

NEWS AND VIEWS

Public Exploitation

BRITAIN'S National Research and Development Corporation expects to be committed up to its present borrowing limit of £25 million by 1968, according to the annual report for 1965-1966 published last week. The Managing Director, Mr. J. D. Duckworth, is hopeful, however, that Parliament will extend this limit by another £25 million. "If we don't get more," he said, "we must start cutting back on our commitments quite soon until our present investments start paying back." Despite the Government's decision to decrease research expenditure, Mr. Duckworth does not feel that the present financial difficulties will affect the position of this corporation; the sums involved are relatively small and would be invested in development and industrial application, not research. "It is in our area that Britain's economic future depends", he added. Informal discussions take place continually between the NRDC and the Ministry of Technology, but more formal negotiations with the Minister will probably begin in the near future so that a new Act can be presented to Parliament during the next session.

The NRDC was established under the Development of Inventions Act of 1948 to develop inventions derived from publicly supported research and inventions from other sources which lack a sponsor. The original Act was amended in 1954, 1958 and 1965; the 1965 Act increased the borrowing powers of the NRDC from £10 to £25 million. The corporation is designed to act as a link between research and industry, but is increasingly participating in joint ventures with industries both to speed up development of important innovations and to spread the cost of taking risks. Within the past year it has also tried to encourage innovation by sharing risks with the user as well as the developer of new products, although the NRDC only provides some capital and is repayed if profitability or productivity increases. Mr. Duckworth stated that at present only 10 per cent of the corporation's funds are being used in this new venture, but he expects that the proportion will greatly increase in the near future.

The increased activity of the NRDC is shown in the figure of £865,000 for receipts in the nine months to the end of March from licensing, dividends, sale of equipment, and development levies. Nearly £4 million has been spent, and of this more than £3 million on projects. In 1965 the total spent on projects was a mere £500,000.

During the last nine months the NRDC has taken on twenty-eight new projects, bringing its total to 121; 155 others are at present under consideration. The corporation continues to support hovercraft development and is supporting a hoverferry, the *CC6*, being developed by Britten-Norman, Ltd. This is designed to carry four to five cars and between thirty and forty passengers. Support for fuel cells, started in 1956, continues. According to Mr. Duckworth, the cells are not yet economically feasible, but the United States is interested and American licences have led to an exchange of information that should strengthen the technical position of the British effort.

New projects include the development of synthetic insecticides related to natural pyrethrum, which com-

bine the lack of toxicity of the natural pyrethrins with significantly lower costs. There is a metal polish additive which may be useful in making such metals as copper, zinc, steel and aluminium more resistant to tarnishing. NRDC is also supporting projects in such areas as teaching machines, minimal farm cultivation, and a multi-gas burner, and is anxious to support computer-controlled automation studies.

Culham Despondent

Two visiting scientists at Culham Laboratory of the United Kingdom Atomic Energy Authority are pessimistic about its economic future. The two American physicists, Prof. Marshall Rosenbluth of the University of California and Prof. Richard Post of the Lawrence Radiation Laboratory, in a letter to the London *Times* on August 23, stated that they have "heard rumours that due to the present financial crisis, scientific research activities not involving an immediate financial return may be curtailed in Britain". They go on specifically to praise the Culham Laboratory as unexcelled in the field of plasma physics. "A laboratory such as Culham is a precious national asset, difficult to come by".

Prof. Rosenbluth has said on the telephone that Culham scientists are more worried about money than they have been during his frequent visits in the past, but added that he has no specific knowledge to justify his pessimism or that of his colleagues at the laboratory. However, he and Prof. Post state that if there is a cut-back on research funds, they "believe the majority of the creative leaders would be inclined to join the 'brain drain' and come to the United States".

The Ministry of Technology was not prepared to comment on the general situation of government aid for research which is closely tied to the economic situation in Britain as a whole; it does admit, however, that generally it is becoming more difficult to get money. The UKAEA, the public corporation directly responsible for Culham, says that it, like other public organizations, had been asked to save £2 million pounds in the next year, but that as yet no decisions had been taken as to where these cuts should be made. While it was very possible that some cuts would be made at Culham, there was no general policy to reduce the proportion spent on basic research.

Earthquake in Turkey

ON Friday, August 19, 1966, an earthquake of approximate intensity 9 on the Modified Mercalli Scale occurred in Eastern Turkey from an epicentre near latitude $39\frac{1}{2}^{\circ}$ N., longitude $41\frac{3}{4}^{\circ}$ E., between Varto and Hınıs in Mus Province. This is some 50 miles south-south-east of Erzurum and between Erzurum and the western end of Lake Van. The area is remote and mountainous, and it is believed that more than 2,000 people died and that many more were injured. The shock was felt in the Soviet Union. Aftershocks are continuing and at least one of these was felt as far west as Istanbul, though no damage was done there.

Turkey is a country of which every part is liable to earthquakes, the most stable area being just inland, near the centre of the south coast (in Asia Minor).