

## Nuclear business

# British fuel company trims sails

BRITISH Nuclear Fuels Ltd (BNFL) plainly expects a continuing public relations battle over the operation of its reprocessing plant at Sellafield in Cumbria, so much is clear from BNFL's annual report published last week. Sellafield has been the centre of the debate over the company's safe use of nuclear technology since an "unscheduled discharge" of radioactive waste into the Irish Sea resulted in a £10,000 court fine in July 1984. More recently, a motion before the European Parliament has called for the temporary closure of the plant.

Expansion modulated by concern for safety is BNFL's new image of itself. Its export earnings, for example, have increased by more than 40 per cent, from £91 million in 1984 to £128 million in 1985. This business, resulting principally from uranium enrichment, has helped to raise turnover from £460 million to £545 million. The company also points to the million pounds a day it expects to spend on new developments over the next 10 years, mostly financed by internally generated funds and advances from customers.

The centrepiece of this expansion is the £1,300 million thermal oxide reprocessing plant (THORP) at Sellafield. The plant, which is planned to be onstream by 1990, is already booked to capacity for the first ten years of operation, with Japan an important customer. At least until the end of the century, according to BNFL, a fleet of ships will be needed just for transporting these wastes from Japan. BNFL officials emphasize that its contracts usually include options to return treated wastes, and the company is "effectively under instruction" to exercise these options in the mid-1990s.

BNFL's bottom line, however, shows the effects of the Windscale court case. Though operating profits also increased, to £138 million, pre-tax profit for the year 1985 was only £68 million, compared to £71 million in 1984. The company ascribes this stasis to production setbacks in nuclear fuel reprocessing and to the commitment of funds to the reduction of radioactive discharges from Sellafield. BNFL claims that these programmes of environmental protection have "undoubtedly influenced the public to take a more favourable attitude towards the company's reprocessing operations".

One of the safety-inspired plants at Sellafield is the £126 million Site Ion Exchange Effluent Plant (SIXEP), which uses clinoptilolite from the Mojave Desert in the United States as a raw material for the extraction of caesium and strontium ions. Data from the computerized plant, according to the company, are not yet conclusive on its effectiveness. Another new project is the construction of £150 million effluent treatment and storage plant for

liquid discharges at Sellafield. The goal is to cut discharge of long-lived alpha radiation emitters from 370 curies in 1984 to less than 20 curies a year. BNFL chairman Con Allday emphasizes that these levels of sea discharges are far lower than those justified by "any simple cost/benefit analysis".

BNFL is not in a position to take quite as positive an attitude toward nuclear waste as was expressed at the British Association of Science meeting at the end of August. There officials from the National Radiological Protection Board and UK Atomic Energy Authority pointed to the high standards of the nuclear industry, describing radioactive waste

disposal as a matter of public education rather than public danger. BNFL claims, however, that such incidents as the 1983 Sellafield discharge have had "no great effect" on the environment, regardless of how data are interpreted by groups of outside critics.

Two important issues in the public relations battle over Sellafield are job protection and secrecy. The Sellafield plant employs over 10,000 people, making BNFL the second largest employer in the area. Neither these employees nor the public at large, according to the British Labour Party, are capable of judging the environmental impact of Sellafield because of the secrecy surrounding government and company reviews of safety at the site. Labour, in other words, would support an "open review at places like Sellafield".

Elizabeth Collins

## Animals in research

# US rules to be made tighter

Washington

THE University of Pennsylvania's Head Injury Laboratory, whose research has been temporarily halted pending an investigation by the National Institutes of Health (NIH) (see *Nature* 25 July, p.286), now faces the prospect of longer term closure. The US Department of Agriculture, after looking at videotapes stolen by an animal rights group that broke into the laboratory last year, is charging the university under the Animal Welfare Act, specifically with respect to operations performed using inadequate anaesthesia, insanitary conditions and improper postoperative care. The university faces a £4,000 fine if found guilty.

Meanwhile, the Head Injury Laboratory last week replied to NIH's report, which found evidence that its regulations were being ignored. NIH will "evaluate" the reply and decide later this month whether to continue support of the research programme. But further pressure is being brought to bear by Congress, where two representatives will seek to block support for next year when the NIH appropriations bill is discussed, thus preempting any action NIH might take.

The events surrounding the University of Pennsylvania reflect the general problem of laboratory animal welfare in the United States, where legislation is less strict than in many other countries (see *Nature* 311, 295; 1984). NIH issue guidelines for the use of animals in laboratories that demand adequate care and surgery to be performed by "trained experienced personnel"; a committee containing at least one veterinarian must regulate research at each institution.

The latest modifications to the guide, imposing stricter conditions, come into force at the end of the year. There are also regulations for research supported by other organizations, such as the National

Research Council and the Public Health Service. But the Animal Welfare Act is long overdue for reform. A recent study by the Animal Welfare Institute found that, using the "most optimistic assumptions", one-quarter of registered research facilities are not meeting the act's requirements.

Previous attempts to amend the act have failed. But increased public awareness of the mistreatment of laboratory animals, typified by the case of the University of Pennsylvania, has resulted in new optimism that Representative George Brown and Senator Robert Dole



will next month successfully introduce their bill to amend the act.

The bill will considerably strengthen the regulations, requiring training for researchers, the use of pain killers and justification of the use of experimental animals as well as better pre- and postoperative treatment. Fines for the infringements of the law will be increased and committees, including a veterinarian and an informed outsider, will be responsible for the treatment of animals at each institution where research is performed. The amendments are supported by the American Physiological Society.

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