

Senate Considers Lead Gasoline Ban

While lead industry, in tough opposition, asks court to stop government from issuing new health warnings to doctors and state officials

Two senators broke into smiles and a third lowered his head to the table as a spokesman for the lead industry defended a statement he had made to the Senate Committee on Environment and Public Works on 22 June. His claim was that, despite the use of leaded gasoline for 60 years, "There is no evidence that anyone in the general public has been harmed by this usage." The committee, many of whose members think otherwise, is reviewing a bill written by Senator Dave Durenberger (IR-Minn.) that would ban leaded gasoline by 1988 because it is contributing to the poisoning of children. Even at low exposure levels, lead apparently can damage the central nervous system, affecting reasoning and behavior.

The prolead spokesman, Jerome Cole, president of the International Lead Zinc Research Organization (ILZRO), defended his minority view to an openly doubtful audience. He argued that the link between lead pollution from autos and neurological damage has not been proved, and further, that if there has been neurological damage, it has been caused by old paint in deteriorated houses. Cole's task was made harder by the fact that he was preceded by four solid adversaries—a well-known pediatrician, an official in charge of U.S. air pollution control, the chief of U.S. environmental research, and the chief of U.S. environmental epidemiology. All spoke strongly of the harm done by leaded gasoline.

The lead industry may be in the minority in its scientific views, but it has other resources. It has not shown any inclination to quit the battle. Over a decade ago the government began to limit the amount of lead in gasoline. Since then, the lead industry has waged a two-pronged campaign to fend off controls, with ILZRO handling the scientific front and the Lead Industries Association (LIA) managing the legal blockade. The campaign has not been entirely successful, but neither has it failed, for it has kept leaded gasoline on the market longer than might have been expected.

At present, the Environmental Protection Agency (EPA) estimates that 45 percent of the gasoline sold in the United States contains lead, posing "a major public health concern," in the words of Joseph Cannon, assistant EPA adminis-

trator for air and radiation. Vernon Houk, director of the U.S. Center for Environmental Health in Atlanta, estimates that there would have been "80 percent fewer cases of lead toxicity" among children if there had been no lead in gasoline between 1977 and 1981, the years covered by the last national health survey. Houk also thinks that pollution from leaded gas contributes about 20 percent of the lead measured in the blood of children with high lead concentrations.

In its latest stalling maneuver, the industry has laid siege to Houk's agency, which is part of the Centers for Disease Control (CDC). As a medical detective bureau, the CDC does not often find itself in the line of fire. Nevertheless, on 15 June, the LIA filed for an injunction to prevent the CDC from warning doctors and state officials of the newly documented hazards of lead, as confirmed for CDC by a group of outside experts in lead poisoning.

A lead industry lawyer got up at the CDC advisory group's meeting on 17 May and threatened legal action. He said that Cole and others holding minority views had not been given enough scope or time to present their case. The CDC responded by extending the comment period for criticism of its paper. Cole wrote no comments.

Instead, the industry went to court on a technicality. It claims that Houk and the Secretary of Health and Human Services, Margaret Heckler, failed to give the required 15 days' formal notice in the *Federal Register* of the advisory group meeting. The argument may be correct in its facts, yet ILZRO was told no later than 29 March that the meeting was to be held on 17 May, that it was to pass judgment on the new toxic alert standards, and that Cole was to be a participant. In addition, extra time has been allowed for written comments. Cole says he is too busy to write a critique, particularly since he thinks the whole CDC proceeding may be invalid. The first hearing on the case will be held in the U.S. District Court in Atlanta on 3 July.

The chairman of that CDC advisory group, pediatrician John Rosen of the Albert Einstein College of Medicine in New York, found the experience "just incredible." He says: "Our committee has worked very very hard with CDC to

update the standards in accord with the new biomedical information. It is clear that the lead industry is obstructing a vital public health document. . . . I find it discouraging from the standpoint of someone who sees 20 lead-poisoned kids every week."

The new document was meant to update a 1978 CDC guidance paper entitled "Preventing Lead Poisoning in Young Children." The draft, approved by nine of the ten members who were present at the review committee on 18 May, contained several important changes. (Cole was the dissenting member.) The major change was to lower the toxic alert level from 30 micrograms of lead per deciliter of blood to 25 micrograms. A child found with this much lead would be considered in need of attention. Houk and others involved in this review say that the data may justify setting the level even lower—perhaps at 10 or 15 micrograms. But a change of this magnitude would overload the screening and treatment facilities, and so was not proposed.

This is the latest in a long record of revisions. The accepted hazard level has come down steadily since mid-century. In 1943 it stood at 100 to 120 micrograms; gradually it slipped to 80, then 60, 40, and in 1978 to 30 micrograms. Physical effects are now measured at levels of 11 or 12 micrograms, although researchers have not proved that at this level lead is decidedly harmful. Even with the recent tightening of standards, Houk points out, "Typical adult body burdens of lead in the United States are about 500 times higher than those of persons who lived in the pre-industrial era."

For pediatricians, the toxic alert figure indicates the point at which remedial action must be taken. The draft CDC report suggested that children with high blood lead levels (35 to 40 micrograms and up) be treated as suffering from acute, specific problems. Those with medium levels (25 to 35 micrograms) were to be treated as victims of a community problem: namely, exposure to lead from general sources such as gasoline. The therapy prescribed for this second group of children was to remove them from the leaded atmosphere or remove the atmosphere from them.

For the lead industry, the alert level represents something different. It serves as a benchmark for air quality regula-

tions written by EPA. A 16 percent decrease in acceptable blood levels translates into a larger change in air regulations, large enough to threaten lead sales. Thus the industry has begun to go after CDC health advisories as well as EPA regulations.

In the first months of the Reagan Administration, the EPA tentatively proposed removing all controls on leaded gasoline. Doctors and public health officials protested loudly, so that EPA reversed course and began to impose stricter controls instead. Assistant EPA Administrator Cannon told the Senate committee on 22 June: "We had envisioned that with our tougher . . . standard, leaded gasoline would quickly recede from the marketplace and virtually

disappear by the early 1990's. But the practice of misfueling, using leaded gasoline in vehicles designed for unleaded, is occurring at an alarming rate." Misfueling destroys catalytic converters and is thought to have increased emissions from affected cars by 800 percent.

As a result of this new pollution and because the danger to health is becoming clearer each year, Cannon said the EPA has drafted a new rule to speed up the removal of lead from all gasoline. It is to be unveiled "within the next few weeks." An exception will be allowed for pre-1971 cars and heavy-duty trucks, which may require very lightly leaded gasoline to prevent valve damage. A recent analysis by the EPA staff showed that the benefits of removing lead would

outweigh the costs. Cannon promised that the new rule will be moving toward implementation by the end of the year. The EPA does not need the new legislative mandate, he said.

Noting that many promises have been made and forgotten in the long history of lead control, Senator Durenberger said he hoped that "the new tiger down at EPA will . . . get the lead out of our tanks." But, he concluded, "I haven't seen the regulation; I know the hurdles it faces when it does come out; and I remember too well his [the tiger's] predecessors." For that reason, Durenberger will try to attach the leaded gasoline prohibition to some piece of vital legislation before Congress adjourns.

—ELIOT MARSHALL

Two Fertilized Eggs Stir Global Furor

The case of the frozen zygotes in Australia has recently triggered a public debate covering issues raised by artificial insemination and surrogate mothering as well as in vitro fertilization, according to some observers.

The story, in brief, concerns a couple from Los Angeles, Mario and Elsa Rios, who flew to Melbourne in 1981 to seek the services of the Queen Victoria Medical Clinic's fertility program. There, doctors extracted and fertilized three of the woman's ova and implanted one, which resulted in a miscarriage. The couple departed, leaving the remaining two fertilized eggs which were frozen in liquid nitrogen. In 1983, the Rioses were killed in a plane crash. The story suddenly gained international prominence after London newspapers reported that the couple had left no will and a substantial fortune was at stake.

The zygotes are probably no longer viable because methods of preservation were considerably more primitive in 1981 than they are today, experts say. But feverish debates have arisen over the disposition of the two microscopic blastulae—whether they should be implanted in someone, and what inheritance rights they may possess. The center has been deluged by women who want to be impregnated. The premier of Victoria meanwhile has established a committee to ascertain the legal rights of the frozen embryos. The Rioses' lawyer, Laura Horwitch, has announced she will ask the Los Angeles Superior Court to determine their legal status. That issue has been further complicated by her assertion that the sperm used in the procedure was not the husband's.

According to a leading center for in vitro fertilization in this country, such a preposterous situation could not arise in the United States because of universally accepted guidelines governing the disposition of unused fertilized eggs. Also, very few places freeze the eggs, which otherwise survive only a few hours. Howard Jones, director of the Institute for Reproductive Medicine at Eastern Virginia Medical School, says guidelines promulgated by the American Fertility Society specify that cryopreservation should not be sustained beyond the reproductive life of the mother. Furthermore, if fertilized eggs are frozen, their disposi-

tion, if unused, has to be decided prior to the procedure. They can either be thrown out, used for research up to the age of 14 days, or offered for adoption, in which case anonymity is required. Any subsequent claim to the progeny by the biological parents would be waived.

Although these principles would seem to cover the ground, the problem, according to Alexander Capron, former head of the President's ethics commission, is that they have not been sanctioned either by law or by society. Nor do they address future procedures that science will be making available.

Capron says the Rios case may turn out to be a "beacon"—like the Karen Quinlan case—signaling that "we have a lot of problems to deal with here" in the whole area of fertility manipulation. One issue relates to the rights of children who want to know the identity of their biological or (in the case of surrogate mothering) gestational parents. Clinics generally try to make identification of donors impossible by mixing sperm from more than one and by destroying records. This issue will also be arising where donated sperm has been used for in vitro fertilization.

As for the legal and moral status of zygotes, Capron notes that contracts are "naïve" because they "only work if society legitimates them." He is sharply critical of the Department of Health and Human Services for shying away from the subject of in vitro fertilization, despite the fact that an ethics advisory board over 5 years ago recommended such research and called the procedure "ethically defensible."

But what is really needed, he says, is a new presidential commission and hearings to arrive at a public consensus on parentage and the disposition of the results of conception, which would supply the basis for much-needed legal guidance.

In vitro fertilization is now being practiced in about 200 clinics around the world. The Victoria group does around 400 a year. Successful pregnancies result in approximately 20 percent of the cases. So far, at least 450 babies have been produced, one of them from a frozen zygote.

—CONSTANCE HOLDEN