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RELEASED IN PART

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**SOUTH AFRICA: NUCLEAR CASE CLOSED?**

*Pretoria has dismantled its nuclear-weapons program, but the South African case illustrates the difficulty of verifying nuclear-material stocks of a former nuclear-weapons state and of "closing the book" on past activities.*

President De Klerk announced in March that South Africa had manufactured six gun-assembled nuclear weapons before NPT accession in July 1991 and had planned to complete a seventh weapon using highly enriched uranium (HEU); officials also say preliminary work was done on implosion and advanced-weapon designs -- all claims that are consistent with information available to the United States.

Reporting indicates dismantlement or decommissioning of all dedicated nuclear-weapon facilities, including the weaponization complex operated by the defense firm Armscor, and there have been drastic cutbacks at virtually all dual-use nuclear installations. One Armscor facility, apparently intended for second-generation nuclear weapons, has been converted to produce conventional technologies. The Kalahari test site, whose bore holes were filled in during a public ceremony, is inactive.

**Growing transparency**

Before the March revelations, South Africa went to considerable lengths not to acknowledge to either the IAEA or the public the military orientation and advanced stage of the former program -- though Pretoria was under no legal obligation to do so. The March disclosures apparently set the record straight concerning previous obfuscation, and Pretoria has invited the IAEA to visit virtually any suspect site and interview any individual in the former program. South Africa has also accepted a long-standing US request to have US experts directly assist the IAEA in analyzing enrichment plant records, though the IAEA, concerned for its institutional impartiality and integrity, has rejected this proposal.

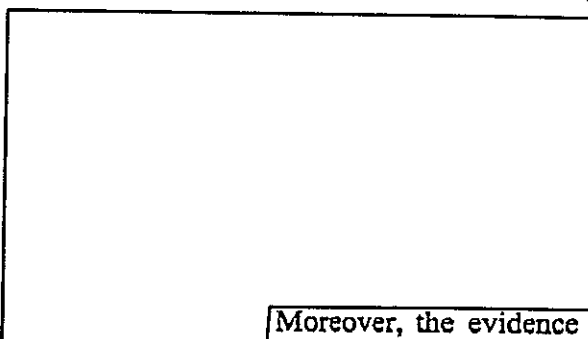
**Inventory declaration: credible but problematic**

South Africa's nuclear-material inventory -- declared to the IAEA shortly after the July 1991 NPT accession -- is [redacted] difficult to verify given the incompleteness of our own information. The amount of enriched uranium produced at the Valindaba plant (the nation's key HEU producer) [redacted]

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[redacted] corresponds to the mid range of previous US estimates of actual plant production but is well below plant capacity. South African officials have described, in impressive detail, plant operating problems that technically are plausible but were hitherto unknown to the United States; nonetheless, there are consistencies between other data provided by South Africa and US information.



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[redacted] Moreover, the evidence for a transfer abroad is not strong, and prospects for an in-country cache are very remote.

**IAEA satisfied**

The IAEA reported to the IAEA board of governors in September that the agency was satisfied Pretoria's inventory declarations were consistent with the amount of HEU that could have been produced by the Valindaba plant. The agency has conducted over 20 inspection missions, examined many thousands of records [redacted]

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B1 [redacted] and received US briefings on most aspects of the weapon program [redacted]

B1 [redacted]

**Past cooperation**

We cannot refute De Klerk's claim that South Africa never conducted a nuclear test,

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[redacted] Pretoria also claims South Africa never engaged in nuclear-weapons cooperation with another country.

We have no firm evidence that would contradict a claim of direct weapons coopera-

tion, though what evidence we have suggests earlier cooperation in a looser sense, including:

[redacted]

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(SECRET/NOFORN/NOCONTRACT/ORCONEXDIS)