

cautions that there are potential problems facing widespread application of some of the techniques. The use of sterile male insects to reduce reproduction in a target population, for example, is effective only when the population has been reduced by other means. Moreover, since potential markets for sterile male insects are likely to remain small, there is little commercial incentive for private firms to get into the business of producing them.

Thus, the general message is that although various alternatives are promising, there is no magic insect zapper", as Kennedy put it, to replace chemical poisons in the near future. "The task of pest control over the next 10 years will almost certainly become larger rather than smaller", the committee concludes. It therefore recommends that research efforts be stepped up, and in particular that basic research on organisms and ecosystems be given more attention by various government agencies.

As for efforts designed to eradicate individual pest species entirely, the committee warns that such schemes have limited chances of success and frequently turn out to be inordinately expensive. In particular, the committee recommends against a programme,

strongly urged by some scientists in the US Department of Agriculture, which is designed to eradicate the boll weevil from the cotton fields of the southern United States. The scheme, which would employ a variety of pest control techniques, would cost about \$1,000 million. Although extensive trials conducted in 1972 indicate that the programme would have a good chance of success, the committee suggests that there is considerable doubt that the boll weevil could be eradicated entirely. The committee cautions that if the programme fails, it may endanger public confidence in the alternative methods of pest control which would be used.

One of the problems which the committee encountered in its research was an appalling scarcity of data on pesticide use in the United States. "The pest control enterprise places a billion pounds of toxic materials into the environment each year", the committee states, "but it is considered 'normal' for us to have only the vaguest idea of how much each compound was used where, and then only after a decade lag". It therefore urges that much more effort be put into monitoring pesticide use and that chemical companies be required to report their production and sales figures to the federal government. □

#### OSETP progress

A longstanding desire of the scientific community in the United States came a step closer to reality last week when the Senate unanimously approved a bill to re-establish a science policy office in the White House. The bill is similar in many respects to a version passed by the House last November, but there are a few important differences which must be ironed out before the measure is sent to President Ford for his signature. The Senate bill would establish an Office of Science, Engineering, and Technology Policy in the White House, headed by a Director who would also be the President's Science Adviser. Unlike the House bill, the Senate version specifies that the director of OSETP would sit on the powerful Domestic Council and be a statutory adviser to the National Security Council. The Senate version would also set up a programme designed to strengthen science policy arrangements at the state level, and to provide grants to states for the application of technology to various pressing domestic problems. It is now expected that the bill will be ready for Mr Ford's signature by the end of March.

### Triple resignation

THE embattled nuclear power industry in the United States suffered a potentially severe political setback last week when three senior engineers in the reactor division of the General Electric Company (GE) quit their jobs and announced that they will campaign for anti-nuclear groups. They said in their letters of resignation that they have become so concerned about questions of reactor safety, proliferation of nuclear weapons, and radioactive waste disposal that they can no longer work for the industry and keep their doubts to themselves.

Each had spent his entire professional career working for GE and, until they quit on February 2, all three were employed at the company's facility in San Jose, California. Although they have raised no new issues, their espousal of the anti-nuclear cause will clearly have substantial impact on public concern about the hazards associated with nuclear power.

That impact is likely to be most keenly felt in California where, on June 6, voters will determine the future for nuclear power in that state. All three have announced that they will campaign heavily in support of a

proposition, to be put to a state-wide vote during the California Presidential primary election, which would almost certainly halt construction of nuclear power plants in California and eventually lead to shut down of existing plants there.

News of the resignations prompted swift reactions in Washington. Congressmen and Senators who have previously expressed concern about nuclear power issued statements publicising the development; Senator John O. Pastore, the chairman of the powerful Joint Committee on Atomic Energy, has tentatively scheduled a committee hearing on February 18 at which the three engineers will testify; and the head of the Nuclear Regulatory Commission, William A. Anders, met with them last week to hear their concerns.

At a press conference called by the Union of Concerned Scientists, an outspoken anti-nuclear organisation, the three engineers said last week that no single event prompted their departure from the world's largest manufacturer of nuclear equipment. All three said that their concerns have been growing for some time, and they felt that the nuclear industry has been seriously downplaying the risks

associated with nuclear technology.

The three engineers are Dale G. Bridenbaugh, formerly Manager of Performance Evaluation and Improvement, who has headed a special project to assess the adequacy of the primary containment vessels of GE's nuclear reactors; Gregory C. Minor, former Manager of Advanced Control and Instrumentation, who has been responsible for design of safety systems and control room instruments; and Richard B. Hubbard, former Manager of Quality Assurance, who has been responsible for ensuring that GE's reactor equipment meets federal quality standards.

Though all three said they reached their decisions to leave the nuclear industry independently, Minor's letter of resignation probably sums up their feelings with the statement that he is "convinced that the reactors, the nuclear fuel cycle, and waste storage systems are not safe. We cannot prevent major accidents or acts of sabotage. I fear that continued nuclear proliferation will quickly consume the limited uranium supply and force us into a plutonium-based fuel economy with even greater dangers of genetic damage and terrorist or weapons activity".