the Environmental Defense Fund, hopes to see close attention paid to substances already under some regulation, lest the public not recognize half measures for what they are. The lack of a national program to recover PCB's from the environment Highland regards as a prime case in point. Also, he observes that, whereas the use of Tris as a flame retardant in children's sleepwear has been banned by CPSC, no action has been taken by OSHA to see whether workers are being put at hazard by occupational exposures to Tris-treated materials.

Whether the annual report turns out to be a spur to more effective regulatory action and much better scientific support of such action may depend on how much effort HEW and its scientific agencies put into preparing it. Officials such as Upton, Rall, and Kennedy seem clearly in sympathy with Maguire's aims. The NTP was, after all, in the works for many months before the cancer act amendments became law; it came about, in fact, as the result of a proposal made to Secretary Califano by Upton soon after he took over as NCI director in mid-1977. Now Upton wants the data-gathering for the report to be supported generously, with perhaps $500,000 or more spent even in this first year's effort—which, for lack of time, will have to consist mainly of assembling bioassay data and other information that is already close to hand.

The positive official climate in which the requirement for the annual report on carcinogens has been received is one that Congressman Maguire is in a good position to foster and reinforce. Coming from a heavily industrialized area in northern New Jersey that figures prominently on NCI's cancer map, Maguire has made cancer prevention and research a major focus of his activities during his first two terms in the House. Although not trained in science, he holds a Ph.D. in government from Harvard and discusses issues of science policy with a sophistication that has impressed the members of the NCAB.

Moreover, as an influential member of the House Health and Environment Subcommittee, Maguire can either reward or chastise the HEW agencies, as in supporting or taking issue with the balance struck by NCI between cancer prevention programs and basic cellular research (which, incidentally, Maguire says deserves continued support). If the report on carcinogens should fall short of expectations, he has the resourcefulness to express his disappointment in a way the people who run those agencies will understand.—LUTHER J. CARTER

Laetrile's Day in Court

The Laetrile furor has reached the Supreme Court at last, framed as a contest between personal freedom and government authority. On 22 January the Court accepted a petition from the Justice Department to rule on whether or not the Food and Drug Administration (FDA) has the power to ban the interstate sale and distribution of Laetrile, the apricot pit extract used as a cancer cure and regarded by most of the medical establishment as a fraud (*Science*, 13 October 1978).

This case grows out of a suit filed by Glen Rutherford, a cancer patient in Oklahoma, who charged that the FDA was interfering with his personal rights in banning the interstate shipment of a drug which could do him no harm and which he wanted to use. He won a partial victory in a local district court in Oklahoma in 1977 and a second victory last July in a federal appeals court in Denver, where the case landed after the government tried to have the earlier decision reversed. The judges in the appeals court found that the FDA had virtually no authority to control drugs sought by terminally ill cancer patients. If this interpretation is allowed to stand, the FDA believes, it would create a large loophole. As the government put it in the Supreme Court petition, the decision "would make it difficult if not impossible for the [FDA] Commissioner to discharge his statutory responsibility to keep unproven drugs out of the marketplace."

The appeals court arrived at its decision by playing with definitions, as follows. The judges reasoned that the FDA by law must base its policies on a drug's safety and effectiveness. By definition, a terminal cancer patient is someone for whom there are no effective drugs. "Therefore, we hold as a matter of law," the court ruled, "that the 'safety' and 'effectiveness' requirements of the statute as now written have no application to terminally ill cancer patients who desire to take the drug." The judges thought it would be easy to resolve the absurd situation they created. A physician would simply certify the patient to be "terminally ill with cancer," putting him in a special legal category for which the FDA law does not apply. The physician would then be allowed to administer Laetrile intravenously. The court did not approve of Laetrile tablets.

There is no scientific evidence that Laetrile helps cancer patients, and there is some thin evidence that it may do harm, especially when taken orally. Doctors at the Massachusetts General Hospital, for example, recently testified that a child named Chad Green showed signs of cyanide poisoning as a result of oral Laetrile treatments given him by his parents. (In January a local court in Massachusetts ordered the parents to stop using the drug; the parents took their child and left the country.) It is also argued that Laetrile, if widely available, could act as a dangerous placebo, causing people to postpone seeking other therapies that are known to be efficacious.

Despite its bad press, Laetrile has many devotees. Between 50,000 and 75,000 people are said to have used it in the United States. A Harris poll taken in 1977 found that about two-thirds of those surveyed favored the enactment of pro-Laetrile laws in their state. The Supreme Court can hardly ignore the political passions in this controversy. Americans are stubborn about rights, including the right to induce cancer with cigarettes and the right to treat it with the extract of apricot pits.

Meteorites and Nuclear Power

The Nuclear Regulatory Commission (NRC) created a dilemma on 19 January when it endorsed a critique of a study of the hazards posed by nuclear reactors, a study whose findings were accepted by the commission in 1975. Although it accepted the critique, the NRC did not flatly repudiate the earlier study.

The first study, headed by Norman Rasmussen, a nuclear engineer at the Massachusetts Institute of Technology, concluded that the likelihood of a major nuclear accident occurring in the United States was roughly equal to the likelihood that a disaster might be caused by a meteorite falling to the earth. It might happen once every million years. The second report, written by University of California physicist Harold Lewis and six others,

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came out in September (*Science*, 29 September 1978). Lewis praised the earlier report as a pioneering work, but found that its conclusions—the part most valuable to the industry in the public relations battle over nuclear power—were unwarranted.

Lewis recommended last year that the NRC beat a prudent retreat, and the commission formally accepted his recommendation on 19 January. In doing so, the commissioners reiterated their confidence in the bulk of the Rasmussen study, but agreed with Lewis that the flat numerical assessment of risk in the executive summary was no good. They decided that "absolute" figures for risk should be used very rarely and very carefully, and they instructed the NRC staff not to use any of the suspect Rasmussen numbers to justify policy decisions. According to NRC executive director for operations, Lee Gossick, three or four licensing decisions which were based on the Rasmussen study must be reconsidered.

The government now finds itself in the predicament that existed before Rasmussen, which is to say that it has no credible estimate of the risk to human health or safety presented by nuclear reactors. In view of this, nuclear opponents ask, how can the government continue to promote nuclear power?

One week to the day after the NRC announced its decision, the Union of Concerned Scientists (UCS) held a press conference in Washington, D.C., to demand that 16 operating reactors be shut down. According to Henry Kendall, director of the UCS, the government has identified safety hazards in all 16 plants, but has justified their continuing operation by alluding to the low-risk estimates contained in the Rasmussen report. Now that the report has been discredited, Kendall said, the reactors must be closed down.

Other critics of the industry are stirring as well. Representative Morris Udall (D-Ariz.), who pressed the government to make a review of the Rasmussen report in 1977, plans to hold hearings on 26 February on the whole saga. An aide said Udall wants to ask, "How did the Rasmussen study come to receive the endorsement it did?"

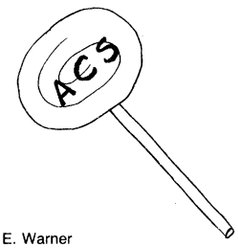
Oddly enough, the debunker of the Rasmussen report, Harold Lewis, thought he was doing the NRC a favor. "I'm pro-nuclear myself," he said recently. "This should be good for the commission's credibility. It moves them away from the technically exposed position they were in." One point missed by the press, Lewis claimed, was that "our report found that Rasmussen's methodology was sound and that the NRC should make much more use of it" when good data are available. Lewis believes that while the data may not be good enough to make statements about the overall safety of nuclear power, they may be good enough to certify that valve X and pump Y are safe. An industry spokesman seemed to find comfort in this point too, and he suggested that the Lewis study might make it possible to accelerate nuclear licensing procedures. At the moment, the likelihood of that happening seems just about as great as the chance that a meteorite will fall on Ralph Nader's house.

The Public Interest versus Lollipops

Relations between the defenders of the public health are not always smooth. Michael Jacobsen, director of Science in the Public Interest, established his claim to integrity recently by tarnishing ever so slightly the claim held by the American Cancer Society (ACS). Jacobsen brought the full force of his wrath down on the ACS when he discovered that it was giving lollipops to children as a fund-raising gimmick. He wrote a letter of protest and released it to the press 6 days before it landed on the ACS's doorstep.

Reaching into his munitions store, Jacobsen brought out his best steel-plated adjectives for the occasion. The ACS was highly irresponsible, insensitive, ludicrous, and insane. Jacobsen was upset, first, because the ACS was giving out hard candy (bad for the teeth) and second, because some of the lollipops were red, containing red dye number 40, an additive which Jacobsen suspects of being a carcinogen. The Food and Drug Administration is now engaged in a review to find out whether the dye's safety approval should be revoked, but has not reached any conclusion.

The ACS was taken by surprise. A startled spokesman, hearing of Jacobsen's protest for the first time from an Associated Press reporter, said merely that "suckers of various colors have been used in various areas by dedicated people trying to raise money to fight cancer, not to spread it." He said the ACS would decline the invitation extended by Jacobsen to join in a campaign to pressure the FDA into banning red dye number 40. If there is any hazard, he said, the FDA is required by law to ban the dye, so who needs pressure?



Drawing by E. Warner

Smog's Not So Bad, EPA Decides

Responding to intense criticism from industry, the Environmental Protection Agency (EPA) decided on 26 January to relax the primary standard for city air pollution by 50 percent. The permissible level of smog, measured as the concentration of ozone, now rises from 0.08 to 0.12 part per million (ppm)—a change that had been anticipated for some time (*Science*, 1 December 1978). EPA staffers recommended an ozone standard no higher than 0.1 ppm, and EPA's scientific advisers never reached an agreement on what should be considered a safe level. However, EPA administrator Douglas Costle, in overruling his advisers, said the new standard was based on "a careful reevaluation of the medical and scientific evidence," which suggested that smog is less hazardous to health than was once believed. The revision, expected to shift 10 to 20 large cities from the dirty to the clean list, will not exempt the worst centers of pollution (such as New York, Washington, D.C., Houston, Los Angeles, and Denver) from undertaking major pollution control programs.

Eliot Marshall