

the material breach charge would not be made at the meeting, but it reserved the right to make the charge at a later time. The White House also directed the Defense Department to prepare options for a U.S. response if the radar is not dismantled.

The Soviet Union has insisted all along that the radar is designed to track spacecraft, a function that would not violate the ABM Treaty. This explanation has won few converts, for the radar is facing in the wrong direction to track most militarily important satellites. Last October, the Soviets seemed tacitly to acknowledge that there is a legal problem, however, by announcing that construction at the facility would be halted for a year. Then, in July, Soviet arms control negotiator Viktor Karpov announced that "if an understanding to abide by the ABM treaty, as signed in 1972, is reached, the Soviet Union will be ready to dismantle the equipment of the Krasnoyarsk radar in a verifiable way."

Karpov, in essence, was offering to trade Krasnoyarsk for an agreement by the United States not to adopt the controversial "broad interpretation" of the ABM Treaty, which the Reagan Administration has argued permits development and testing of candidates for SDI. The offer apparently drew a frosty response, to the effect that the Soviets should expect no concessions for living up to their treaty obligations.

The review conference resolved nothing. The U.S. statement at the end of the meeting said that "the continuing existence of the Krasnoyarsk radar makes it impossible to conclude any future arms agreements." It also warned that "the United States will have to consider declaring this continuing violation a material breach of the Treaty."

The Soviets issued their own statement, accusing the United States of violating the treaty by upgrading old early-warning radars at Thule in Greenland and Fylingdales in England with electronic facilities of the type that the treaty restricts to the periphery of the Soviet Union or the United States. The statement also chastised the United States for ignoring the chief purpose of the review conference, which was to seek ways to strengthen the treaty, by refusing even to discuss proposals offered by the Soviet delegation designed to prevent future disputes over large radars.

The next Administration, whatever its political stripe, is unlikely to bring the Soviets any relief on Krasnoyarsk. Last week, Michael Dukakis, the Democratic candidate, said in a statement that "we must be clear that no new strategic arms agreements will be signed until the Soviet Union agrees to dismantle the Krasnoyarsk radar."

■ COLIN NORMAN

Applied R&D Key for U.S. Trade

In a critical report, the 19-month-old Council on Competitiveness is calling for an overhaul of federal policies that affect the conduct of research and technology development. The independent, bipartisan organization says that "fragmented" government programs impede efforts to reverse the decline in the nation's ability to produce high-technology products and to compete in world markets.

Picking Up the Pace: The Commercial Challenge to American Innovation is the first of four reports being prepared by the organization, which is composed of 151 companies, universities, and unions. The study examines the problems and possible solutions to the erosion of the nation's technological competence and loss of overseas markets for a host of manufactured goods ranging from computer chips to ball bearings. "It is clear that we are getting weaker," says council president Alan Magazine about the ability of domestic manufacturers to effectively transform laboratory research findings into commercial products.

Competitiveness in world markets should be at the top of the national agenda for the next president, contends Magazine, whose group is recommending federal action "across a broad policy front." Specifically, the council wants the government to: adopt strategies to encourage greater private savings and investment; to widen national R&D programs to give commercial and industrial needs more consideration; to spur more American students to pursue math and science careers, and to outfit universities with new research facilities; and to coordinate and set priorities for federally funded science programs.

In releasing the report on 7 September, John Young, chairman of the council and president of Hewlett-Packard Company, told reporters that the government's framework for advancing technology in the United States is "somewhat outdated." Young notes that "U.S. technology policy has viewed commercial applications as incidental or secondary in importance."

To better address the needs of U.S. industry, Magazine says some growth in federal spending for R&D will be necessary. This need not enlarge annual federal budget deficits, he says, if Congress has the courage to reallocate funds away from other programs. The council plans to identify in late November a group of federal programs that could be cut in order to support an enlarged R&D effort.

In conjunction with reorienting U.S. R&D policy, the council recommends that the role of the government's 700 laboratories in supporting the commercial application of technology needs to be examined. Says Young, "More resources should be directed toward R&D that is relevant to the needs of the private sector." To accomplish this, the report says the activities of some federal labs will need to be redirected to support more applied research and in other cases laboratories should be closed where their work is of marginal utility.

The political obstacles posed by an effort to restructure and consolidate federal laboratories, the council concedes, will be large. Members of Congress usually regard these facilities as prized possessions and because the labs are often mission-oriented they also have industrial constituencies that will lobby in their behalf.

A key to deploying federal research dollars and research facilities more effectively, says the council, is leadership at the White House level. The Office of Science and Technology Policy (OSTP) previously played a larger role in coordinating agency research programs. The council notes, however, that OSTP "currently has neither the resources nor the inclination to play a strong role in this area."

The council recommends that the next president elevate the current national science adviser position to an "assistant to the president for science and technology." This position would have cabinet-level status and an adequate operating budget and staff.

The chairman of Westmark Systems, Inc., Bobby R. Inman, who helped prepare the report, says it is also essential that order be brought to congressional budgeting for research and technology development. He notes the civilian research budgets carved up between 13 appropriations committees, which do not set priorities.

Inman says it is crucial that the Senate and House budget committees conduct a unified review of the federal R&D budget and set joint priorities at the beginning of the budget process. The council report also recommends that R&D programs be authorized and receive appropriations on a 2-year cycle. This would add stability to R&D planning.

■ MARK CRAWFORD