

sification work. The segmentation and diversification concept had developed following discussions involving the AEC, Senator Henry M. Jackson of Washington, and a group known as the Tri-City Nuclear Industrial Council.

The Tri-City council was formed in early 1963 by local businessmen who knew that sooner or later some or all of the plutonium reactors might be closed down, thus creating a crisis for the local economy. A few years earlier some Tri-City leaders had formed an exotic metals fabrication company, but this early, and very modest, approach to segmentation and diversification had gotten nowhere.

By 1963, when the Tri-City council was organized, conditions were changing. The Cuba missile crisis was past,

the nuclear test-ban treaty was in the making, the U.S. goals for deployment of land- and sea-based missile forces were rapidly being met, and the need for production of plutonium was declining. The council, coming on stage at a propitious moment, hired a firm of consultants to help it identify opportunities for economic development in fields such as nuclear fuels processing, the encapsulation of isotopes, and the like.

In Washington, Senator Jackson, as an influential Democrat and member of the Joint Congressional Committee on Atomic Energy, was in a strong position to help the council encourage the AEC to bring about a greater diversity of activities at Hanford. One day in March 1963 AEC Chairman Glenn T.

Seaborg, together with other AEC officials and a vice president of General Electric and Senator Jackson, visited Hanford to see what could be done. After this visit, the AEC conducted studies from which the segmentation and diversification plan emerged. For his part Senator Jackson pushed through legislation authorizing the AEC to issue use permits making available Hanford facilities for private nonnuclear work.

Such use permits are now held by Battelle and several other contractors and were part of the bait that lured them to Hanford. For the industry contractors there was also the promise of profits and the chance to gain significant new experience in the nuclear field. Accordingly, the industry response to

Defense: Laird Warns of "Soviet Technological Threat"

Last year Congress showed strong irritation concerning the rising costs of defense modernization. The irritation reflected a widespread suspicion that much new weaponry being investigated or purchased by the Pentagon is wasteful.

This year Defense Secretary Melvin R. Laird argues, in congressional testimony made public on 20 February, that failure to pursue a vigorous modernization program will place the United States on the unfavorable side of a military "technology gap." The reason for concern, said Laird, is the increasing momentum of the "Soviet technological threat." He said Soviet spending for military research and development and space activities is probably greater than U.S. spending, and has been "increasing at a rate of about 10-13 percent a year" while the U.S. level of effort has declined. Thus the Pentagon's proposed \$7.3-billion R & D budget (*Science*, 6 February) is "the minimum with which we can have some confidence of meeting our needs in the future" and maintaining American "technological leadership" in weaponry, he said.

Six days later the Director of Defense Engineering and Research, Dr. John S. Foster, Jr., in testimony before the Senate Armed Services Committee, stressed "the critical—and growing—need for defense R & D." He called for "a much more vigorous commitment to national research and development, both military and civilian, upon which

our long-term national technological position can be strengthened."

Followers of Laird's political record will not find his interest in military R & D a departure from previous views. As a congressman he was in large part responsible for the Republican party platform statements of 1964 and 1968 calling for a more aggressive effort to develop new weaponry. Congressional doves and arms control advocates, of course, consider this approach a prescription for accelerating the arms race.

From the arms control point of view, there is a close link between Laird's attitude toward military R & D and the political pressures that make it hard to stop deployment of such weapons as the Safeguard antiballistic missile (ABM) system, which President Nixon now wants to expand. Thus the stage is set for a repeat of last year's epic confrontation in Congress between the doves and the Pentagon.

On 24 February, Laird announced that the Administration wants congressional authority (i) to install ABM defense at a third Minuteman intercontinental ballistic missile (ICBM) base, and (ii) to prepare five additional sites for installation of long-range ABM missiles for "area" defense of population against attack from China.

Last year the Administration survived a 50-50 tie vote in the Senate to win approval for installation of ABMs at Minuteman missile bases in Montana and North Dakota. Laird then staved off de-

feat on other major new weapons by yielding to deep cuts elsewhere in the defense budget.

This year the Administration may find victory more elusive. For one thing, it is an election year, with control of the Congress at stake. Two Democratic Senators who last year were strong backers of Safeguard, John O. Pastore (R.I.) and Henry M. Jackson (Wash.), have announced their opposition to the system for protection against Chinese attacks on population. Another reason for congressional resistance to defense proposals is the growing awareness of the very large costs involved in cleaning up the environment. President Nixon's own budget for fiscal 1971 makes it clear that military spending must be further curtailed or taxes raised if significant funds are to be made available for environmental and other new domestic programs during the next 5 years.

Finally, the opposition is better organized. Drawing on experience gained last year, staff members of liberal congressmen and senators are already at work preparing a detailed critique of Laird's budget proposals. Even the Senate Armed Services Committee, traditionally a bastion of support for the military, is better prepared to take a critical view of the Laird budget this year, since Chairman John Stennis (D-Miss.) has added several experienced budget examiners to his staff.

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