fresh ideas and a real critical look."

Mere absence from the committee doesn't seem to have slowed Kelly much, however. The week after this year's committee meeting in Washington, D.C., Kelly was off at a retreat in the Blue Ridge Mountains with two of his old friends—Kaya and Kaneshige—discussing the role of a scholar and scientist in promoting world peace. They went sightseeing by day and talked long into the night, and afterward, Kelly, now 62, acknowledged that he was pleasantly tired. "You have to be so careful that what you say is understood," he said. "It's so important to have understanding."

—PHILIP M. BOFFEY

Westinghouse's Environment School: Combining Business with Ecology

Fort Collins, Colorado. Ever since the environment took the stage as a major public issue, corporations have been cast in the villain's role. Recently, however, many of America's largest companies have sought to shed the spoiler's image. Some of their efforts have provided little more than publicity for their products. Others have produced solid contributions to environmental improvement.

The Westinghouse School for Environmental Management, which completed its 4-week session on 10 July, provided a little of both. It offered a comprehensive course in environmental problems, with an emphasis on the relation of power production to the environment. It also produced favorable exposure for some Westinghouse products.

Ecology Viewed as Business

Enterprising Westinghouse executives have viewed the ecology movement as an opportunity for more business. The Westinghouse Environmental Systems Laboratories, created on 1 January to help bridge the gap between conflicting demands for low cost power and a cleaner environment, have developed a number of products designed to appeal, at least indirectly, to the ecology-minded consumer. Last month, for example, Westinghouse announced the development of a nuclear power plant which it claims is noiseless, odorless, clean, and safe.

The 4-week session of the Westinghouse School brought 28 executives of public and private power utilities to Colorado State University in Fort Collins, Colorado, at the base of the Rocky Mountains. The organizations they represented included the Atomic Energy Commission, Consolidated Edison Company of New York, and the Pacific Gas and Light Company of California. Two foreign students represented utilities of Italy and Puerto Rico. Each student's company paid $6000 for the extensive review course, which embraced such disciplines as geology, marine biology, public health, and radiology. Westinghouse paid an additional $3100 for each student.

The curriculum was designed by two Westinghouse employees, David B. Smith and A. Donald Watt, with the assistance of a six-man curriculum advisory council. Colorado State University was chosen as the site for the school on the recommendation of one of the members of the curriculum council, Dr. Herbert Riehl, professor of atmospheric science and chairman of the Environmental Engineering Committee at CSU. The University is located in the middle of the kind of unspoiled land that environmentalists are trying to protect. Colorado in fact has been the scene of several recent legal battles between environmental groups and government agencies (*Science*, 12 June). The University has extensive facilities for environmental research, including laboratories for studying the effects of pollution on animals.

The backbone of the course was a series of lectures. Crammed into 23 school days, each of which began at 8:30 a.m. and many of which lasted well into the night, were presentations by 66 lecturers, ranging from Michael McCloskey of the Sierra Club, to Representative Craig Hosmer (R–Calif.) to Chauncey Starr, Dean of the School of Engineering and Applied Science at UCLA and vice president of the National Academy of Engineering. Most of the lectures revolved around the relation of power production to the environment and touched on legal requirements, legislation at the federal and local levels, research methods for testing pollution of water, air, and land, and new developments in environmental engineering.

Discussions following the lectures were often lively. McCloskey, for example, underwent sharp questioning from the students, many of whose companies and agencies the Sierra Club had opposed in controversies around the country. "In general, I think the level of awareness and responsibility of industry in the environmental field has increased," McCloskey conceded, "but I know that we are locked into battle after battle with industry about the environment." He urged industry to play a part in the fight for the environment by ceasing to oppose environmental quality control bills in Congress.

The Enemy Is Us

Many of the students contended that the public will be willing to demand environmental quality only so long as their power supply is not limited. When it comes to choosing between air conditioners and clean water, said the students, Americans will chose the air conditioner. McCloskey agreed that the problem could be characterized by the phrase "We have met the enemy and he is us." But he called on industry to recognize that rapid industrial expansion cannot continue much longer. He cited figures which showed that, if power production continues to grow at its present rate, doubling every decade, the entire nation will be covered with power plants in 200 years.

In addition to the lectures, the course provided three field trips—to the University of Wisconsin's Environmental Awareness Center, to the Tennessee Valley Authority's service area in Huntsville, Alabama, and to the National Center for Atmospheric Research in Boulder, Colorado. Also fea-

tured was a day during which students participated in a mock trial before Judge Dale Shannon in a local Colorado court. The trial involved a lawsuit brought by a hypothetical "Fish Forever Society" against an equally hypothetical "Corbett Power Company" for polluting the environment. The students took the parts of lawyers for and officials of the two contestants. "It sure gave me an idea of what we are up against," said one student.

In terms of the education it provided, the school appeared to be a success. Most of the graduates of the course said that they had acquired a wide range of information particularly in areas in which they were not specialists.

But information dissemination by itself accomplishes little. "What you must do now," said Donald C. Burnham, chairman of the Board of Westinghouse, in his commencement address, "is to go home and start something." He asked the students to begin an environmental program in their companies, even if the task seems overwhelming and the chance of success small.

The difficulty of carrying out Burnham's proposal is compounded by the fact that the students in the Westinghouse school were from the middle level of management. Most of the men directed their companies' environmental engineering divisions. None was the head of a company or agency. Top-level industrial policy makers in general have neither the time nor the inclination to spend 4 weeks in school. So the real success of the school in terms of meaningful change depends on how well the students are able to bring home to their bosses the problems and possibilities of environmental control.

In terms of promoting Westinghouse products, the school achieved its aim without appearing to be an unalloyed sell (the lecturers included nine Westinghouse executives who did not hesitate to point out to the utility executives the merits of the new Westinghouse nuclear power plant).

Burnham, in his commencement speech, for example, said that the development of the nuclear plant "has come at a critical time in our history and is, perhaps, the best single weapon in our fight against environmental pollution."

Whatever publicity value the school might have had, it also did provide a meaningful step toward improving the environment. McCloskey, one of industry's sharpest critics, said that he was favorably impressed with the school and that it showed a concern for the environment which most companies have lacked in the past.

—THOMAS P. SOUTHWICK

CBW: Interagency Conflicts Stall Administration Action

On 25 November 1969, President Nixon affirmed a U.S. policy of "no first use" for lethal and incapacitating chemical weapons. He also renounced the U.S. use of any biological weapons, even in retaliation. Furthermore, he pledged to submit to the Senate for ratification the long-neglected Geneva Protocol of 1925, which binds nations to refrain from first use of chemical and biological weapons. At the time, Nixon's announcement was hailed as a major policy decision that would generate positive initiatives toward world peace.

However, it seems that U.S. initiatives in the chemical and biological warfare (CBW) area up to now have not been as sweeping as they first seemed to be. The White House appears to be holding back on declassifying biological warfare research completely. In addition, the Geneva Protocol remains stalled in the Executive branch. Nixon's inaction of late on the CBW issue is causing critics to speak out. Last week, for example, Charles W. Yost, U.S. Ambassador to the United Nations, warned the State Department that the United States might face a "quite embarrassing" situation unless the protocol is sent to the Senate soon for ratification.

Nixon had stated that existing biological warfare stockpiles would be destroyed and that all offensive biological warfare research would cease. He had indicated that the only biological warfare research to continue would be defensive research.

On 14 February, a high official at the White House held a background briefing for newsmen on CBW policy and stated unequivocally that all future biological warfare defensive research would be done on an unclassified basis. "There will be no need for secret research in this field under this program," he said. "What we are now doing is examining the biological facilities to see to what extent they could be used for unclassified research and for the defense research that is authorized under the President's policy," he added. However, it seems that the Pentagon is successfully bypassing the White House's commitment to stop classified research on biological warfare. When the White House official mentioned "biological facilities," he was presumably referring to Fort Detrick (*Science*, 13 January 1967), the chief research facility for biological warfare. Fort Detrick employs 1595 civilians and has 650 military personnel attached to it. Colonel Thomas D. Buyrne, an Army public relations spokesman, said that, of the 1085 Fort Detrick civilians directly involved in the biological warfare research effort, the Pentagon plans to move 240 civilians to Dugway Proving Grounds in Utah (where 6000 sheep were killed accidentally by lethal chemical gas) and to Edgewood Arsenal, the chief research facility for chemical warfare research. Classified research is carried out at both sites. The 240 civilians, in addition to 190 military personnel who would be moved under the plan, would do defensive biological warfare research on a classified basis.

The Public Health Service (PHS) is reportedly interested in taking over Fort Detrick. In addition, the PHS has proposed taking control of the portion of the Pine Bluff Arsenal in Arkansas which develops and stockpiles biological warfare munitions.

According to the White House, defensive biological warfare research would be completely unclassified. Ac-