The additive is now used in about half of all unleaded gasoline as an octane booster.

After the EPA refusal, MMT was automatically banned as a gasoline additive under the 1977 Clean Air Act Amendments. The law provided that MMT would be banned unless EPA granted a waiver.

Administrator Douglas M. Costle said it would cost more for the auto industry to meet emission standards with MMT in fuel than it would for the refining industry to increase refining operations to make up for octane lost due to the MMT ban.

### Safeguard Extension Sought

EPA is seeking extension of two key provisions of a decree that prohibits U. S. automakers from working together to avoid the development of improved auto exhaust clean-up systems.

The two provisions prevent the automakers from exchanging restricted information, such as trade secrets, relating to emission control technology. They also prevent joint presentations to government agencies regarding proposed motor vehicle air pollution requirements. The Automobile Manufacturers Assn., Inc., is also covered in the decree.

These provisions will expire in October, 1979,



unless extended by the U.S. District Court in Los Angeles. EPA has asked the Justice Department to request a permanent extension on the Agency's behalf.

### Memphis Pays \$25,000 Penalty

Under a recent consent decree the city of Memphis has paid \$25,000 in civil penalties for violations by a wastewater treatment plant of a National Pollutant Discharge Elimination System permit. The violations were by the T. E. Maxson Wastewater Treatment Facility between June 30, 1975, and July 22, 1977.

The consent decree was entered into by the Federal government and the city of Memphis in settlement of a lawsuit filed at the request of EPA. The Federal Court for the Western District of Tennessee signed the decree. Additional penalties for any future violations are called for by the decree.

### Catch-up Rules Set

EPA recently announced the rules it will follow in issuing, approving, and disapproving delayed compliance orders under the Clean Air Act. These orders may be issued by EPA or the States to eligible stationary sources and contain catch-up schedules to comply with air clean-up requirements.

To encourage public participation, EPA will put proposed delayed compliance orders in the Federal Register. In the Register notice EPA will request public comments on the order and offer the opportunity to request a public hearing. The new rules also provide for a notice before EPA acts on delayed compliance orders issued by States.

## R & D

### Japan Praised for Scrubbers

Administrator Douglas M. Costle recently called on U. S. utility executives to strive to equal Japan's successful application of scrubber technology to control sulfur dioxide pollution from power plants.

Although many American utilities have done a commendable job in the use of scrubbers, application of the technology in Japan has generally preceded that in the U.S., Costle said. He was announcing the report of a task force, including an EPA representative, which visited Japan to study its scrubber use and applicability to U. S. power plants.

## Air

### Final Standard Set for Lead

Administrator Douglas M. Costle recently announced EPA's final atmospheric air quality standard to protect the public health from exposure to airborne lead. The pollutant may, even at low levels of exposure, harm human nervous and blood-forming systems.

"It is well known that at certain levels lead is highly toxic and can lead to permanent health damage or even death," Costle said. "What we are finding increasingly, moreover, is that even low levels of lead may have more harmful and persistent effects than we thought previously."

The final standard for airborne lead is 1.5 micrograms—that is, 1.5 millionths of a gram—per cubic meter of air. This is the first national ambient air standard EPA has issued since 1971.

### Clean Air Grant

EPA and three other Federal agencies have awarded a \$245,000 grant to the U. S. Conference of Mayors. The aim is to organize workshops for elected officials and prepare publications to help States and localities meet various requirements of the 1977 Clean Air Act.

Special attention will go to new State plans to meet national air standards, principles for growth in areas now violating clean air standards, plans to control auto use in polluted cities, and the prevention of significant air deterioration in pristine areas.

The other funding agencies were the Department of Commerce, Department of Housing and Urban Development, and the Department of Transportation.

## Solid Waste

### EPA Commends Florida Law on Solid Wastes

EPA has commended the State of Florida for innovative legislation dealing with solid waste. The new law exempts resource recovery equipment owned or operated by a municipality from the Florida sales tax. Showing the potential economies, it is expected that \$2 million will be saved on Dade County's resource recovery project and about \$1 million on Pinellas County's facility.

The law is "a unique and very positive approach to furthering resource recovery" in Florida and should be a model for others, said Steffen Plehn, EPA's Deputy Assistant Administrator for Solid Waste, in a letter to Governor Reuben Askew.

## Water

### Water Savings Get EPA Boost

Conserving water in the home can result in lower water and energy bills. It can also mean big savings to taxpayers by reducing a community's sewage treatment costs. This was a key theme for a water conservation conference scheduled by EPA for November 28 and 29 in Des Plaines, Ill.

EPA believes that saving water can not only ease the pressure in water-short areas, but can reduce the volume of wastewater a community has to treat to protect health and the environment. It can also preserve options for community growth without the need for capital facilities such as sewage plants.

### Marine Agreement For Use, Protection

EPA and the National Oceanic and Atmospheric Administration (NOAA) have agreed to formally coordinate research and regulatory activities regarding the use and protection of oceanic and coastal waters. Among the first priorities will be a search for ways the two agencies can cooperatively implement the Clean Water Act of 1977 under which EPA must set criteria for marine disposal of municipal wastewater discharges.

Formation of the NOAA-EPA Interagency Committee for Program Coordination was announced by Administrator Douglas M. Costle and NOAA Administrator Richard A. Frank. □



# Senior Environmental Aides Honored

**T**welve workers in the Senior Environmental Employment program were honored at a White House ceremony recently for their outstanding service. The program, which employs older citizens in various environmental projects, is cosponsored by EPA and the Administration on Aging at the Department of Health, Education, and Welfare.\*

The program began in 1976 and has since provided jobs for more than 200 people in one national and 10 state projects. The jobs include surveying toxic chemicals used in industrial areas, educating the public on areawide water quality planning, educating the public on programs in noise abatement, establishing and managing agency environmental libraries, presenting educational programs on the uses of pesticides and the hazards of poisoning to farmworkers, and working on surveys of environmental carcinogens.

In order to qualify for the program workers must be over 55. The jobs they fill must augment or expand current or planned programs in State governments rather than replacing existing positions. This makes experienced assistance available to environmental projects without displacing established workers.

Deputy Administrator Barbara Blum told the recipients "you have reconfirmed my strong belief that the enthusiasm and dedication of older citizens is much too valuable not to be used." She cited the outstanding reputation of the Senior

Environmental Employment program and continued, "We look forward to increasing this program because it has been so successful."

According to Robert Benedict, Commissioner of the Administration on Aging, the program is "a vehicle through which older people can begin to have a tremendous impact on social and economic problems facing the country."

Blum presented a special citation to John Ropes of EPA's Office of Noise Abatement and Control. As Director of State and Local programs Ropes was extensively involved in the development and implementation of the Senior Environmental Employment program.

The 12 Senior Environmental Employee workers receiving awards were:

- **Dennis Wile** of Clarkston, Ga., who offers information to cities in an eight-State region on noise problems and control methods.
- **John P. Waters** of Glastonbury, Conn. who researches and writes articles and booklets for public information on environmental issues.
- **Harvey Duhamel** of Palmyra, N.J., who is a retired chemical engineer now working as a program coordinator in the solid waste administration, there.
- **George Siegel** of Clarks Summit, Pa., who is inventorying wells in his State that serve 25 or more people.
- **Norman Nylund** of Louisville, Ky., who is an inspector of pesticides for the State.

• **Walter Blair** of Elmhurst, Ill., who is a technician assisting public water supply operators.

• **Delyle Compton** of Fayetteville, Ark., who makes audio visual presentations on environmental subjects to civic groups in the State.

• **Bertel Soderblom** of Hays, Kans., who makes slide presentations on water quality management and planning to interested groups in the State.

• **Harold Campbell** of Watertown, S. Dak., who is an area supervisor for solid waste, air and water quality, and air hygiene programs.

• **Josephine Sandoval** of Fresno, Cal., who is secretary for the program on pesticide information and surveys.

• **Zelma Gorrell** of Spokane, Wash., who is a technician in the water program.

• **Chester Biesen** of Seattle, Wash., who is disseminating information on noise hazards and control methods

Biesen spoke at the ceremony on behalf of the recipients of the awards. "We older Americans take great pleasure in being singled out for appreciation in the White House," he said. "Our environment has always been good to us, but we have not been so good to it. We take particular pride in working for the Environmental Protection Agency to help stem the tide of the past, to correct past mistakes, and pass on to future generations a viable and livable environment such as we have had."

"We older Americans have

been taken off the shelf and brought back into the mainstream of society," Biesen said. "We want to put our abilities back to work, not just for the sake of our natural resources, but for the sake of our human resources as well," he said.

The recipients included one representative from each of the 10 State projects and 2 from the national project. They will participate in local ceremonies at a later date to share the honors with the remaining workers.

Three State project officers involved in the program were honored also. They are Denise Mikics, New Jersey Department of Environmental Protection; Jack O'Nan, Kentucky Department of Natural Resources and Environmental Protection, and Katherine Leitch, Washington Department of Social and Health Services, Office of Aging.

A group called the Consortium of Aging Contractors was cited. It includes the National Retired Teachers Association/American Association of Retired Persons, the National Center on Black Aging, the National Council on Aging, and the National Farmers Union Green Thumb.

Recently enacted amendments to the Older Americans Act were signed by President Carter the day of the awards ceremony. These changes will expand the employment opportunities for older citizens. Other Federal agencies are studying Senior Environmental Employment program as an example of what can be done in this area. □



*Deputy Administrator Barbara Blum presented a certificate of appreciation to John Ropes, Director of State and Local Programs in EPA's Noise Program for his work in developing the Senior Environmental Employment program.*

\*See "Enlisting the Elderly for the Environment: EPA Journal Vol. 4 #2.



## News Briefs

### Hazardous Waste Funds

EPA recently announced that \$15 million in Federal grant funds is available to help States set up programs to manage hazardous wastes and EPA is expected to propose regulations shortly. Examples of hazardous wastes include unrinsed pesticide containers, etching acid sludges, used lubricating oil, and some paint wastes.

### Clean-up Award Entries

Applications are now being accepted for the National Environmental Industry Awards, the Council on Environmental Quality and the Environmental Industry Council jointly announced. The deadline for entries is Jan. 5, 1979. The two groups sponsor the awards program.

### Congress Approves Bike Measures

Congress voted a helping hand to the Nation's bikers in two separate pieces of legislation before adjourning this year. The National Energy Act declared that bicycles "represent a viable commuting alternative to many people, offer mobility at speeds as fast as that of cars in urban areas, provide health benefits through daily exercise," and "reduce noise and air pollution." It authorized the Department of Transportation to conduct a year-long study of the bicycle including its energy conservation aspects and to develop a program for increased bike use. In the Surface Transportation Assistance Act of 1978, Congress also voted a total of \$20 million to establish standards for bikeways and make grants to the States and localities to construct them on a 75--25 percent Federal--State matching basis.

### States Served by EPA Regions

**Region 1 (Boston)**  
Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont  
617-223-7210

**Region 2 (New York City)**  
New Jersey, New York, Puerto Rico, Virgin Islands  
212-264-2525

**Region 3 (Philadelphia)**  
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215-597-9814

**Region 4 (Atlanta)**  
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**Region 6 (Dallas)**  
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415-556-2320

**Region 10 (Seattle)**  
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206-442-1220



## 1 REGION

### Sewer Upgrade Evaluated

Region 1 has released its draft Environmental Impact Statement on the upgrading of the Boston Metropolitan Area Sewer system. The EPA evaluation recommends alternatives, which at this time appear to be the most environmentally sound and cost-effective, for upgrading wastewater treatment for Boston Harbor and the lower Charles, Mystic, and Neponset Rivers. It recommends expansion and upgrading of a primary treatment plant at Deer Island to provide secondary treatment for approximately 586 million gallons per day of wastewater. The existing sewer system and pumping stations would be expanded and modified as needed to handle peak flows of sewage. Some wastes would receive preliminary treatment at a plant at Nut Island and then be transported to Deer Island through a pipeline tunnel system under Boston Harbor. Disposal of dewatered sludge from the plant would be accomplished by a combination of composting, incineration, and direct landfilling. Ash disposal and composting would take place at Squantum Point.

## 2 REGION

### Sludge Alternative Listed

An alternative ocean disposal site for municipal

sludge 60 miles out to sea has been recommended by Region 2 in the final Environmental Impact Statement for the New York Bight site that is presently being used. The move is a precaution against any possible dangers to public health and coastal water quality that might result from overtaxing the existing dump site 12 miles offshore. The alternative location would be used on a contingency basis only until the dumping ends in 1981.

As older wastewater treatment plants in the Greater New York Metropolitan Area are upgraded to provide at least secondary treatment the volume of sludge is expected to increase. By 1981 the volume of sludge produced should be one and a half times that produced in 1977. EPA is concerned over the possible effects of dumping increased volumes of sludge at the existing site.

Regional Administrator Chris Beck said, "We are recommending that the existing dump site be monitored closely for potential threats to public health or degradation of water quality. There is a regional surveillance program already established and on-going to this end. If a possible threat is confirmed, then waste dumpers would be required to use the alternative disposal site."

The alternate site is located at the northern end of the New York Bight in order to minimize the effects on commercial shellfishing, exploration for gas and oil, and other offshore activities, most of which are concentrated in the southern area of the Bight.

## 3 REGION

### Steel Facility Impact Assessed

Regions 3 and 5 have released their comments on the draft Environmental Impact Statement prepared on U.S. Steel's proposed lakefront steel mill near Conneaut, OH. The \$3.5 billion total process steel mill would straddle the Ohio-Pennsylvania border on the shore of Lake Erie.

EPA found that the statement gave inadequate information to fully assess the impact of the plant in several critical areas. These include air pollution analysis, population projections, stream relocation, wastewater treatment alternatives, construction of a pier, and operation of water intakes.

These issues must be resolved before Federal permits necessary for construction can be issued, but EPA is hopeful that cooperation by the parties involved will result in an agreement that will allow the project to proceed. EPA sent the comments to the U.S. Army Corps of Engineers, which compiled the statement from information submitted by U.S. Steel and its consultants. Both EPA Regional Offices have worked closely with the Corps, U.S. Steel and other involved parties on this project over the past year.

### Air Compliance Ordered

A Federal judge has ordered the West Penn Power Company to begin a cleanup program that could result in the installation of flue gas desulfurization equipment

(scrubbers) at the company's Mitchell Generating Station near Monongahela, Pa. The preliminary injunction order issued by the judge requires the company to prepare a preliminary control plan and compliance schedule within six months. Design work on the control system must be completed within a year, with bids procured and evaluated three months later.

## 4 REGION

### PCB Cleanup Proceeds

EPA is working with North Carolina officials to clean up PCB contamination along some 250 miles of roadway in 15 counties, where the liquid was allegedly dumped from a tanker truck. A Jamestown, N.Y., man and his two sons were arrested on a Federal warrant and also face State charges in the case. Cost estimates for removing 72 million pounds of contaminated soil and burying it in an EPA-approved site exceed \$2 million. The contaminated roadside areas were first treated with activated charcoal and emulsified asphalt to keep the PCB's from washing into other areas. Various methods of picking up the hazardous material were tested before wide-scale cleanup operations began. Workers received blood tests to determine liver function and establish existing levels of PCB's. They wore protective clothing and respirators during the cleanup process. North Carolina officials are examining some 60 areas to find a

permanent site in the State to use for disposal of the debris. The nearest EPA-approved disposal site for PCB's is in western Alabama near Livingston.

## 5 REGION

### Awards Program Set

EPA's Chicago office has initiated an award program to recognize outstanding wastewater treatment facilities in the States that make up Region 5. According to Deputy Regional Administrator Valdas V. Adamkus, "The purpose of this program is to emphasize the importance EPA attaches to the job performed by wastewater treatment plant operators, to encourage treatment plant personnel throughout the Region to improve their operation and maintenance of these facilities, and to enhance our relationship with State and local agencies."

The first two awards indicate that the criteria for excellence have been established without bias toward the size of the plant. The first was presented to East Lansing, Mich., which handles 10 million gallons a day, and the second to New Auburn, Minn., which serves a rural community of 300 people. They were chosen from facilities nominated by the States.

The East Lansing plant was noted for the low level of pollutants found in discharges to the nearby river, excellent staff training programs, high quality of upkeep, and continuing involvement in research into new methods of water treatment and re-use. All 39 plant employees and the city's mayor received certificates at a recent ceremony.



The New Auburn facility was recognized for the outstanding work done by Herman P. Knacke, the sole employee for many years. Knacke, who died this year, wrote a complete set of instructions for running the plant. His widow and the town's mayor received certificates at a ceremony that was attended by many residents of the town.



### Disposal Application Withdrawn

Rollins Environmental Services, Inc. of Baton Rouge, La., has notified EPA's Dallas office that it is withdrawing its application for PCB disposal at its incinerator and landfill facilities in Baton Rouge. The withdrawal was attributed to adverse public opinion in Louisiana. An application by the company for approval of an incinerator and landfill disposal operation at Deer Park, Tex., is not affected.

### Discharge Permit Issued

Region 6 has issued a permit to the Department of Energy to discharge brine into the Gulf of Mexico from the Strategic Petroleum Reserve facility at Bryan Mound, Tex. The discharge will be permitted at a point 12.5 miles from the coast subject to strict monitoring provisions. Regional Administrator Adlene Harrison must approve the monitoring plan before the discharge is authorized. The discharge is expected to average more than 28 million gallons per day as the salt water is pumped from the Bryan Mound salt dome to make room for oil storage. Monitor-

ing will be conducted by a third party acceptable to both Federal agencies. If adverse effects on the marine environment are found, the discharges will be halted immediately.



### Toxic Incident Investigated

The Region 7 Emergency Response Section assisted in the investigation of an incident involving a mysterious illness that struck the Boyer family of Pevely, Mo. In late September local police found the 35-year old mother dead, and the father and two children critically ill. The children suffered from convulsions and paralysis, symptoms that were shared by the family pets—two dogs and two cats. Police officers who entered the basement home reported a heavy, musty, metallic odor. They suffered headaches and nausea for a brief period of time.

Tests conducted by Army epidemiologists for nerve or chemical gases were negative. The Poison Control Center in St. Louis also took tests that proved negative. EPA's Region 7 sent a team of investigators who took samples of air, water, material from sink traps, soil, and styrofoam insulation, which had been stored in the home. Dow Chemical Co., which manufactured the insulation, also took samples of the styrofoam.

The 13-year-old boy subsequently died. His father and sister regained consciousness after lengthy treatment and are recovering. The St. Louis medical examiner attributed the two deaths to pulmonary edema and pneumonia. EPA's tests showed significant quantities of methyl chloride

and methyl bromide in the air and liquid samples from the home. These compounds also were found in the insulation material. EPA findings have been referred to toxicologists in the St. Louis area and to the U.S. Center for Disease Control in Atlanta, Ga. Identification of the toxic gases hinge on tests being conducted by the Center for Disease Control



### Fines Fund Recycling

The Federal District Court in Denver has approved a settlement agreement between EPA and the cities of Littleton and Englewood, Colo. that allows pollution fines to be satisfied by contribution to a nonprofit environmental project. The fines were imposed by EPA because of pollutant discharges to the South Platte River in 1977. According to Lance Vinson, Region 8 Enforcement Division Director, the good faith and cooperation of the cities in working with EPA staff toward a settlement was largely responsible for the Agency's decision to allow the cities credit for fines through funding of Littleton/Englewood Recycling, Inc., a local nonprofit recycling project.

The legal dispute between EPA and the cities arose over discharges of sewage sludge from the new sewage treatment plant that violated the cities' pollutant discharge permit. EPA contended that improper procedures were followed during the start-up of the plant, causing the discharges.

Under the terms of the agreement each city will contribute \$15,000 to the

recycling program. Although not a party to the agreement, the firm of Henningson, Durham, and Richardson of Omaha, Neb., the consulting engineers for the sewage treatment plant, has agreed to contribute a portion of the settlement.



### Federal Cooperation Continuing

EPA's Region 9 has held a transportation/air quality workshop to discuss the requirements for non-attainment area plans that must be submitted by January 1, 1979, and to explain the DOT/EPA Memorandum of Understanding and Joint Transportation Guidelines. The workshop was part of environmental planning activities in which the Regional Office cooperates with the Intermodal Planning Group. This group includes the Federal Highway Administration, the Federal Aviation Administration, and the Urban Mass Transportation Administration, all of the Department of Transportation. Ad hoc members of this planning group include EPA, the Department of Housing and Urban Development and various State highway and planning offices.

The Intermodal Planning Group convenes on a monthly basis. The members have annual meetings with Metropolitan Planning Organizations to review yearly work program plans and to coordinate all transportation and related planning that is affected by Federal funding or regulations. EPA's involvement in the Intermodal Planning Group laid the groundwork for cooperation in integrating transportation, land-use, and environmental plan-

ning. This cooperation is especially important because of the amendments to the Clean Air Act and increasing coordination among Federal agencies.



### Air Regulations Violated

Region 10 has issued a civil complaint to the city of Meridian, Idaho, for violations of EPA's unleaded gasoline regulations at a municipally-operated fueling station. Regular gasoline was dispensed through a nozzle small enough to fit the small filler inlet of cars requiring unleaded fuel. Also EPA charged that one of the Meridian police cars, marked "unleaded gasoline only," had been fueled with regular gas, again in violation of EPA regulations. The nozzle violation carries a maximum penalty of \$1,000; the maximum penalty for introducing leaded gas into a car designed for unleaded gas is \$2,000.

In neighboring Canyon County, the local sheriff admitted to EPA that catalytic converters had been removed from four 1978 cars in his fleet, after passage of the 1977 Clean Air Act Amendments made this action illegal. EPA is considering enforcement action in the Canyon County case.

## Margaret Mead

*Margaret Mead died of cancer on November 15, 1978 as this issue of EPA Journal was going to press. In recognition of her outstanding concern for the environment and humanity we reprint this statement sent by Margaret Mead last July to the Athens International Symposium On The Child In The World Tomorrow :*

In a darkened world beset by the fear of nuclear holocaust, degradation of our soil and air and imbalance of population growth that threatens to strangle our human settlements, the Year of the Child stands like a beacon of hope. We must see that its light guides us and gives us direction for preparing a livable, sustainable, beautiful world for our children, those who have been born, those who have been conceived but not yet born and those children of the future not yet conceived.

By keeping our eyes steadily on the pressing needs of children, we can determine what needs to be done, and what can be prepared for but accomplished later. For babies cannot wait. A few moments without oxygen, a few hours without food or shelter, a few days of desperate emotional deprivation and, if they survive at all, they carry the mark for life.

Within the world initiatives of the last decade for a safer and better cared for earth, initiatives to protect the environment, balance population, feed the hungry, design human settlements for human living, this coming year can be the climax, as we focus on needs and well-being of the world's children, and the parents and grandparents of children, the towns within which children live, the food they eat, the water they drink, the education and health care they receive. As we provide children with a fuller life we will find our reasons for living and protecting the world.

## Rachel Carson

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Her investigation of the threatened roots of life was so profound, and her voice so eloquent, that her message carried beyond the specific problem of pesticide use.

"There is no question," a government expert on natural resources said following her death, "that *Silent Spring* prompted the Federal Government to take action against water and air pollution—as well as against the misuses of pesticides—several years before it otherwise might have moved."

Serious questions remain about the long-term effects of environmental contaminants on life. Despite many changes for the good, Americans now apply more than twice the amount of pesticides they did before *Silent Spring* was published, and totals also are increasing around the world.

But the dialogue about the benefits and hazards of their use will never be quite the same. The voice of one woman opened the "Age of Ecology," prompting other people in all walks of life to insist on working toward a clean environment for ourselves and the creatures with which we share the Earth. Perhaps David Brower, an eminent conservationist in his own right, best summed up Rachel Carson's achievement:

"She did her homework, she minded her English, and she cared." □

## A New Coalition: Women for Environmental Health

A coalition of women from environmental, health, labor, consumer, and feminist organizations have joined together on issues that relate to women in their daily environments: at work, at home, and in their communities.

Women for Environmental Health (WEH), believes it is vital to address the total environment of people, including occupational health issues or community health concerns. Environmental dangers that women are exposed to at work and in the home are not separate

issues, but part of the same problem. Because different Federal agencies, State, and local governments address different parts of environmental health issues, WEH believes there is a need for an organization that crosses those regulatory lines and addresses environmental issues on a wider basis.

In the past, women within the traditional environmental organizations have not had the opportunity to deal with this set of issues that affect them in a very direct manner. WEH has been formed in the belief that feminists, like labor, consumers, and other natural allies, must begin to speak in a strong, united voice with environmentalists on issues that affect women's lives and health. They believe that a coalition approach can forge a critical link between two constituencies that share mutual concerns, increasing the effectiveness of their respective movements as well.

The strength of WEH will derive from its members' work within existing organizations and professions.

As an organization of professional women concerned with the environment,

it has a three-fold purpose: 1) To identify and take action on group-chosen issues through lobbying, public education, research and political outreach. 2) To serve as a Washington-based clearinghouse for information about women's environmental health issues—to inform other activists in other local and Federal developments, and to help them use the extensive network of Washington-based groups which WEH represents. 3) To support each other's work by sharing information, time, resources and political contacts, whenever needed, to improve effectiveness.

WEH has pin-pointed several concerns, important issues that some member organizations are addressing from their own perspective.

- In Oregon and other States, women who live adjacent to forest lands are concerned about possible side-effects from spraying with 2,4,5-T and other herbicides. EPA is probing the cause of 10 miscarriages between 1973 and 1977 among eight women in a small

## Nursing Mothers

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keys. He has observed the same range of symptoms in the monkeys nursing from PCB-contaminated mothers that the Japanese victims exhibited. Further, he found that the infant monkeys exhibited hyperactivity and learning disabilities.

Dr. Allen has also been involved with research studying the effects of dioxin, a highly toxic chemical, and a contaminant of the herbicide 2,4,5-T. EPA is currently looking into levels of dioxin in human milk. As the research technology has been perfected it has become possible to detect low level residues, not just parts per billion but also parts per trillion. The milk data are still being analyzed.

Groups outside of the Agency are also looking at the problem. In March of 1970, the Environmental Defense Fund ran an ad in national newspapers asking: "Is mother's milk fit for human consumption?" Stephanie Harris and Joseph Highland of EDF have been studying the subject of breast milk and pesticides for many years, and are authors of a booklet titled, "Birth-right Denied: The Risks and Benefits of Breast-Feeding." The publication is an analysis of the factors involved in choosing whether or not to breast-feed. Harris and Highland described the dilemma faced by women who want to give their new-born

children a healthful start in life. They concluded that with the scientific knowledge available today, in most cases the benefits of breast-feeding outweigh the risks because it not only provides an infant's dietary needs under sanitary conditions, but also fosters a psychological feeling of well-being in the infant.

However, Harris and Highland suggested that women who are occupationally exposed to pesticides may want to consider alternatives to nursing their infants. At the time of the 1975 study, Stephanie Harris asked EPA to test 50 women who were vegetarians and who were not part of the original group. The researchers found they had lower levels of pesticides in their breast milk, but no significant difference in the levels of PCB's. (Harris and Highland are completing their statistical analysis of the results of this testing.)

Another study is underway in North Carolina under the auspices of the National Institute for Environmental Health Sciences. Dr. Walter Rogan has contracted with three hospitals to test women, some of whom are nursing and others bottle-feeding their infants. The study is particularly concerned with PCB's, DDT, and DDE. Researchers will look at the infant formula, colostrum (breast milk produced shortly

after birth), blood associated with the umbilical cord, and the possibility of contamination before birth through the placenta. The infants will be examined at three and six weeks, and three and six months. Dr. Rogan has said he expects there will not be any startling news and that perhaps the study will reaffirm that low-level chemical contamination of mother's milk poses very slight danger to mother and child. He will not be able to draw any conclusion about occupational exposure since none of the mothers in the test group works with chemicals.

Dr. Marcus Wassermann and his colleagues at the Department of Occupational Health of the Hebrew University of Jerusalem are conducting a worldwide study on the exposure of humans and our environment to PCB's. In an unpublished paper, Dr. Wassermann commented that, "PCB's have become current constituents of the human body and the biological environment." PCB residues in breast milk have been reported in several countries in Europe, North America, and Asia.

After almost 30 years of research, the immediate and long-range effects of chemical residues on mothers and infants are still unknown. A newly formed coalition, Women for Environmental Health, has made this issue a priority item for the coming year.

The public needs to know the effects on mothers and their infants of chemical residues to be found in breast milk. They need to know what effect, if any, diet has on levels of pesticides in the human body. What effect do geographical and occupational differences have on pesticide levels? Most important, what health effects or implications do chemical residues have for infants?

In a recent issue of the *EPA Journal*, Administrator Douglas Costle and Deputy Administrator Barbara Blum stated that for the fiscal years 1979 and 1980 a top priority will be protecting the public health; and further, that Research and Development will be strengthening its health effects work. With this kind of effort and commitment, EPA hopes to help resolve the controversy over the health effects of chemical residues in mother's milk. □

Oregon town to determine if the mishaps were caused by herbicide spraying of nearby forests. WEH wants to support and expand the work of those groups, such as Friends of the Earth, who are working to ban or strictly limit the use of such chemicals.

- Americans need stronger regulations to ensure the safety of cosmetic products. WEH believes there is growing evidence that ingredients in some cosmetic products can cause cancer, birth defects, and genetic damage. The organization wants to utilize the strength of its member groups to pressure Congress for stronger cosmetic safety legislation to protect consumers—both men and women—from this hazard.

- A majority of working women, work in the service industry, retail trades, and in clerical occupations. These jobs, though they expose workers to a plethora of occupational hazards, are termed "low-risk" by the Occupational Safety and Health Administration. Restaurant workers, for example, daily face: burns, heat stress, muscular injuries, mental stress, microwaves, cuts,

and other hazards that go unregulated and unprotected. Most workers are not aware of the hazards that they face, or their rights under the law. WEH wants to develop, in conjunction with the committees on occupational safety and health and unions, educational materials for women workers whose health needs are being ignored.

- Nursing mothers throughout the U.S. and around the world are passing pesticide residues and other toxic contaminants to their babies through breast-milk. In some cases chemical levels several hundred times the accepted daily intake established by FDA have been found, WEH reports. WEH believes women have the right to know whether their breastmilk is safe, and, if not, what can be done to make it safe.

As the coalition grows new issues will develop. More information from or about WEH, can be obtained from Carolyn Projansky, Women for Environmental Health, 1747 Connecticut Avenue, N.W., Washington, D.C. 20009, (202) 667-2140. □



# 10 region Report

By Donald Dubois  
*Regional Administrator*

In early June of this year, when EPA's Northwest Regional Office in Seattle announced its acceptance of the Oregon Department of Environmental Quality's plan to limit air pollution from the burning of fields on 800 individual Willamette Valley grass seed farms, it was more than just a transaction between two government agencies.

The EPA announcement was the culmination of a process that involved the delicate balancing of conflicting demands that at times appeared irreconcilable: an end to the nuisance and esthetic blight of summer-time smoke intrusions over the cities of Eugene and Springfield, the protection of the multi-million-dollar grass seed industry from substantial financial losses, and—above all—the need to prevent violations of total suspended particulate standards that would affect human health.

How to control particulates from the burning of grass seed fields was a problem of long standing. In recent years, the controversy has been centered on the question of just how many acres the growers could burn. Burning of the fields after harvest was essential, according to the growers, because it was the only method available to control plant disease, insects and weeds, and also to eliminate the cost of removing and handling the four tons per acre of straw that remains on fields after harvest.

Burning is necessary, said the growers, to preserve the yields of grass seed that produce 95 percent of the world's ryegrass seeds, more than 80 percent of the turf seeds, and more than 70 percent of the forage type grasses. The value of the crop averages \$48 million a year, and it is estimated that nearly 9,000 Oregonians' jobs are dependent on the industry.

On the other hand, the Willamette Valley has been designated a non-attainment area for total suspended particulates. Field burning, a significant contributor to the amount of particulates in the Valley's airshed, required control in order to meet air quality standards.

EPA and the Oregon Department of Environmental Quality (DEQ) began the year in what seemed to be an impasse. The DEQ, bound by an act of the State Legislature that prescribed acreage limitations, submitted a plan that called for 180,000 acres to be burned. But EPA, after evaluating the plan, determined that it could not be accepted under the Clean Air Act as a revision to the State Implementation Plan because it would not insure attainment of the health-related particulate standards. Without a revised plan, the growers would be bound after the 1978 harvest to an SIP already on the books that limited the burning acreage to only 50,000—a restriction that not only appeared to defy the will of the State Legislature, but one that growers complained they could not live with.

With the Legislature not in session in 1978, DEQ and EPA could not look to the Legislature to break the impasse. Unless something were done, growers would be faced with almost certain financial sacrifice or, just as bad, there was the possibility of litigation that could have left DEQ and EPA without any control plan at all.



At this point, EPA looked for solutions from the two parties most directly affected. On the one hand, the growers; on the other, the City of Eugene whose residents endured the nuisance of smoke intrusions and faced the threat of adverse health impacts.

Considering the distance between the two parties (i.e., the growers who would prefer no field burning controls at all, and the City of Eugene which at one time favored an all-out ban on burning), it was not surprising that they did not come to an agreement. They did come close, and their discussions formed the basis for a compromise plan DEQ submitted in May to EPA. The terms of the plan, good until Oregon submits a revised SIP in 1979, provided for burning of up to 180,000 acres, but only if growers used new burning techniques and paid proper attention to weather conditions and other considerations that would alleviate the emissions of particulates to the atmosphere.

The terms of the plan were less important than the means by which it was developed.

The 1978 field burning plan, produced in a crucible of tremendous deadline pressure, is a tribute to the willingness of persons with competing points of view to sit down together to find common ground on which fair and workable compromises could be reached. That's the way it should be whenever pollution control problems pit one segment of the public against another, whenever benefits for many require sacrifices for many others.

When it comes to environmentally related trade-offs, government's role should be limited to seeing to it that standards are met, that regulations are implemented and that guidelines are followed. The business of working out the trade-offs should be left to local business, local government and local citizens. EPA and the



Oregon Department of Environmental Quality did just that with the field burning issue.

Alaska and the Pacific Northwest face a number of tough environmental problems in the years ahead. Along the Pacific Coast, where rainfall often amounts to more than 100 inches a year, it may be difficult for local landfill operators to meet EPA's criteria to prevent the leaching of harmful chemicals into groundwater or nearby lakes, rivers or streams. Downtown merchants in Boise and Anchorage will have to come to terms with the unpleasant fact that their cities—like Portland, Seattle, and Spokane—may have to adopt transportation controls to reduce air pollution from automobiles. It's a virtual certainty

that many farmers in the Northwest may have to change the way they till their fields, apply fertilizers or use pesticides in order to reduce non-point water pollution. The forest products industry faces the prospect of having to adopt a best management practice approach to solving air and water quality problems associated with timber harvesting. Proposals for a Northwest trans-shipment facility to handle Alaskan oil must be evaluated in the context of preserving clean air and clean water. Local sentiment against

the designation of hazardous waste disposal sites is an impediment to finding places to get rid of dangerous chemicals and other materials.

Those are some of the issues that challenge EPA in Alaska and the Pacific Northwest. The best solutions to those problems probably won't come from EPA or other agencies of government. They will more likely come from businessmen, farmers, environmentalists, citizen groups and others working in a spirit of accommodation and mutual respect. That's the way EPA's Region 10 will continue to make things happen. □

*Inside Back Cover The mouth of the Columbia River between Astoria, Ore., and the State of Washington.*

*Back Cover Twilight at Moose River near Old Forge, N.Y.*



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