

France to Produce Binary Weapons?

Paris

The French government has indicated that it is considering producing a new generation of chemical weapons, which would be used to respond to a chemical attack. The announcement is contained in the proposed military budget for the years 1987 to 1991, published in Paris in early November, which states that France "should have available an appropriate dissuasive capability" if attacked by a country using chemical weapons.

The statement is being interpreted in the arms control community as signaling that France, which is widely believed to have been working on the development of binary chemical weapons for several years, may be approaching a decision to put these weapons into production and to develop plans for their deployment.

Although the government has refused to acknowledge publicly even that France continues to possess chemical weapons—or to give any details of the size of its stocks—it is generally considered to have the world's third largest stockpile, after that of the Soviet Union and the United States. The Stockholm International Peace Research Institute (SIPRI), for example, has estimated that France's stockpile is the same order of magnitude as that held by the United States in West Germany.

Until now, the official position has been merely to emphasize that, as a signatory of the 1925 convention outlawing chemical weapons, France would not resort to their first use. Indeed the former defense minister, Charles Hernu, said in a newspaper interview in the spring of 1985 that, even though France had reserved the right to reply in kind, an attack on France with chemical weapons could justify the use of tactical nuclear weapons in response. Hernu described this possibility as a reflection of the "marvelous uncertainty of nuclear dissuasion."

At the same time, however, there has been continuing pressure from within the armed forces to develop new chemical weapons stocks that could be used in a counter-offensive. One article by the director of the French chemical weapons analysis and development program ended with a quotation attributed to Joseph Stalin that "in a scientific war, he who prepared only for the defensive digs his own grave." And President François Mitterrand speculated publicly earlier this year about whether a change in attitude toward chemical weapons might be appropriate.

The new announcement does not say explicitly that France intends to produce

new chemical weapons—or even that a policy of defensive use has been officially adopted. The government's statement merely says it should not "definitively renounce those types of weapons which other countries feel they have the right to possess, nor accept the prospects of its defense forces being paralyzed by an aggressor who takes the initiative in the use of chemical arms."

Nevertheless, even this cautious statement is being interpreted in Paris as a significant

Briefing:

Visions of Sugarplums

A rumor rife in the Washington outposts of the academic community is that the National Science Foundation will seek an increase of a third or more for its fiscal year 1988 budget. NSF's budget for the current fiscal year tops \$1.6 billion. Asked by reporters whether such a bid was contemplated, NSF director Erich Bloch assumed the silence incumbent on federal officials when budgets are in the making and said he could not comment. At a press briefing, Bloch acknowledged that he has not been shy in saying publicly he sees a need to double the foundation budget, but refused to confirm or deny the current rumor. ■ J.W.

Grant Aftershocks

The National Science Foundation has completed its internal investigation of allegations of irregularities in the choice of the State University of New York at Buffalo as site of an earthquake engineering research center (*Science*, 5 September, p. 1031). In a letter to House Science and Technology Committee chairman Don Fuqua, foundation director Erich Bloch reviewed criticism of the selection process and said "NSF's decision to support the Buffalo proposal was made solely on the basis of the merits of the proposal." Alluding to charges, made by competitors at the University of California, Berkeley, of plagiarism in the winning proposal, Bloch said that inclusion in the Buffalo proposal of material "without proper attribution was careless, but does not provide a sufficient basis to overturn the award." Bloch noted at the 14 November National Science Board meeting that a question has recently been raised about a competing proposal from Berkeley, "on exactly

shift from the government's previous position. Indeed, in the past there has been speculation in the press that France has been collaborating with the U.S. government on the development and testing of binary weapons, although this suggestion has been formally denied by the French government. There has also been speculation that the government might agree to let the United States store the chemicals needed for binary weapons in France if public opposition makes it impossible to store them in either West Germany or Great Britain. ■

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the same point." Bloch declined to provide details and said clarification had been sought from the Berkeley administration. Still in the works is a General Accounting Office investigation of the award. ■ J.W.

Industrial R&D Slowing

Spending by private industry on research and development is expected to increase by about 5% in 1987 to reach a total of nearly \$60 billion, according to a survey of companies in R&D-intensive industries. Over the past decade, industrial spending on R&D grew at an average annual rate of 13%. According to the National Science Foundation, which conducted the survey, the chief reasons for the slowdown are poor sales expectations, concerns about short-term profitability, and restructuring of research activities following corporate mergers. ■

C.N.

Glittering Prize

The value of the National Science Foundation's premier research award, the Alan T. Waterman Award, is being boosted from \$300,000 to \$500,000. The award, named after NSF's first director, is given to recognize and encourage particularly able young researchers (35 is the age limit). The award money is disbursed over 3 years and can be used only to pay research costs. NSF director Erich Bloch told the National Science Board that the increase was being sought to distinguish the Waterman award more clearly from other NSF research awards. He said the hope is that the enhanced visibility of the award will attract nominations from areas of science and engineering that have so far been underrepresented. ■ J.W.