

NEW WORLD

AEC Promotes Safety Research

by our Washington Correspondent

AMID rumours of a palace revolt and Congressional displeasure, the Atomic Energy Commission is going ahead with a reorganization plan designed to give more prominence to research on reactor safety. The plan represents an abrupt *volte face* on the part of most of the Atomic Energy Commissioners and it may lead to the resignation of Milton Shaw, the powerful head of the AEC's Division of Reactor Development and Technology. But, on the other hand, it may help to head off criticisms that reactor safety has suffered from conflicts of interest within the agency, and it seems to represent a victory for the AEC's new chairman, Dr Dixie Lee Ray.

The essence of the reorganization plan is that safety research on water-cooled reactors is being taken out of Shaw's division and placed in a division of its own. Dr Herbert J. C. Kouts, a nuclear physicist at present employed at Brookhaven and a former chairman of the Advisory Committee on Reactor Safeguards, has been appointed director of the new division and will report directly to the AEC's General Manager. According to Dr Ray, the changes will "provide for greater emphasis and effectiveness in (the AEC's) safety research programmes", and they will "help to speed resolution of the still-unanswered questions in this rapidly developing technology".

Such a relatively minor bureaucratic reshuffle may seem an insignificant matter, but it represents a rather fundamental change of view within the commission, and it comes at a time when public concern over reactor safety is at its height. It seeks to redress a constant criticism of the AEC, namely, that it suffers from a conflict of interest that arises from its dual responsibility for promoting and regulating nuclear power. As far as safety is concerned, the agency's critics have suggested that since responsibility for safety research has been vested in the division which is also responsible for reactor development, it has not received the attention it deserves. The reorganization plan is thus an attempt to remove the appearance of conflict of interest and to elevate safety research to a higher position in the AEC's bureaucratic hierarchy.

But the reshuffle has not pleased everybody. Among those who are not enamoured with it are Milton Shaw, who has lost some of his responsibilities, Commissioner James Ramey and a few

powerful members of the Joint Committee on Atomic Energy, the AEC's Congressional watchdog. They are concerned that since safety systems are such an integral part of reactor design, to divorce safety research from reactor development could be counterproductive.

But those who favoured splitting off safety research into a separate division—and Dr Ray was among them—argued that as far as water cooled reactors are concerned, development is essentially complete, and so there is no need to integrate safety research with development. The same cannot be said for the fast breeder reactors, however, and so the final reorganization plan keeps research on breeder reactor safety under Mr Shaw's wing.

The fact that a majority of the five-member commission eventually agreed to the reorganization plan represents a complete change of heart during the

past year, for in April 1972 there was a move to shift responsibility for safety research to the AEC's Regulatory Division, but the commission was unanimously opposed to the idea. The Joint Committee on Atomic Energy in fact then held a day's closed hearings to discuss the matter with commission members, after which James Schlesinger, who was then AEC chairman, wrote to the committee to say that "removing the safety research function from the Division of Reactor Development and Technology would have detrimental effects upon the overall safety of reactors". Last autumn, however, Schlesinger proposed his own scheme to set up an office of safety analysis reporting directly to the commission, which would liaise between Shaw's division and the regulators. Commissioner Ramey said last week in a telephone interview that he still favours that scheme rather than the reorganization

ENVIRONMENT

Out with a Bang?

by our Washington Correspondent

THE latest explosion in the AEC's Plowshare series shook a few buildings and raised some dust in Colorado last week, but it seems from preliminary reports that the blast triggered little damage and met with general apathy among local residents. Whether the test successfully achieved its objective of fracturing layers of rock deep under the surface to release trapped natural gas will not be known for several weeks, when a shaft will be redrilled to the cavern made by the explosion and the quantity of gas trapped there will be measured. Even if the test is an unqualified success, however, there are serious doubts about whether nuclear explosives will ever be used to exploit the vast deposits of natural gas trapped in tight formations beneath the Rocky Mountains (see *Nature*, 241, 494; 1973).

The test, called Rio Blanco, ran into some opposition before it took place—environmentalists tried unsuccessfully to get it stopped by the courts, and Senator Floyd K. Haskell, the new Senator from Colorado, held a day of hearings into the project, but if the AEC and CER Geonuclear Corporation of Las Vegas, its industrial partner in the exercise, propose to take the project any further, they are likely to have to fight tooth and nail in the courts and to overcome some opposi-

tion in Congress and in other government agencies. The chief problem will be that, according to an estimate from the Lawrence Livermore Laboratory, it will take 370 blasts each year until the end of the century to exploit all the gas deposits underneath the Rockies—local residents may be willing to put up with one test shot, but not with several thousand.

The chief fears which have been voiced about the project are that the radioactivity from the blasts will seep into groundwaters and contaminate the Colorado River, but the AEC vigorously denies the possibility of that happening. The question has also been raised of the dangers that may arise from radioactivity in the released gas itself, but Dr Gerald W. Johnson, head of the Plowshare programme, told the Haskell hearings that a consumer would receive an annual dose of radioactivity from the gas about a hundred times smaller than that from a colour television set.

Rio Blanco itself was designed to test whether firing three explosives simultaneously would release more gas than a single shot—the test involved three 300-kiloton devices in a vertical line—and to test a low-yield explosive. The results will enable AEC officials to balance the possible risks associated with development of the gas field with the benefits of being able to double proven reserves of natural gas in the United States. There is a chance, however, that it may have been Plowshare's last blast.