

Lead in gas: Costs prompt new limits

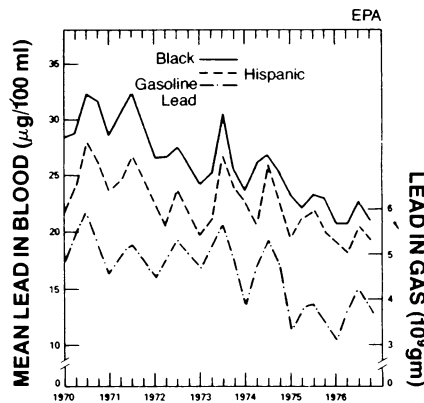
The Environmental Protection Agency has proposed reducing the permissible amount of lead in gasoline by 91 percent—from 1.1 grams per gallon in "regular" grades to 0.1 gram. Explaining the new move last Monday, EPA Administrator William Ruckelshaus said: "Our goal, quite simply, is to eliminate environmental lead as a threat to human health and today's action moves us very close to that goal."

Several factors have prompted EPA's move. First, there are new survey data suggesting that more than 13 percent of all vehicles designed to run on unleaded gas have been misfueled with cheaper leaded gas. Because misfueling ruins catalytic converters, affected vehicles now spew up to eight times more pollution.

Also contributing to EPA's action is a new economic analysis by the agency showing that a lowering in gasoline-lead levels would bring about clearly quantifiable savings to society that far outweigh the necessary changeover costs to industry. The roughly \$575 million it should cost refiners to meet the newest lead limits by 1986—the target implementation date—"is more than offset by the \$1.8 billion that will be saved during that year alone from lower costs for medical treatment and rehabilitation [for lead poisoning], and improved fuel efficiency," Ruckelshaus notes. The net benefit to the national economy "will thus exceed \$1 billion in 1986 and each year thereafter," he points out.

But the clincher, explains Bernard Goldstein, a physician and EPA's assistant administrator for research and development, are new health data. Referring to the graph (above right), Goldstein notes the near perfect correlation between fluctuations in leaded-gasoline sales in the New York City area and fluctuating blood-lead levels in local inner-city children aged 2 to 3 years. He pegs the chance that anything other than leaded-gasoline emissions might account for these near lockstep variations as "less than 1 in 10,000." Leaded gasoline has been estimated to account for 80 percent of airborne lead and up to 50 percent or more of a typical child's lead exposure.

Even more worrisome, he says, is new research showing a host of adverse health signs at blood-lead levels below that previously accepted as "safe"—30 micrograms (μg) per deciliter (dl) of blood. Goldstein notes that EPA scientists have found altered electroencephalogram (EEG) patterns and brainstem auditory-evoked potentials in preschool children with as little lead as 8 $\mu\text{g}/\text{dl}$. Blood-lead levels as low as 15 to 20 $\mu\text{g}/\text{dl}$ not only can interfere with vitamin D metabolism, but also with putting iron into the compound used to form heme, a necessary constituent of hemoglobin. Unpublished gov-



ernment survey data indicate adults may develop elevated diastolic blood pressure with lead in blood as low as 10 $\mu\text{g}/\text{dl}$. Finally, congenital abnormalities have just been linked to umbilical blood-lead levels in amounts averaging less than 10 $\mu\text{g}/\text{dl}$, he says.

Though Goldstein cautions that many of these findings are still preliminary and their practical significance speculative, he says they also raise the frightening specter that there may be no "safe" threshold for lead. And that, he points out, is why EPA has been "compelled" to propose reducing lead levels.

Why not eliminate lead in gas entirely? It's something EPA considered. But there are still some older cars that need lead's lubricating properties to limit engine wear. It's a dilemma with which Goldstein can identify. "On the one hand," he says, "I've treated people with lead poisoning. On the other hand, I have a 1967 Lincoln."

—J. Raloff

Gunsmoke comes to EPA

Technicians from the Environmental Protection Agency were taking routine pollution samples near their Atlanta office in March 1983 when someone fired gunshots at them. The workers left at once, notes Robin Woods of the EPA's Washington, D.C., office. Such gun exchanges aren't common, but "occasionally, agents have had guns pulled on them. They wanted protection before they began to investigate," Woods adds.

EPA criminal investigators also complain about witnessing illegal dumping of toxic chemicals, but being helpless to do anything besides take notes and scramble for the local police. Meanwhile, Woods says, the culprit may escape.

To counter these situations, the EPA's 23 criminal investigators last week were sworn in by the U.S. Justice Department as official U.S. Deputy Marshals. This gives them the right to carry guns, make arrests and execute search warrants. Courtney Price, assistant EPA administrator of Enforcement and Compliance, says investigators can now hold their own against "midnight dumpers and other flagrant violators." □

Toward a stronger toxic-waste law

Some of the loopholes and gaps in the current law governing the handling of hazardous wastes may soon be closed. Last week, the Senate voted unanimously to reauthorize and strengthen the Resource Conservation and Recovery Act (RCRA). The House passed a similar but stricter version of the bill last November. Later this month, members of the House and Senate will meet in an attempt to iron out differences between the two bills.

Work on the bills will be completed before Congress adjourns this fall, predicts Sen. John H. Chafee (R-R.I.), who helped shepherd the bill through the Senate. This measure could be the first major environmental program to be reauthorized since the Reagan administration took office.

The general principles in both the House and Senate bills are "more or less the same," says Joel S. Hirschhorn, analyst for the congressional Office of Technology Assessment. "But, there are all kinds of differences when you get down to the fine details of how to implement the program."

Both bills, for example, increase restrictions on land disposal. This will force companies either to reduce the amount of toxic waste produced or to find acceptable ways of destroying or detoxifying the waste (SN: 3/26/83, p. 198). However, the Senate version allows a longer time for the new standards to be met.

The most sweeping change may be the large increase in the number of companies that will be regulated under the new law. The existing law requires only those companies that generate more than 1,000 kilograms per month of hazardous waste to follow disposal regulations set by the Environmental Protection Agency (EPA). The new bills lower this exemption level to 100 kilograms per month, although each bill does it in a different way.

"We think the Senate version is superior to the House version," says Mark Griffiths of the National Association of Manufacturers, because it allows a longer time for implementation. "We understand that [small-quantity hazardous-waste generators] are going to be regulated," he says. "We just don't want to overstrain the regulatory system."

In commenting on the Senate legislation, EPA Administrator William D. Ruckelshaus said that despite tight deadlines for implementing new programs, the bill "is a workable framework for carrying out our commitment to effective management of hazardous wastes."

"It's a question of will," says Hirschhorn. "There's no doubt that in order to meet the deadlines, it requires more work within EPA, which means they need more staff... which means they need more money. But I think it's within the realm of possibility."

—I. Peterson