Army Agrees to New Study of Biowarfare Laboratory

The U.S. Army has agreed temporarily to hold up construction of a controversial new laboratory intended for tests of highly infectious and lethal biological aerosols, pending a study of potential environmental hazards from the facility. The agreement came as the result of a lawsuit initiated by Jeremy Rifkin, a Washington activist and author on biotechnology issues, and joined by the attorney general for the state of Utah, where the laboratory is to be constructed.

In the lawsuit, Rifkin sought a commitment by the Army to prepare either an environmental assessment or a formal impact statement on the new laboratory, which was authorized by a handful of congressmen under an unusual procedure last December (*Science*, 21 December, p. 1405). The laboratory is to be built according to P4 or maximum federal safety standards, and it has aroused some controversy because the data gathered there could potentially be used to develop offensive biological weapons, which are prohibited by a 1972 international treaty.

Rifkin had obtained affidavits from four scientists who asserted that such a laboratory is unnecessary, because permissible defensive research can be conducted with surrogate organisms that require less elaborate safety precautions. Richard Novick, director of the Public Health Research Institute in New York, was among those who maintained that "the aerosol characteristics of pathogens can be simulated with complete assurance by non-pathogenic organisms of the same general types." This view was also taken by David Dubnau, a molecular biologist at New York University.

In addition, Liebe Cavalieri, a biochemist at Cornell and a member of the Sloan-Kettering Institute for Cancer Research who is outspoken on recombinant DNA issues, and David Ozonoff, a physician who directs the environmental health section at Boston University's School of Public Health, noted that federal design standards for such high-security laboratories explicitly discourage the creation of aerosols.

In a filing with the U.S. district court on 23 January, however, the Army conceded none of these points and acknowledged only that it had erred by deciding not to conduct an assessment of potential environmental problems. Unlike formal impact statements, such assessments are not required to consider alternatives or to take public comments into consideration. Depending on the conclusions reached by the Army and the U.S. court, however, the assessment could eventually lead to the preparation of a formal impact statement. It will be completed in a week or so.

—R. JEFFREY SMITH

U.S.–Soviet Academies to Resume Exchanges

Officials of the U.S. and Soviet academies of science have tentatively agreed to renew a formal exchange pact that lapsed in 1980. The pact, which provides for a series of cooperative workshops and scientific symposia during the next 2 years, results from a visit to Moscow on 21 and 22 January by a delegation headed by Frank Press, president of the National Academy of Sciences (NAS).

A list of the dozen or so topics to be discussed at the meetings is still being negotiated. But both sides have agreed that "only forefront fields of science" will be considered, and that participants will be selected jointly "to ensure substantive interaction." This provision was drafted by the NAS in order to prevent last-minute substitutions of lesser Soviet scientists, a frequent occurrence under the last agreement. The NAS is particularly interested in exchanges in mathematics and biotechnology.

At the urging of its members, the NAS had planned to restart the exchange program on two previous occasions, but demurred because of the Soviet shoot-down of a Korean airliner and because of a hunger strike by Andrei Sakharov, the eminent Soviet physicist. One reason for the NAS decision to go ahead now is the improved overall climate of relations in the aftermath of a decision to restart U.S.–Soviet arms negotiations. Another reason is that NAS officials have heard that Sakharov and his wife are healthy, and that he has been allowed to pursue some scientific research in Gorky, the site of his internal exile.

In a brief printed statement, Press did not indicate whether Sakharov's plight came up during the trip to Moscow. He said only that the discussions "covered what constitutes a propitious climate for cooperation . . . [including] our concern about human rights."

The visit was apparently preceded by an amusing exchange between the NAS and the Commerce Department. NAS officials are relucant to provide full details, but apparently Press had wanted to give a lap-held Radio Shack computer to A. P. Alexandrov, his Soviet counterpart. Just before leaving, he was informed by the Commerce Department that it was on a list of items that cannot be exported without a license. He settled on a computerized chess set instead. For Press, who is no stranger to the debate over export controls, it was a firsthand encounter with the controversial regulations enacted to prevent the leakage of advanced technology.

—R. JEFFREY SMITH

New Peace Committee at NRC

Social scientists at the National Research Council (NRC) are planning to set up a new NRC committee to explore ways the social and behavioral sciences can be applied to reducing the risk of war. The proposal is the result of a 1-day meeting last summer conducted by Nobel prizewinning economist Herbert Simon of Carnegie-Mellon University.

According to David Goslin, director of the NRC's Commission on Behavioral and Social Sciences and Education, the committee intends to gather research from the relevant disciplines on such matters as conflict resolution, negotiation, trust and confidence-building measures, the role of public opinion, and the implicit behavioral and social assumptions that underlie strategic thinking.

The group also hopes to make contact with social scientists in the Soviet Union for the purpose of exploring research possibilities. It is currently conducting financial discussions with David A. Hamburg of the Carnegie Corporation of New York and Ruth

Adams, head of the new peace program at the MacArthur Foundation. The new group will complement the National Academy of Sciences' Committee on International Security and Arms Control, which is comprised primarily of physicists.

—CONSTANCE HOLDEN

A Science Primer for Freshman Legislators

In what was truly a freshman course in "Science and Government," a 2-day seminar was held recently in Washington to provide a primer for newly elected congressmen on issues dear to scientists' hearts. But despite an all-star cast of scientists and administrators, the ambience of the National Academy of Sciences, and offerings of catered lunch and dinner, fewer than a dozen of the 40 new legislators showed up. In fact, representatives of sponsoring organizations outnumbered the legislators.

"We don't propose to transform you into professional scientists in 2 days, but we are going to try to learn to talk the same language," said Mike McCormack, a former member of the House Science and Technology Committee. McCormack and George Washington University organized the meeting and arranged use of the Academy facilities. The meeting is apparently the first of its kind. Funding for the meeting, which cost about $20,000, came from several scientific societies, private companies, and industry-related organizations. Two congressmen queried said they had come because they had been assigned to committees dealing with science matters.

Speakers included several former members of the House Science and Technology Committee, Lewis Thomas of Memorial Sloan-Kettering Cancer Center; William Ruckelshaus, former administrator of the Environmental Protection Agency; Joshua Lederberg of Rockefeller University; Erich Bloch, director of the National Science Foundation; and Leon Lederman, director of Fermi National Accelerator Laboratory.

Thomas, the lead speaker, talked about human disease and survival and ended by saying that the study of nuclear winter "is the most urgent scientific problem. And that's not hyperbole." Legislators, however, quizzed Thomas on other issues, such as rising medical costs, gene therapy, and hunger in developing countries. Other speakers discussed scientific method, risk assessment, mathematics, science education, biotechnology, epidemiology and cancer, and energy issues.

An assistant to McCormack said that there are sufficient funds to hold another seminar on science policy later this year, but no decision has been made about the specific topic or when and where the meeting will be held.

—MARJORIE SUN

Ashes to Ashes—to Orbit

Space Services, Incorporated, the Houston-based firm that has been trying for the last several years to develop a market for private space launches, has now signed its first contracts: sometime in 1986, a group of undertakers will use Space Services' privately built Conestaga booster to place human ashes into orbit.

"More than one mortician's group has approached us with this idea," says Space Services vice president William Vance. "So far, we've signed with two"—the Celestis Group of Melbourne, Florida, and the Starbound Company of Tyler, Texas.

Furthest along in its planning is Celestis, a consortium of engineers and morticians headed by Melbourne funeral director John Cherry. The group plans to accept human remains produced by conventional cremation, reduce them in volume by further heating, and place them in 1 centimeter by 3 centimeter capsules identified by name, Social Security number, and a religious symbol.

As many as 13,000 of these capsules will fit into the Celestis-designed payload vehicle, which will be launched by Space Services' Conestoga rocket into the Van Allen radiation belts, where it will remain in orbit for some 63 million years. The space mausoleum will be coated with reflective material so that relatives of the deceased can see it more easily as it passes overhead. The cost per person will be $3900, say Celestis officials.—M. MITCHELL WALDROP

China's Science Academy Revamps Funding Process

The Chinese Academy of Sciences, the country's leading institution for science and technological research, is introducing major reforms in the way it funds research to promote competition among its scientists. In a break from the past, a substantial portion of research will now undergo peer review before funding is granted by the academy. The reforms were announced in January at an annual academy meeting in Peking, according to a recent article in the *Beijing Review*.

While peer review is the norm among Western scientific institutions, the practice has been foreign to the Chinese academy. For the past 30 years, the academy has allotted its various institutes an equal amount of research funds, "which, in turn, distributed the money to research groups without distinction," the article reported. "The practice resulted in research duplications and delays."

Now the academy will annually withhold 17 percent of its total research budget, $214 million, as a discretionary fund to support basic and applied research. The individual institutes, which now total 117, will vie for the money by submitting proposals for peer review.

The academy also announced that it will contract out for certain applied science projects, such as those related to construction and the transfer of technology from other countries to China.

"Thus, the amount of research funds [that] each institute gets from the academy is determined by how well its work is done," said Yan Dongsheng, the Chinese academy's vice-chairman. The reforms will help "cut down on inappropriate projects," he noted.

The academy also announced it also will give the individual institutes more authority over day-to-day management of activities and will focus its attention on long-range planning for research. Previously the academy exercised "very strong control" over the institutes, according to Li Shu Bao, a science official at the Chinese embassy in Washington.

—MARJORIE SUN