

## news in brief

### ● **Explosion hazard at Windscale:**

An unexpected and potentially dangerous build-up of hydrogen in one of the storage silos at the Windscale reprocessing plant has forced British Nuclear Fuels Ltd to close the plant temporarily. The build-up of hydrogen was discovered on Tuesday, 3 October. Safety procedures were instigated to bring it quickly under control.



Hydrogen is produced by a reaction between the magnox cladding material that is stripped from irradiated fuel elements before they go into the reprocessing plant, and the water in which they are stored in the silos. The hydrogen build-up was caused by a sudden increase in the temperature in the silos, due to the settlement of the magnox; this speeded up the reaction.

The temperature was lowered when the stand-by cooling system was switched on. The hydrogen was dispersed by forced air ventilation of the silos, but this in turn caused a discharge of radioactivity into the area around the silo. Although the discharge was within the safety limits, people working in the area had to be evacuated and decanning (pictured above) and reprocessing procedures halted.

● **Austria decides against nuclear energy:** Austria's new nuclear power station at Zwentendorf near Vienna may never be used, even though it is already loaded with the necessary radioactive elements. This follows a referendum on nuclear energy in which the Austrian people voted by a small majority against the use of nuclear energy in their country. In the poll, 50.5% of the votes were opposed to nuclear energy, and 49.5% in favour.

The referendum puts the Austrian Chancellor, Dr Bruno Kreisky, in a difficult position. The Zwentendorf power station forms a major part of the government's energy policy, and the ruling Socialist Party now has to decide what to do with it. It could be converted to a conventional power station. Dr Kreisky, who has described the referendum result as "a personal defeat", has however announced that he will not carry out his threat to resign if the vote went against atomic energy.

● **"No scientific barriers to nuclear waste disposal" says US report:** Despite limitations, existing scientific knowledge and technology is adequate to proceed with selecting and characterising sites for the permanent disposal of radioactive waste, according to a report issued last week by the US Department of Energy.

The report says that the successful isolation of radioactive waste from the biosphere "appears feasible for periods of thousands of years" provided that a systems approach for selecting the geologic environment, repository site and waste-form is utilised rigorously.

And it says that a broad range of underground media, such as salt, basalt, granite and shales, should be considered to provide a "conceptual framework" for program planning and establishing near-term priorities.

The report was prepared by an inter-agency review group chaired by Dr John Deutch, director of the office of energy research. After 30 days for public comment, a revised version will be prepared for the President as the basis for an administration policy on the handling, transportation and storage of nuclear wastes.

It recommends that an executive planning council be set up as part of a partnership between the federal government and individual states to plan and implement the nuclear

waste programme. And in order to assist in the progression to high level repositories, the report suggests that one or more intermediate facilities be established in several emplacement media and geologic environments "at the earliest practicable date." If an alternative to salt is selected for the first high-level waste depository, this is unlikely to be ready until 1992 at the earliest, the report says.

● **US and China agree to exchange research workers:** China is expected to send over 500 postgraduate students and research workers to the US over the next year under the terms of a verbal agreement made in Washington last week between the National Science Foundation and a visiting delegation from the People's Republic of China.

The most popular subjects are likely to be physical and biomedical sciences, engineering and applied technology. In exchange about 60 US researchers will visit China, although primarily to study subjects in the social sciences, language and literature, and archaeology and art.

In addition to these exchanges, many more Chinese students will come to take courses in the US through private arrangements with US universities; the first of these have already started courses at Stanford University and the University of California at Berkeley.

Under the terms of the agreement, which was reached after a two-week visit by the delegation which had included 14 universities and colleges, each side agreed to use "its best efforts" to fulfil requests for study opportunities, and to pay the costs for its participants.

● **Lund looks at UNCSTD:** How are preparations for next year's United Nations Conference on Science and Technology for Development (UNCSTD)? "Rather bad but not disastrous", says Docent Jon Sigurdson, director of the University of Lund's Research Policy Program and co-editor of the Lund Letter, circulated regularly to governments and people interested in UNCSTD. "There are organisational problems, and if the organisation doesn't work well we can't pinpoint the questions that should be discussed."

It is well known amongst officials working with UNCSTD matters that the UNCSTD Secretariat and the UN Office for Science and Technology have found cooperation difficult, with each one trying to make the conference its own show. Similar problems have arisen between the Secretariat and various UN agencies—UNESCO, for example—and UNCSTD's Secretary-General Da Costa, who has been on sick leave for extended periods, has not been able to provide the strong leadership necessary to bring the squabblers into line.

"The first phase of the preparations—the national analyses leading up to the national papers—is nearly over now", says Mr Lennart Båge of the Ministry of Foreign Affairs. "We are now anxiously waiting for the Secretariat to analyse these papers. As the third preparatory committee meeting has been postponed until January, we need good background documentation in good time for the meeting to make it an efficient starting-point for the international negotiations leading up to the conference."

The Research Policy Program is itself about to begin going through the sixty or so national papers to hand to see which themes they have taken up and where their deficiencies lie. "From what we have seen", says Docent Sigurdson, "most national papers seem to have dealt only with item one on the conference's agenda: science and technology for development. Very little attention seems to have been paid to the other three items, especially the last on: science and technology for the future".