

## EPA expands emissions trading policy

The Environmental Protection Agency plans to expand its air pollution emissions trading program — called the “bubble policy” — which the agency says will add efficiency to pollution control efforts without harming air quality. The bubble policy allows industry to meet air quality standards by averaging emissions over a large area, like an entire plant, rather than making sure every vent and smokestack meets requirements. At a press conference announcing the changes, EPA chief Anne Gorsuch said the policy will give “industry much more flexibility to create surplus emission reductions at some stacks or vents and use them to meet costly requirements elsewhere.” Among several new features, Gorsuch said the policy will expand the bubble program to urban areas that have not yet met national air quality standards and allow states to write trading rules for categories of pollutants without federal review of each individual project.

In the past, EPA approved 18 bubbles, which it claims saved industry \$50 million. “EPA now predicts that savings from bubble trades alone would top \$1 billion by the end of this year with equal or better air quality results,” says Gorsuch. Environmentalists, however, are leery. “Emissions trading is three years old — what is good is not new and what is new is not good,” says David Doniger of the Natural Resources Defense Council. Specifically, he’s concerned about trading in areas that have not met air quality standards they were supposed to meet by 1982. “We support the concept of trading,” he says, “but only when it does not get in the way of meeting minimum requirements for protecting human health.”

## Airborne metals dominate forest cycle

The atmosphere contributes at least one-third of the total amount of lead, zinc and cadmium flowing through a forest ecosystem in Tennessee, reports Steven Lindberg of the Oak Ridge National Laboratory in the March 26 *SCIENCE*. Lindberg measured both wet (dissolved in rainwater) and dry (attached to particles that settle on leaves) sources of heavy metals. “The most surprising thing to me was lead — atmospheric sources completely dominate that cycle,” he told *SCIENCE NEWS*. Interaction between particles and acid rain resulted in metal concentrations 50 to 500 times higher than in rain alone because acidic solutions can dissolve the heavy metals. The mean precipitation pH in Lindberg’s study area was 4.1. “And it seems to us that there’s a far greater chance of something being taken into the leaf if it starts out in solution than as a particle,” he says.

According to Lindberg, “the most important information needed now is to get a handle on the detrimental effects of these metals—not just on forest species—but on crop plants as well.” Such information could be important to the EPA, which is considering allowing more lead in gasoline (SN: 4/24/82, p. 278). Auto emissions are the chief source of atmospheric lead.

## Endangered species bill proposed

Senator John Chafee (R-R.I.) has introduced a bill reauthorizing funding for the Endangered Species Act. Beyond the three-year reauthorization, S2309 would make a few changes, such as requiring the Secretaries of Interior and Commerce to decide to list or not list a species within two years after it is proposed and moving up the deadline for deciding on an exemption for a federal project jeopardizing an endangered species. “We’re generally supportive of Chafee’s bill,” says Roger McManus of the Center for Environmental Education. In particular, he’s pleased that it would speed up the listing process. “The present administration will probably lose some species just because it has failed to act on listing proposals,” he says.

MAY 1, 1982

## Methyldopa safe for fetuses

Because high blood pressure during pregnancy can threaten the life of both mother and baby, obstetricians often treat it with drugs, and the drug of choice is methyldopa. In fact, two studies have shown in the past that methyldopa treatment of high blood pressure during pregnancy can increase the chances of fetal survival. But the fact that methyldopa crosses the placenta has led to concern that its use may hurt the fetus. This concern is groundless, however, according to a study published in the March 20 *Lancet* by J. Cockburn and colleagues from the University of Oxford.

Cockburn and his co-workers followed, from birth to seven and a half years of age, the health status of 100 children whose mothers had received methyldopa for high blood pressure during pregnancy and the health status of 100 children whose mothers had received no treatment for high blood pressure during pregnancy. The investigators examined a wide range of factors including intelligence, physical handicaps, mental handicaps, vision, hearing, behavior and blood pressure. They could find no significant differences between the two groups of children. So “methyldopa is safe to use in pregnancy,” Cockburn and his team conclude.

## What latent herpes viruses do

What appears to be the first major insight into what herpes viruses do when they are in a latent state rather than actively infecting cells is reported in the April *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES* by Hagop Youssoufian and Carel Mulder of the University of Massachusetts Medical School in Worcester and by Scott Hammer and Martin S. Hirsch of Harvard Medical School.

Last year Hammer and Hirsch devised a cell culture model for herpes viruses in a latency state. The model consisted of cancerous T cells persistently infected with herpes viruses that sometimes went into latency stages. Hammer, Hirsch, Youssoufian and Mulder then went on to use this *in vitro* model to see what herpes viruses do during latency and found that herpes virus DNA is heavily methylated (that is, methyl, or CH<sub>3</sub>, groups are added) during latency but not when actively infecting cells.

This finding, Hammer told *SCIENCE NEWS*, might eventually help medical scientists devise a drug that is effective against chronic herpes virus infections, which are characterized by herpes viruses becoming latent (retreating into neural ganglion cells) when they are not actively infecting skin cells (SN: 4/10/82, p. 247). First, though, he cautions, methylation of herpes virus DNA would have to be shown to be an essential component of herpes virus latency in human ganglia. And then, he says, researchers would have to design a drug capable of methylating herpes virus DNA. Such a drug might keep herpes viruses perpetually latent in ganglia rather than from periodically becoming active and infecting skin cells.

## Nutrition research grant

The National Cancer Institute recently awarded the Memorial Sloan-Kettering Cancer Center in New York City almost \$2 million to study the role of nutrition in health and disease. This is one of the largest grants ever made for nutrition research.

Thanks to the grant, the center’s scientists will be able to determine the role of various nutrients, vitamins and minerals in cancer, whether dietary manipulation can prevent cancer and what role nutrition plays in immunodeficiency, autoimmune diseases and aging. Part of the grant will also be used to educate physicians in nutrition, since medical school training has traditionally included little instruction in nutrition.

297