South Africa: Defense Strategy in an Increasingly Hostile World

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South Africa's Nuclear Weapons Capabilities

Strategy

3. There are several strategies that South Africa could follow in carrying out its nuclear weapons program:

- Clandestine development but not assembly of all weapons components
- Clandestine assembly of all components and the placing of untested weapons "on the shelf" for military use in a last-resort situation
- Clandestine testing of assembled weapons
- Open testing of assembled weapons
- Overt deployment of weapons

4. At this time, the pace and boldness with which top leaders will pursue the nuclear weapons program are still strongly influenced by the political and economic costs that South Africa would incur if the extent of the program were to be admitted or otherwise made obvious to the outside world. Such costs have been most immediately and directly on another strategic goal—advancement of South Africa's peaceful nuclear energy program. These costs are examined below for each of three weapons program options—maintaining the program at present levels, cutting back the program, and advancing it
5. Maintaining Existing Weapons Program Levels. South Africa would continue to pay a variety of economic penalties if it should maintain its present technical capabilities but not move ahead with weapons development. International concern about South Africa's nuclear weapons capability has resulted in the loss of economic assistance for peaceful nuclear development that the government had been counting on. The South African nuclear reactor is practically shut down for lack of fresh highly enriched fuel. The South African Government has apparently decided not to use domestically produced fuel in order to avoid revealing that its enrichment capabilities are suited to the production of highly enriched uranium. The Koeberg nuclear power station near Cape Town probably will suffer delays in startup because the necessary enrichment services cannot be secured abroad. Domestic capacity cannot meet the demand until one or two years after the scheduled startup of the Koeberg reactors.

In addition, plans for a commercial uranium enrichment plant in South Africa are held to be delayed because the enrichment equipment could not be procured abroad. South African industry probably will be in a position to produce the necessary equipment for many years. These penalties have not been severe enough to make the South Africans take anything other than cosmetic steps to allay international concern, however, and there is no reason to believe that these penalties will come to be perceived as more tolerable in the next few years. However, if additional penalties were developed, if France were to refuse to honor its contractual obligations to fabricate fuel elements for Koeberg, for example—the consequences could be much more severe, particularly if South Africa were unable to acquire suitable fuel fabrication technology.

7. Cutting Back the Weapons Program. South Africa's use of this option is unlikely. For one thing, because its nuclear weapons work is secret, there would be little need to be gained from cutting back part of the program unless at the same time the program's full extent were revealed. But such a revelation would likely arouse as much concern and suspicion as it delayed or more. Even if Pretoria placed all nuclear production facilities under international safeguards, for example, foreign specialists would reason that a previously amassed secret stockpile of weapons-grade uranium probably was being maintained.

Even in the absence of such a stockpile, the current enrichment equipment could not be used for South Africa's very short breeder for the production of weapons-grade uranium.

9. Why, then, has the treaty not been ratified? Basically, the South Africans are reluctant to make an international commitment when they feel they are not being accepted as a full member of the international community. More specifically, South Africa is concerned that the promised assumption of an A nuclear weapon would be subject to future unilateral rejection or suspension. Also perceived as fundamental problems with the treaty, or with the performance of other countries professing adherence to the treaty, may be an obstacle, in which case South Africa might be willing to adopt full-scope safeguards while steadfastly refusing to be a party to the NPT. Other possible reasons:

—The South African Government may have decided to sign the treaty once further progress is made toward the establishment of a treaty weapons option that can be perceived intact thereafter, the accumulation of a certain amount of highly enriched uranium, being a possible prerequisite.

—South Africa may wish to maintain its option to become an overt nuclear weapons state, although the political and economic trade-offs associated with such an advancement of the weapons program suggests that such a course will never appear attractive to Pretoria.

10. Advancing the Weapons Program. Significant and rapid advancement of the nuclear weapons pro-
11 In light of the possible—and as yet unconfirmed—nuclear event on 22 September 1979, there has been speculation that South Africa may have conducted a clandestine nuclear test. If South Africa has indeed tested a nuclear device, it is unlikely to delay shun an immediate security concern in the international community. If South Africa were to conduct a clearly identifiable nuclear test, set up a new branch of the armed forces for nuclear weapons exploitation or otherwise make obvious its nuclear weapons program, the government certainly would anticipate serious repercussions. The UN Security Council very likely would impose a mandatory embargo on all foreign inputs to South Africa’s nuclear program, an event that would shut down ongoing power reactor construction programs. Broader economic sanctions might also be adopted which, even if not fully observed, might discourage foreign investment in South Africa. Aside from political repercussions, the impact of these actions on South Africa’s economic interests would appear out of proportion to the risk in security that the government could reasonably expect from such overt nuclear activities.

12 We conclude, therefore, that the nuclear weapons program probably will remain clandestine unless South Africa were to perceive a drastic deterioration of its security situation. Once a ready weapons capability is assumed, Pretoria may well be willing to sign the NPT or at least accept international safeguards, particularly if Western suppliers of nuclear-related materials were able to convince the South Africans that supply for peaceful purposes would be secure.*
an "stable" nuclear-armed black regime. Pretoria could also attempt to intimidate neighboring states, although this would risk provoking the Soviets into making new commitments to their clients in the region.

17. The probable nature of the weapons that South Africa could deploy would make them useful in a strict military sense only in extreme circumstances. For the next several years, the principal military threats to the government are likely to remain insurrection in black urban areas of South Africa and guerrillas operating from domestic or border-state rural bases. Nuclear weaponry would be inappropriate against such challenges. Nuclear weapons would be useful in South Africa only as an implicit or explicit threat against neighboring capitals and ports, against large concentrations of troops and equipment massed on its borders, or against nuclear weapons that might be deployed in the region.

18. In the more distant future, if the conventional threat were to grow, nuclear weapons would acquire more utility as a deterrent or retaliatory force. This capability may well be an important consideration for Pretoria's nuclear strategy, who likely fear that heavy Soviet military involvement against the republic could eventually wear down its conventional armed forces. Pretoria may calculate that a South African nuclear capability would give the Soviets serious pause, encourage the West to intervene on Pretoria's side, and, if all else fails, prove effective in combat.