

plead hardship with some conviction. They have until February 15 to come up with their plans.

But the Los Angeles smog is not Ruckelshaus's only worry in relation to the Clean Air Act. Acute shortages of low-sulphur fuels in the United States are likely to prevent some states from putting into effect their plans for meeting the sulphur oxides standards prescribed by the act, and the situation is likely to be exacerbated by the so-called energy crisis.

A study conducted by the Mitre Corporation for EPA has come to the conclusion that there will be insufficient quantities of low-sulphur fuels available, particularly in the Midwest, to allow all the plans to be put into effect, and it suggested that some states which have relatively pure air should be de-regulated. The effect would be to increase sulphur dioxide pollution in those states, although it would not increase enough to exceed the primary air quality standards. Moreover, the "energy crisis", which has rapidly taken over from the "environmental crisis" as the chief topic of conversation in the United States, is likely to harm the environmentalist bandwagon in general and the Clean Air Act in particular.

Exceptionally cold weather earlier this month caused such a shortage of heating oil that schools and offices were closed all over the Midwest, and other areas were preparing for power breakdowns. President Nixon is due to outline the Administration's policies for coping with the energy crisis in a message to Congress in February or March, and it is widely expected that he will call for a greater reliance on coal for electricity generation—a move which would not help solve the problem of the shortage of low sulphur fuels.

But Ruckelshaus, for one, can be expected to fight hard to preserve the Clean Air Act from moves to weaken it. He has already refused to give automobile manufacturers extra time to develop emission control devices, in spite of a recommendation from the National Academy of Sciences, and his hard-nosed management of the EPA during his first two years in the job has won him wide respect from all sides. He said last week that he would like more flexibility in administering the provisions of the Clean Air Act, but that the act is "a great success". Just "because 5 per cent of it may not be working doesn't mean you ought to junk the whole act", he said.

#### CIGARETTES

## Smoking and Health

from our Washington Correspondent

SINCE 1964 the US Public Health Service has published seven reports surveying the evidence linking cigarette

smoking to disease and premature death. All have found that cigarette smoking is not only a major cause of lung cancer and chronic bronchitis, but that it is also associated with illness and death from chronic bronchopulmonary disease, cardiovascular disease and other illnesses. The latest in the series, published last week, is no exception. According to Dr Merlin K. DuVal, who resigned last month as Assistant Secretary for Health, it "confirms all these relationships", and it also has disquieting things to say about the effects of smoking on foetal development and mortality. The report also takes a look, for the first time, at brands of little cigars which are becoming popular in the United States. It concludes that if they are smoked in the same manner as cigarettes, they are likely to have the same effect on the health of the smoker.

As for the effects of smoking on pregnancy, the report points out that in 1970 one-third of American women of child-bearing age were cigarette smokers and it is estimated that the percentage of American women who smoke during pregnancy is "in the neighbourhood of

20 to 25 per cent". A large foetal population is therefore at potential, though preventable, risk.

The report comes to the following conclusions about the effects of smoking on the foetus:

- On the average, a woman who smokes during pregnancy runs nearly twice the risk of delivering an infant of low birth weight as that of a non-smoker, and there is strong evidence of a dose-response relationship.
- Recent studies suggest that "cigarette smoking is most strongly associated with a higher stillbirth rate among women who possess less favourable socio-economic surroundings or an unfavourable previous obstetrical history".
- There is a "strong, probably causal" association between cigarette smoking and higher late foetal and infant mortality.
- No conclusions can be drawn about any relationship between smoking during pregnancy and congenital malformation.
- Smoking does not seem to influence the sex ratio of newborn infants.

## Short Notes

### Institute of Medicine

THE Institute of Medicine, an associate institution of the National Academy of Sciences, announced last week that it has been given a grant of \$300,000 by the Richard King Mellon Foundation in support of its general operations. The grant will be paid in three annual instalments, and it brings the total amount granted to the institute for the next three years to \$1.5 million.

### Reshuffle at NIH

TOP officials at the National Institutes of Health were shuffled around last week in a manner resembling a strange game of executive musical chairs. Dr John F. Sherman, Deputy NIH Director for the past four years, was promoted to Acting Director of NIH. Dr Robert Q. Marston, who was fired last month as NIH Director, was appointed Acting Director of an NIH institute, the National Institute of Neurological Diseases and Stroke (NINDS), and Dr Edward F. MacNichol, NINDS Director since 1968, left NIH partly of his own volition.

The moves suggest that Sherman will probably be given the full directorship of NIH, although there is still a possibility that President Nixon could appoint somebody else. But Marston's appointment is a temporary one, to ensure administrative continuity while a new NINDS director is chosen. Marston was informed last month that

President Nixon had accepted his *pro forma* resignation as NIH Director, but no reasons have yet been publicly stated. MacNichol, on the other hand, resigned on his own initiative. It was revealed, in September 1971, that he had spent several months at Woods Hole while drawing government travel funds of \$25 a day—a fact which led to a review by the General Accounting Office and by the NIH head office of government travel grants—but MacNichol retained his post without any change of status.

The reshuffle therefore puts Sherman in authority over his former boss and Marston in a dead end job.

### US/USSR Cooperation

COOPERATION between the United States and the Soviet Union on environmental problems is continuing apace. This week, a joint working group met in Moscow to discuss wildlife conservation, and the Council on Environmental Quality, which is looking after the US end of the cooperative agreement, announced last week that fifteen other joint meetings have been arranged for 1973 on topics ranging from air and water pollution to earthquake prediction. Meanwhile, the chief cooperative agreement between the United States and the Soviet Union on science and technology is theoretical. The first meeting of the Joint Commission which was set up by the agreement has twice been put off, and Dr Edward David's departure from the Office of Science and Technology has left nobody officially in charge of the US end of the agreement.