Briefing:

NSF Appoints Two Assistant Directors

National Science Foundation director Erich Bloch has announced the appointment of new heads for two of its directorates centrally involved in NSF efforts to promote economic competitiveness. Taking over as assistant director for engineering is John A. White, professor of engineering at Georgia Institute of Technology's School of Industrial and Systems Engineering. The new assistant director for computer and information science and engineering (CISE) is William A. Wulf, who has been a professor of engineering and applied science at the University of Virginia.

White's predecessor in the engineering post was Nam P. Suh, who has returned to MIT. The engineering directorate has played a major role in establishing more than a dozen interdisciplinary engineering research centers in recent years. Wulf succeeds C. Gordon Bell, first assistant director for CISE, who returned to industry. CISE was formed in 1986 by consolidating foundation activities in computer science and computer engineering. ■ **J.W.**

Legislating Labs as Drug-Free Workplaces

In readying several authorization bills for floor action, the House science committee has attached a cryptic rider aimed at insuring that work under grants and contracts awarded by the National Science Foundation and other science agencies be carried out in a "drug-free workplace."

Author of the provision is Representative Robert S. Walker (R–PA). The amendment, radically condensed from its original version, simply states that "No funds authorized to be expended under this act shall be expended in any workplace which is not free from illegal use of controlled substances." The short form was apparently adopted mainly to avoid the prospect of "sequential referral," that is, sharing legislative jurisdiction with other House committees.

The amendment was attached to the NSF bill by the full House Science, Space and Technology Committee. The committee also added it to corresponding legislation for the Department of Energy, National Bureau of Standards, and National Aeronautics and Space Administration.

The earlier version of Walker's amendment went into considerable detail in placing responsibility for enforcing a drug-free environment on recipients of grants and contracts and on federal agencies for insuring compliance with the law. A finding against the employer could have triggered the withholding of federal funds.

At this point, agency officials are left to puzzle out how the current version should be implemented if it becomes law. Sources on Capitol Hill say that the framers intend that the language of the amendment be interpreted literally. Agencies are to be given broad discretion, but are expected to achieve the goal of a drug-free workplace.

The amendment roused strong opposition in committee from several members but won a key vote 20 to 7. The measure has a number of hurdles to clear before becoming law, but Congress watchers say that legislators may find it difficult to appear to vote against a drug control measure, particularly in an election year. ■ **J.W.**

Soviet Satellite in Trouble; Groups Call for Ban on Orbiting Reactors

With fortuitous timing, a group of U.S. and Soviet scientists last week proposed that nuclear power sources be banned from Earth orbit just as the Soviet Union acknowledged that one of its nuclear-powered reconnaissance satellites is in danger of falling to Earth in the next few months.

The orbit of the satellite, known in the West as a Radar Ocean Reconnaissance Satellite, or RORSAT, has been decaying recently. RORSATs are believed to have a safety system that separates the reactor from the satellite and kicks it into a high orbit before the satellite reenters the Earth's atmosphere. The reactor has not separated from the apparently malfunctioning satellite, however, and there is concern that the safety system has failed.

If so, radioactive parts of the reactor could survive reentry. A similar mishap in 1978 scattered radioactive debris in parts of northwestern Canada.

The call for a ban on orbiting nuclear power sources came from a joint committee of the U.S. Federation of American Scientists and the Committee of Soviet Scientists Against the Nuclear Threat. It was motivated only partly by environmental concerns. A joint statement by the two organizations says it also "grows out of our efforts to prevent . . . the extension of the arms race into space."

Such a ban would have an immediate impact on the Soviet Union, forcing it to move to solar power for its RORSATs. The satellites, which are believed to be the only Soviet satellites that use nuclear power, are designed to monitor naval movements and could provide targeting information during wartime.

The United States does not now have any nuclear-powered Earth-orbiting satellites. A ban could, however, have a serious impact on plans for the Strategic Defense Initiative, for nuclear power is currently envisioned for some satellites that would be deployed in later stages of an antimissile defense system.

A type of nuclear power source will be used by both Soviet and U.S. spacecraft for deep space missions, such as the upcoming Galileo and Ulysses missions. The joint proposal says that such missions should be exempt from a ban on nuclear power in space. ■ **C.N.**

National Science Board Elects Good and Day

The new chair of the National Science Board, the policy-making body of the National Science Foundation, is Mary L. Good, president–engineered materials research, Allied Signal Corporation. Elected vice chair was Thomas B. Day, president of San Diego State University in California.

Good is the first woman to head the NSB. She earned her Ph.D. in chemistry from the University of Arkansas, and was a professor of chemistry at LSU before moving to industry in 1980. She was appointed to the NSB in 1980 and served as vice chair of the board from 1982 to 1984.

Day holds a Ph.D. in physics from Cornell. He has made his career in university research and administration and also been active as a consultant to government and industry.

The terms for NSB chair and vice chair are 2 years. Good's predecessor as NSB chair was Roland W. Schmitt, president of Rensselaer Polytechnic Institute. The vice chair was Charles E. Hess, dean of agriculture at the University of California, Davis. ■ **J.W.**

Curien Returns as French Science Minister

Paris

The French scientific community seems likely to emerge as a significant beneficiary of socialist President François Mitterrand's sweeping win in the country's presidential elections on 9 May.

Mitterrand's preelection commitments to policies treating research as what he described as a "favorite child" of the government have been reinforced by the decision of the new Prime Minister, Michel Rocard, to reappoint physicist Hubert Curien as re-

search minister.

Mitterrand has also approved the creation of a new "superministry" covering education, science, and sport which, with its own Secretary of State, is being grouped with the ministries of economics, housing, and foreign affairs at the top of the hierarchy of government departments. Mitterrand's choice as head of the new ministry is Lionel Josepin, former secretary-general of the Socialist Party.

The 64-year-old Curien occupied the post of minister for research during the last 2 years of the previous socialist government, which was defeated in the legislative elections of 1986. Prior to that, he had held at one time or another many of the top posts in France's scientific administration, including director-general of the National Center for Scientific Research (CNRS) from 1969 to 1973, and he had been president of the National Center for Space Studies from 1976 to 1984.

Ironically, Curien started his scientific career (as a crystallographer) at the prestigious Ecole Normale Superieure in Paris under the guidance of the physicist Yves Rocard, the father of the new Prime Minister.

During the election campaign itself, each of the three leading candidates—Mitterrand and the conservatives Jacques Chirac and Raymond Barre—spoke out in favor of the need for greater efforts to boost France's scientific activity.

Chirac's promises, however, were met with skepticism in many parts of the scientific community. It was pointed out that claims he had made that the government's support for research had increased significantly over the past 2 years were true only if defense research were taken into account; the budget for civilian research programs has, in fact, declined.

Mitterrand made no specific promises on research financing during the election campaign. However, he did say that "the duty of the next government will be correct the budget trends" of Chirac's government, that laboratories and research institutes should be given "greater help and encouragement," and that major research organizations such as the CNRS and the National Institute for Health and Medical Research "should be in the front ranks" of those seeking a rebirth of the French economy.

No announcement has yet been made about whether the same government team will be retained in the event of the Socialist Party winning the legislative elections announced by President Mitterrand on 15 May. However it is widely expected that, if this happens, the change in Cabinet appointments will be relatively minor. ■

D.D.

Biological Defense Defended

The Department of Defense in early May defended its controversial program aimed at developing defenses against potential biological warfare agents as being both militarily necessary and conducted with adequate safeguards to protect public health. The occasion was a congressional hearing called by three House subcommittees, followed 10 days later by the release of a draft report on the potential hazards that may conceivably arise from the biological defense effort.

The program has attracted increasing public attention recently as the Army's plans to build a new biological test facility in the Utah desert have ignited local opposition (*Science*, 8 April, p. 135), and as funding for the entire program has mushroomed from $16 million in 1980 to about $75 million this year.

The program is limited by the 1972 Biological Weapons Convention to research designed to develop defenses against microorganisms and toxins. Even before the convention was negotiated, President Richard Nixon unilaterally renounced all offensive biological warfare activities in the United States and scrapped U.S. stockpiles of biological warfare agents. The program is therefore directed toward the development of vaccines against exotic disease agents, the development and testing of protective clothing and filters, and efforts to produce detectors capable of signaling the presence of specific biological warfare agents. "We have renounced the sword in this area, the most we can do is to promote the shield," Thomas J. Welch, a Pentagon official in charge of the program, told the congressional hearing.

Welch produced a chart at the hearing indicating that U.S. intelligence agencies suspect ten countries of working on biological weapons, but he declined to name them or give any details, on the grounds that the information is classified. He did, however, repeat controversial accusations that the Soviet Union has maintained an offensive biological weapons capability in violation of the 1972 convention.

The U.S. program is carried out primarily at an Army research facility at Fort Detrick, Maryland, about 50 miles north of Washington, D.C. The facility has a maximum containment, or BL-4, laboratory capable of handling the most dangerous pathogens. The Army wants to build a second BL-4 facility at its Dugway Proving Ground in Utah in order to generate aerosols of pathogenic agents as part of a program to test protective devices and detectors. In addition, according to documents released along with the report on the potential hazards associated with the program, some 100 contractors, including almost 50 universities, are conducting research under the program.

Critics of the program have argued that the recent expansion of the effort—especially the plan for the Dugway facility—is, as Representative Wayne Owens (D–UT) put it at the hearings, "blurring the line between defensive and offensive research." The argument is that, in order to test defenses against biological agents, the agents themselves must be produced.

Welch responded that "there is a clear distinction between offense and defense," and asked "would we deny Walter Reed the right to do research [on yellow fever] because we were concerned about the offensive potential of his work?"

The Army's report on the potential environmental hazards of the program, which was produced as a result of a lawsuit filed by the Foundation on Economic Trends, concludes that safety measures in force are adequate to guard against exposing the public to disease agents and to prevent the escape of infected animals and insects from research facilities.

The day before the report was released, however, a highly critical report by the Democratic staff of the Senate subcommittee on oversight of government management, charged that there are "serious failings" in the Defense Department's oversight of the safety of the program, including "inadequate regulations, lax safety enforcement, and documented safety lapses." As a result, Senator Carl Levin (D–MI), the subcommittee chairman, announced that he is planning hearings later this summer on the safety of the program.

In addition, Jeremy Rifkin, the president of the Foundation on Economic Trends, announced at the House hearings that he is planning a campaign of demonstrations at facilities conducting research under the program, including universities, this fall. The program's political troubles are clearly far from over. ■

COLIN NORMAN