

refuseniks is the law's treatment of applicants for visas with alleged knowledge of state secrets; this continues to be a main reason for denial of permission to emigrate. To receive clearance to leave, a formal declaration is required from an applicant's superior affirming that no state secrets would be compromised. The applicant does not have access to this communication so he or she cannot be certain what it says or even if it has been filed. The period of delay before applicants in this category are permitted to emigrate is said to have been raised from 5 to 10 years to 10 to 15 years.

According to Gottfried and Sessler and other visitors, refuseniks said that harassment, formerly constant and assumed to be officially encouraged, is now not a problem. Would-be emigrés, however, continue to lose their jobs when they apply to leave.

City University of New York physics professor Joseph L. Birman, who returned in late June from a trip to the Soviet Union that included stops at several Soviet cities, described a "diminution of fear" among refuseniks about severe punitive action by Soviet officialdom. He said, however, that the state secrecy criterion is being applied more freely, especially to long-term refuseniks. He said that those turned down for emigration are suffering "an increase by orders of magnitude of anxiety, desperation. They feel stuck there forever," because the current policies may not last and this may be the final opportunity to leave.

Dorothy Hirsch of the Union of Concerned Scientists, a New York-based group active on the Soviet emigration issue and on matters involving scientific freedom, says that reports received by her organization confirm that visas are being withheld from long-term refuseniks. These include Viktor and Irina Brailovsky, cyberneticist and mathematician, respectively; mathematicians Alexander Ioffe and Naum S. Meiman; and cyberneticist Alexander Lerner.

Glasnost is also described as putting strains on relations between refuseniks and dissidents—those who seek increased political or religious liberties in the Soviet Union, but do not necessarily wish to emigrate. Many dissidents have followed physicist Andrei Sakharov in taking a hopeful if cautious view of Gorbachev's initiatives. Others are highly skeptical.

Refuseniks in Moscow told visitors in the spring that a drop-off in the number of American scientists visiting them had made them feel abandoned. The flow of American visitors headed for the Soviet Union has apparently increased sharply, however, with the prospect of there being more U.S. scientists traveling to the Soviet Union than at any time since the 1970s. ■ JOHN WALSH

Briefing:

SSC Deadline Extended

The Department of Energy has extended its 3 August deadline for states to submit site proposal packages for the Superconducting Super Collider. An extension was granted until 2 September because of congressionally mandated changes in the selection process.

Under the revised rules, direct financial assistance offered by any state may not be considered in the site selection process. Offers of such assistance may accompany state proposals, but must be contained in a separate envelope that will not be opened until a site has been chosen. States, however, may use their financial resources to enhance proposed SSC sites by providing roads, sewage services, and so forth. ■ M.C.

"Greens" Challenge French Gene Research

The first shot in what could become a growing conflict among European countries over the release of genetically engineered organisms into the environment was fired in Strasbourg last week by a group of members of the European Parliament. They demanded an immediate halt to experiments with the nitrogen-fixing bacteria *Rhizobium* being carried out by scientists in France.

The experiments, begun in March, involve the release of a bacterium made resistant to the antibiotic kanamycin as a way of tracing its spread in a field of wheat and alfalfa. They are being conducted by scientists working for the National Institute for Agricultural Research at Dijon.

No formal approval was sought by the scientists involved; nor is it required. Although France has formal procedures for evaluating the risks of genetically altered substances, legal permission is only required for products to be sold commercially. Furthermore, the new committee was only established after the experiments had begun.

Benedict Haerlin, a representative of the German Green Party in the European Parliament, said at a press conference that the experiments should be halted until tighter regulatory procedures have been put into place, warning of the danger of an escape of bacteria.

He added that although the Parliament does not have powers to require changes in the domestic legislation of individual European states, it does have jurisdiction over the experiments in question since they were financed by the European Economic Com-

mission, which is keen to promote the applications of genetic engineering to agricultural crops.

The scientists at Dijon have strongly denied that the experiments pose a significant threat to the environment. They point out that only a very small quantity of the bacteria have been released, and that the fields being used will be chemically sterilized once the experiments have been finished.

France currently has less stringent regulations covering environmental release of genetically altered organisms than some other European countries. Denmark has recently decided to ban all such experiments, and a German Parliamentary Commission has proposed a 5-year moratorium, allowing more information on potential risks to be collected. ■ D.D.

France to Boost Research Spending

France's conservative government has decided to take a leaf out of the book of its socialist predecessor and make increased expenditures on research one of its top three priorities in next year's budget, the other two being job creation and international cooperation.

Prime Minister Jacques Chirac announced last week that although the overall increase in public spending between 1987 and 1988 will be kept to 2%—less than the anticipated inflation rate—the budget for civilian research will be increased by 7.7%, to reach a total of \$9.2 billion. Military R&D spending is planned to increase even faster, by more than 12%.

The major focus of the increased funds will be on moves to encourage greater research efforts by the private sector, for example by considerably increased tax incentives. Industrially sponsored research is an area in which France lags considerably behind its European partners, and the goal is to double the number of companies benefiting from the R&D tax incentives by 1992.

At the same time, there will be more support for some of France's traditional large technological programs (*grandes programmes*); spending on space research, for example, is planned to grow by 10%.

The new policy coincides with the appointment a few months ago of a new minister for research and higher education, former chemistry professor Jacques Valade, and contrasts with that of Valade's predecessor, Alain Devaquet. He announced in 1986 that although overall R&D spending was to rise by 8% between 1986 and 1987, most of the extra money was being devoted to military research. ■ D.D.