Argentina Formulates Nuclear New Deal

Alfonsin government putting program under civilian control, appears willing to accept stronger nonproliferation regimen

In coming months, actions by Argentina are likely to provide a major test of the Reagan Adminstration's policies to prevent the spread of nuclear weapons. Last November, the Argentines revealed that they were secretly building a plant to enrich uranium, which would give them a greater potential for producing weapons-grade nuclear materials than had previously been known. But the new civilian government of President Raul Alfonsin seems to be moving toward acceptance of more international safeguards on the nation's nuclear activities, which would impede Argentina's developing a nuclear weapons capability. And U.S. officials are particularly encouraged by the new government's decision to shift the nuclear program from military to civil authority. The United States will have to weigh these contrasting developments as it considers requests from Argentina for U.S. nuclear exports.

Disclosure of the enrichment project provided not only a rude surprise for the United States but also evidence of an embarrassing lapse in the global intelligence effort intended to keep tabs on developments relevant to nuclear proliferation.

Argentina has been numbered among the "problem" countries in respect to nuclear proliferation. Because Argentina has its own deposits of uranium and is technically advanced, the country has been regarded as capable of accomplishing its avowed aim of achieving nuclear independence by creating a complete nuclear fuel cycle. Argentina is known to be constructing a reprocessing plant that would enable it to separate plutonium from irradiated nuclear fuel. Completion of an enrichment plant would enable the Argentines to produce nuclear explosives either by enriching natural uranium to weapons grade or providing nuclear fuel free of international safeguards which could be irradiated in Argentine reactors and then reprocessed to extract plutonium. Argentina has consistently denied any intention of developing nuclear weapons, stressing its aim of achieving self sufficiency in peaceful nuclear activities.

State Department officials affirm that announcement of the enrichment plant near Pilcaniyeu in Río Negro province some 600 miles from Rio de Janeiro came as a surprise to them. They were aware of a building there, they say, but not that it was an enrichment plant. Apparently it was too small for its purpose to be suspected since the gaseous diffusion process, which the plant is said to employ, usually requires facilities on a considerably grander scale. It was also thought that Argentina had no need for enriched uranium because the country's nuclear power program has concentrated on a type of reactor that uses natural uranium fuel. Perhaps the major question left by the slipup, however, is that of what might have been overlooked elsewhere.

The revelation of the enrichment plant project in November occurred at a time when critics in the country were taking the Reagan Administration to task for approving the retransfer by West Germany to Argentina of 143 tons of heavy water of U.S. origin. The heavy water is designated for use in a power reactor of Canadian design which employs heavy water to moderate the fission reaction and is now being built in Argentina by West German contractors.

> Critics are striving to close what they see as the major loophole . . .

The heavy water is subject to the international nuclear safeguards administered by the International Atomic Energy Agency (IAEA) in Vienna, which means that IAEA inspectors keep tabs on facilities and materials to prevent prohibited uses. The implications for nuclear nonproliferation in a system only partially under safeguards, nonetheless, are seen as serious by U.S. critics. At a House hearing, for example, Paul Leventhal, president of the Nuclear Control Institute, a nonprofit research organization that concentrates on nuclear proliferation issues, argued that heavy water, like enriched uranium, is an essential ingredient for converting nonexplosive uranium into explosive plutonium.

Critics in Congress and in organizations concerned with nonproliferation matters have attacked the Reagan Administration for permitting exports of nuclear components and technology which are not covered by the U.S. Nuclear Non-Proliferation Act, which does mandate that recipients of U.S. reactors and nuclear fuel accept full scope safeguards—those covering all of a country's nuclear facilities and materials.

Critics are striving to close what they see as the major loophole in U.S. nonproliferation laws. The House last year passed an amendment introduced by Representative Howard Wolpe (D-Mich.), which forbids the export of nuclear components and technology to countries that do not accept full scope safeguards. In the Senate, a comparable amendment has been sponsored by Senators Gordon J. Humphrey (R–N.H.) and William V. Roth (R–Del.). The issue is expected to be thrashed out in the coming session and U.S. dealings with Argentina could well be affected.

Argentina's nuclear policies are now undergoing a major review. President Alfonsin has reaffirmed his intention to place Argentina's National Atomic Energy Commission (CNEA) under civil authority and named a commission headed by the foreign minister to recommend changes in the country's nuclear program including nonproliferation policies. Alfonsin has also suggested that his government is willing to accept more safeguards on nuclear facilities. However, a number of obstacles remain before the United States could freely export nuclear technology to Argentina.

Argentina declined to sign the Nuclear Nonproliferation Treaty (NPT) and has refused to accept full scope safeguards on its nuclear facilities. Argentine officials now say that the country may be willing to ratify the Treaty of Tlateloco, which provides for a nuclear free zone in Latin America. Argentina has signed but not ratified the treaty. In the past, the Argentine unwillingness to ratify was attributed to the failure of some countries in the area, including Brazil and Cuba, to accede to it. Unlike the NPT, Tlateloco permits development of peaceful nuclear explosives, which Argentina has not been willing to forego.

The Argentine atomic energy authority has traditionally been controlled by the military and that association strengthened a presumption that the program had a military orientation. The CNEA's longtime chief, Vice Admiral Carlos Castro Madero, exercised a major influence on the country's nuclear program. Castro Madero, however, re-

signed after Alfonsin took office in early December, and the new government has reiterated its intention to put the nuclear program under civilian control.

The shift to civilian control does not however, necessarily indicate that the Argentine's will make a full reversal of past policies on nonproliferation. Castro Madero in announcing construction of the enrichment plant placed the responsibility for the Argentine decision to build it at least indirectly on U.S. actions which were viewed as frustrating Argentine plans for its nuclear industry. Argentina's ambitions for its nuclear industry are obviously substantial as is the investment it has made in it. Some American observers believe that costs and technical difficulties facing the Argentines in completing the plant may deter them from carrying through on it. But politically, abandoning the country's aspirations to nuclear independence would be difficult because the policy is popular in Argentina, particularly with the Peronists and the military, who form the new government's most serious potential opposition. It is not clear, as one State Department source put it, how far the government "would be willing to expend political capital."

Another factor working against U.S. nonproliferation aims is the charge increasingly made by Argentina and other nonweapons countries that the United States and the Soviet Union have not fulfilled the obligation explicit in the NPT that the superpowers would work effectively to reduce the number of nuclear weapons in their arsenals and to assist nonweapons countries with their civil nuclear programs. The nonweapons states indicate that they, therefore, feel less impelled to accept safeguards.

The Reagan Administration's strategy on nonproliferation is based on the view that the best way to influence countries to accept nonproliferation measures is for the United States to cooperate with them in their efforts on condition that they accept adequate safeguards. The Administration rejected Carter Administration tactics of denying U.S. nuclear technology and assistance to nonweapons countries in the cause of preventing their development of facilities capable of producing nuclear explosives. The Reagan Administration is dealing with an Argentine government evidently more disposed than its predecessors to negotiate safeguards as part of a nuclear quid pro quo. Skeptics in this country contemplating the prospect of a complete nuclear fuel cycle in Latin America worry that both governments and policies can change.—**JOHN WALSH**

Compassion in Medicine

Throughout the field of medicine there is evidence of increasing concern with humanistic values to counteract the universal preoccupation with technological advances. The American Board of Internal Medicine (ABIM), representing medicine's largest specialty, has recently surged to the front of the movement by adding proof of a physician's "integrity, respect, and compassion," to its requirements for certification.

For the next examination, in September, supervisors will be required to furnish evaluations of a candidate's sensitivity to the rights and emotional needs of patients. The exam itself, which has included items on ethics since 1978, will not contain new questions.

Board president John A. Benson, Jr., a professor at Oregon Health Sciences University, says many residency programs are experimenting with ways to incorporate a more humanistic emphasis. He estimates that about one-third of the country's 440 internal medicine training programs are doing this, primarily through informal conferences and lunches. The most avant-garde schools have been involving residents and other hospital personnel in role-playing exercises where they demonstrate how they would manage difficult cases. Real-life situations are also videotaped and subjected to subsequent critiques.

Benson points out that the new emphasis also enables residents to explore problems they have in common, such as lack of self-confidence. For example, at Mount Sinai School of Medicine in New York Richard Gorlin and Howard Zucker run "group therapy–type" meetings where residents can share experiences and reduce their sense of isolation.

Benson says the Board is visiting residency programs and preparing some training scenarios they might use. He stresses that the focus is on creating instruments to "heighten awareness" rather than trying to nail down "humanism" with quantitative assessments.

He sees a real "ground swell" of activity, noting that Johns Hopkins Medical School is taking measures to encourage humanities majors to enter medicine. He also says there are several new foundations created by physicians or their widows that explicitly define humanistic qualities as a key to medical preparation. From being mesmerized by technology the profession is "swinging back a little bit to doctoring . . . I hope," says Benson.

—**CONSTANCE HOLDEN**

Military Claims Growing Share of Britain's R & D

Spending by the British government on research and development has increased significantly in areas relevant to military and industrial need over the past 5 years. However, spending has remained virtually constant in energy research and has dropped in environmental sciences and transportation, according to figures recently published in London by the Cabinet Office.

These trends emerged from the first official attempt to provide a systematic analysis of government-wide R & D expenditures, a promise made in 1982 by Margaret Thatcher's Conservative government.

The report showed that, between 1977–1978 and 1982–1983, government spending on military research and development increased from $1,281 billion to $2,692 billion in current prices. Significantly, the largest increases occurred in 1978–1979 and 1979–1980, the last year of the previous Labour government and the first year of its current Conservative successor. According to the Cabinet Office report, the R & D figures reflect an increasing emphasis on the development of new weapons systems in contrast to weapons carriers, as well as "a willingness to forego the last few percent of weapons performance where this adds disproportionately to the price."

Overall, the proportion of the government's total R & D budget spent on military-related projects increased from 45 percent at the beginning of the 1970's to its current level of 51.5 percent; over the same period, spending on R & D related to the environment and transportation dropped from 5.2 to 1.9 percent of the total budget.

The figures produced by the Cabinet Office revealed that the university community has not fared as badly as is often supposed. Total funds allocat-