

details of the environmental impact of its proposal, as required by the National Environmental Policy Act (NEPA), the lawyers suggest. Such an impact statement, which is required by NEPA for all government projects having an impact on the environment, should spell out exactly what is being proposed, and alternative methods of approach.

One possible method for alleviating fuel shortages this winter, NRDC suggests, is for the federal government to require some meaningful conservation measures, instead of the almost derisory moves in that direction which have been made so far. Moreover, the letter points out that the energy office has not said which regions will be affected by relaxation of pollution controls, how long they are likely to last, or how great the shortage of fuel is likely to be. For its part, the energy office says that it does not know the answers because they depend on how cold it is going to get.

Already the Congress is putting final touches to legislation which will clear away all obstacles to construction of the Alaska pipeline although environmentalists will probably fight the legislation in the courts on the grounds that it is unconstitutional, and as a last resort they are considering the possibility of bringing an antitrust suit against the companies intending to build and operate the pipeline. And automobile manufacturers have now been given the extra year they want to develop exhaust clean-up technology. But there are at least four other major issues which will be fought out in the next few months. They are strip mining of coal, exploitation of offshore oil and gas reserves, extraction of oil from shale in the Rocky Mountains, and an attempt to weaken the Clean Air Act.

As far as strip mining is concerned, the United States possesses more than half of the world's reserves of coal, and much of the low sulphur deposits lie close enough to the surface to be extracted by opencast mining. Already, whole areas of the Appalachians have been stripped of coal, leaving behind massive destruction of mountainsides, streams and vegetation, and large-scale strip mining is likely to begin soon in the Midwest, particularly in Montana. Although some opponents of strip mining are demanding nothing less than a total ban on the method, the battle lines are being drawn chiefly around bills before Congress which are designed to force coal companies to repair the damage wrought by their coal shovels—the largest of which can scoop up 2,000 tons of soil and coal at a single bite. At issue is the stringency of the regulations requiring the coal companies to fill in and revegetate the scars left on the land. Similarly, proposals to exploit the off-

shore deposits of oil and gas and the Rocky Mountain oil shale fields are being fought chiefly to ensure that exploitation of the energy resources is accompanied by adequate environmental protection.

In the long run, the outcome of the various confrontations between the desire to protect the environment and the need for adequate supplies of energy is likely to depend, in large part, on how Mr Train guides the EPA in the next few months. He is on record with a number of tough speeches criticizing those who have made the environment the whipping boy for the energy crisis, and he has spoken out against the move in Congress to exempt the Alaska pipeline from further review under NEPA. And last week he reiterated his support for the thrust of NEPA and the Clean Air Act and said "I am not a rubber stamp for the Administration". In particular, a critical factor will be whether Train's voice in the White House will be equal to that of Governor Love and his Office of Energy Policy. Differences of opinion are already emerging between EPA and Mr Love's office, and the compromises that will eventually be reached will set the basis for environmental policies for many years to come.

#### HUMAN EXPERIMENTATION

### No More Abuse

by our Washington Correspondent

THE Senate last week voted to set up a national commission to safeguard the rights and welfare of those who take part as experimental subjects in biomedical or behavioural research. The move is a direct response to a number of recent disclosures of total disregard for human rights in some research projects, perhaps the most notorious of which was the so-called Tuskegee study of the effects of syphilis, in which treatment was withheld for 40 years from some 200 poor black men who were known to have the disease. The Senate decreed that all grants and research contracts should be subject to peer review before they are awarded by the National Institutes of Health or the National Institute of Mental Health. The Senate also called for a thorough study of the ethical, legal and scientific implications of psychosurgery, and voted to ban research on living fetuses—at least until the proposed commission had a chance to study the matter.

A commission to protect the rights of experimental subjects was proposed by Dr Bernard Katz of Yale University during hearings held by Senator Edward M. Kennedy's Health subcommittee, and it was written into a research training bill by Kennedy and his committee. Made up of eleven members appointed by the President and drawn

from a variety of disciplines, the commission would be charged with the task of drawing up mandatory regulations governing all clinical research supported by the Department of Health, Education and Welfare (HEW). The commission would eventually oversee the implementation of the regulations.

In short, the commission would establish guidelines for the selection of subjects and for obtaining their consent to take part in biomedical research projects, and it would draw up risk-benefit criteria for deciding whether individual research projects are justified. The commission would also be required to recommend to Congress sanctions that can be invoked if the regulations are violated, and suggestions for compensating individuals who are injured as a result of their participation in a research project. Although the bill stipulates that the commission would be concerned only with research funded by HEW, it also suggests that the commission should consider ways to bring all human experimentation in the US under its purview.

A key component of the proposal is the setting up, in every institution receiving HEW funds for clinical research, of institutional review boards which would be certified by the commission. The chief function of the boards would be to ensure that the regulations are properly implemented at the working level, and if necessary they would refer disputes to the commission for arbitration. Every institution receiving funds from HEW for clinical research would be required to set up review boards.

As for the other provisions in the Senate bill, like the House version of the legislation, it calls for some \$208 million to be spent on biomedical research training grants in the present fiscal year. This is in contrast to the Administration's recently announced decision to spend only \$30 million this year on a new training programme, and eventually to build up the expenditure to some \$90 million in three years' time. Whatever Congress finally decides to vote, however, it can be assumed that the Administration will release only what it wants to spend.

Finally, the bill includes a provision demanding that all grants and contracts awarded for biomedical research should be subject to peer review. The provision was included in the bill in response to suggestions earlier this year that the Office of Management and Budget had the knives out for the peer review system because it made the allocation of research money insensitive to central management control. Those suggestions caused such an outcry from the scientific community, however, that wholesale butchering of the peer review system now seems unlikely.