

ENVIRONMENTAL RELEASE

UK law in the offing

London

JUMPING the gun on a long-awaited report from the Royal Commission on Environmental Pollution, the UK Department of the Environment last week issued a consultation paper proposing new legislation concerning the deliberate release of genetically manipulated organisms. Should the proposals become law, releases would be subject to notification and consent and, on the now fashionable 'polluter pays' principle, the costs of the consent process and those of any environmental damage resulting from the release would be borne by the applicant.

The proposed legislation is intended to plug gaps in existing laws. A major gap exists for releases where damage to the environment is the paramount risk. In particular, The Wildlife and Countryside Act (1981) makes it an offence to release any new animal into the wild but it is doubtful that the term 'animal' can be stretched to encompass bacteria or viruses, and it is equally doubtful that the addition of a single gene creates a 'new' animal, despite the recent designation of a fruitfly with an added heat-sensitive gene as such.

New legislation would include provision for notification of planned experiments to the Department of Environment, an authorization process and enforcement measures. There is some indication, however, that exemptions might be granted for certain categories of release which could grow in number as experience was accumulated. An attempt to devise such categories based on hazard analysis is under way but is "not within shouting distance of success", according to one of its advocates, Professor John Beringer of Bristol University.

The consultation paper suggests that genetically modified organisms imported as finished products should be treated no differently from those that had been subject to consent in the process of national development, regardless of the regulatory hurdles they may have crossed in their country of origin. (European legislation for releases — see *Nature* 339, 413; 8 June 1989 — will have to consider this problem within the context of the European Community.)

Another suggestion is that a register of applications for consent is published in the public interest, despite strong arguments in favour of confidentiality, especially for commercial reasons.

Comments on the consultation paper are requested before the end of August to allow new legislation to be included in a general Environment Bill that may be ready later this year. It is suggested, however, that comments are delayed until after publication of the Royal Commission's report on "The Release of Genetic-

ally Engineered Organisms to the Environment", whose overly long gestation period is expected to come to an end early in July. The commission's chairman, Lord Lewis, guardedly says of the new proposals only that "in broad terms, they are not inconsistent with the Commission's views on the sort of legislation that is required".

NUCLEAR POWER

Rancho Seco shutdown vote

Boston

A MAJORITY of the residents of Sacramento, California, voted last week to shut the 918 MW Rancho Seco nuclear reactor. This is a serious blow for the US nuclear industry. Similar referenda have previously been held in numerous states, but this is the first vote in favour of shutting down a working nuclear plant.

The 53.4 to 46.6 per cent vote turned more on economics than on worries about safety. The Rancho Seco plant, completed in 1974, has consistently operated well below average capacity for nuclear reactors in the United States and, in 1988, produced electricity at roughly twice the price per kilowatt hour of electricity from other sources.

Opponents of Rancho Seco have nevertheless hailed their victory as a "shot heard around the world", and have hastened to add that voters rejected the plant in spite of more than half a million dollars spent by the nuclear industry on its lobby to keep the reactor running.

The nuclear industry, on the other hand, prefers to paint the referendum as a "unique situation". Scott Peters, of the Council for Energy Awareness, the nuclear industry trade association, says the vote was "not so much against nuclear power as against a poorly operating plant".

Peters stresses that Rancho Seco was run by a small public utility whose board of directors has itself been divided over the continued operation of the plant. And he notes the irony that the utility has invested \$400 million within the past three years on a "mass refurbishing" of the reactor. The recent vote, he says, does nothing to address the problems of pollution that will be generated by nuclear power's alternatives, or to meet the increased electricity demand faced in several parts of the country.

Richard Rosen, of the Boston-based Energy Systems Research Group, predicts that the economic problems that topped Rancho Seco are not unique. Rosen says that smaller reactors in particular have difficulty generating electricity at competitive prices because of high opera-

Anticipating eventual legislation, the Department of the Environment already operates an interim expert committee to provide advice on environmental aspects of planned releases. The Health and Safety Executive's Advisory Committee on Genetic Manipulation also takes environmental hazards into account when offering advice on planned releases, whose notification to the executive is soon to be made compulsory.

Peter Newmark

ting and maintenance costs relative to their output. Peters and others dispute this contention. But with the announcement earlier this year that a Colorado utility would shut its poorly-operating Fort St Vrain reactor for economic reasons, and the abandonment of the Shoreham reactor in Long Island, New York, Rancho Seco's closure is another major setback for the nuclear industry.

What will become of the Rancho Seco reactor remains to be determined — but there is no permanent disposal site in the United States for high-level nuclear waste, including Rancho Seco's nuclear fuel.

Seth Shulman

Nuclear revival hopes

Washington

A TOTAL of 417 nuclear reactors produced 17 per cent of the world's electricity last year, according to the annual survey of the US Council for Energy Awareness (USCEA). France took the lead with 70 per cent of its electricity generated at nuclear power stations, followed by Belgium at 65 per cent. But in terms of the total number of power stations the United States remains the world leader with 111 plants producing 20 per cent of electricity generated. In the Soviet Union 90 plants produced 11 per cent of electricity.

A comparison with 1987 data shows that the number of nuclear plants under construction fell, largely because of cutbacks in

Nuclear programmes worldwide

	1988	1987
Operable	417	404
Under construction	114	126
On order	16	9
Planned	96	149

the Soviet Union. The number of planned nuclear plants also fell as Venezuela, the Soviet Union, Yugoslavia and Israel abandoned tentative projects.

In May, nuclear power operators formed the World Association of Nuclear Operators to help improve safety and pool information. US operators look to the greenhouse effect and concern over the burning of fossil fuels to restore 'nuclear's' fading popularity.

Alun Anderson