Gasoline lead

Ruckelshaus makes a move

Washington

CITING "overwhelming" evidence that lead in gasoline is a threat to human health, the Environmental Protection Agency (EPA) has proposed cutting back the lead content of gasoline by 91 per cent.

Besides bringing about a direct reduction in the amount of lead going into the atmosphere, the new rule, if adopted, is expected to increase the price of leaded gasoline at least to that of unleaded, thus discouraging the practice of fuel switching. An estimated 13 per cent of car owners equipped with catalytic converters illegally use leaded fuel because of its lower price.

The leaded fuel then destroys the catalyst, causing another pollution problem: hydrocarbon and carbon monoxide emissions increase by at least a factor of four.

The Reagan Administration had originally proposed doing away with, or at least relaxing, the old lead-in-gasoline standard of 0.5 grams of lead per gallon applicable to the average lead content of all gasoline, leaded and unleaded. After complaints from health experts, the administration changed its mind and, in the autumn of 1982, imposed a standard of 1.1 grams of lead per gallon of leaded gasoline, which EPA reckoned was equivalent to 0.5 grams per average gallon standard, and which would reduce lead even more as the use of leaded gasoline declined.

Last week, EPA Administrator William Ruckelshaus acknowledged that the reduction had not occurred as quickly as had been expected, largely as a result of fuel switching. The agency had predicted in 1982 that lead usage would be 21.4×10^9 grams by 1988 but its revised estimate is 35.7×10^9 grams, up by 67 per cent.

The new standard, 0.1 grams of lead per gallon of leaded gasoline, is the minimum amount needed for older engines that require lead as a valve lubricant. EPA estimates that by the mid-1990s, all of these older cars will have been retired; at that time, an absolute ban on lead in gasoline may be proposed.

EPA is considering two options for introducing the new standard. The first would impose it in 1986, the second would phase it in, reaching 0.1 grams per gallon by

1988. There will be hearings on the proposal at the end of the month.

The lead proposal is one of the very few that the Reagan Administration has made to tighten environmental regulations. Ruckelshaus last week cited the persuasive evidence linking lead in gasoline and lead in children's blood. His case was probably not hurt, either, by a cost-benefit analysis showing that the cost of the new regulation, \$375 million, is vastly exceeded by reduced medical costs and reduced vehicle maintenance costs of \$1.8 million. The Office of Management and Budget, the well-known scourge of environmental regulation, could not argue with those numbers.

Stephen Budiansky

Biophysics congress

Stay-away hosts

THE eighth international biophysics congress held at Bristol (United Kingdom), from 29 July to 4 August and organized by the International Union for Pure and Applied Biophysics (IUPAB) and the Royal Society, attracted approximately 1,300 people. The triennial conference aims both to provide a forum for discussing latest developments in a particular field and to give people a flavour of the biophysical world outside their own part of it.

A vast range of topics was considered at Bristol and the small number of invited speakers in each session were provided with enough time to present their own work in relation to a general framework. The central emphasis at this conference was on atomic interactions, structural transitions and dynamics of macromolecules and membranes. Recent biophysical advances in resolving higher levels of molecular organization (motile and structural proteins, sensory receptors) were described with the use of computer graphic, nuclear magnetic resonance (NMR) and image reconstruction methods. Two practical applications of biophysics were much in evidence, *in vivo* NMR, the non-invasive technique with huge medical potential, and the manufacture, processing and storage of foodstuffs.

International enthusiasm for the conference (over 350 delegates from the United States alone, good representations from the Soviet Union and China) was not mirrored by the UK attendance, which was only one-sixth of the total. Clearly many "soft money" scientists were not prepared to pay for the cost of the meeting from their grants. However, a successful conference was achieved by almost 1,000 poster displays of current research, efficient organization and pleasing surroundings in Bristol's floating harbour. Sightings are already set towards Jerusalem in 1987.

Maxine Clarke

Sakharovs

More anxiety in West

SCIENTISTS from 13 countries, including several Nobel prizewinners, will this week launch a new action in support of Dr Andrei Sakharov and his wife, Elena Bonner. Those concerned will offer to maintain a continuous presence in Moscow of volunteer "good faith witnesses" (on a rotating basis), if the Soviet authorities will allow Mrs Bonner to travel abroad for ophthalmic treatment.

It was in protest at the refusal of the authorities to permit such treatment that Dr Sakharov began his reported fast in May. The Soviet official line, however, is that Mrs Bonner can receive adequate treatment in the Soviet Union and that she wishes to go abroad only to carry out anti-Soviet propaganda.

Those who have agreed to act as "good faith witnesses" are treating the commitment seriously — to the extent that several of them have carefully specified the dates when they have unbreakable professional commitments. Under the circumstances, however, the likelihood that their offer would be accepted seems extremely remote — leaving aside the question of what reprisals the Soviet authorities could take on the "witnesses" should Mrs Bonner either fail to return or give press interviews which the Soviets might consider had a political content.

Moreover, according to sources in Moscow, Mrs Bonner has succeeded in getting a letter to her friends there, for the first time since May, in which she says that she expects to be put on trial before the end of the month, on a charge of anti-Soviet slander. Dr Sakharov's relatives abroad are with good reason cautious about any news purporting to come from either of them, but his step-daughter, Mrs Tania Yankelevich says that the family are inclined to accept this particular letter as authentic.

The relatives, however, still have no reliable news about Dr Sakharov. Mrs Yankelevich, says, however, that the family are treating seriously reports that, in June, a team of experts on forcible feeding was sent to Gor'kii, and also the report in mid-July that Dr Sakharov had been given injections of psychotropic drugs. Even here, however, there is some lack of clarity, since the psychiatrist said to be commuting to Gor'kii by special plane, Dr Vladimir Rozhnov, is a specialist in psychotherapy and hypnosis not in drug-treatment. It is possible, of course, that a two-pronged course of "treatment" has been used, particularly since (according to Mrs Yankelevich), during Sakharov's previous protest fast, in November 1981 (to obtain an exit visa for his stepson's fiancée) "psychotherapeutic" pressure (but no drugs) was used in a vain attempt to get him to abandon his fast.

Vera Rich