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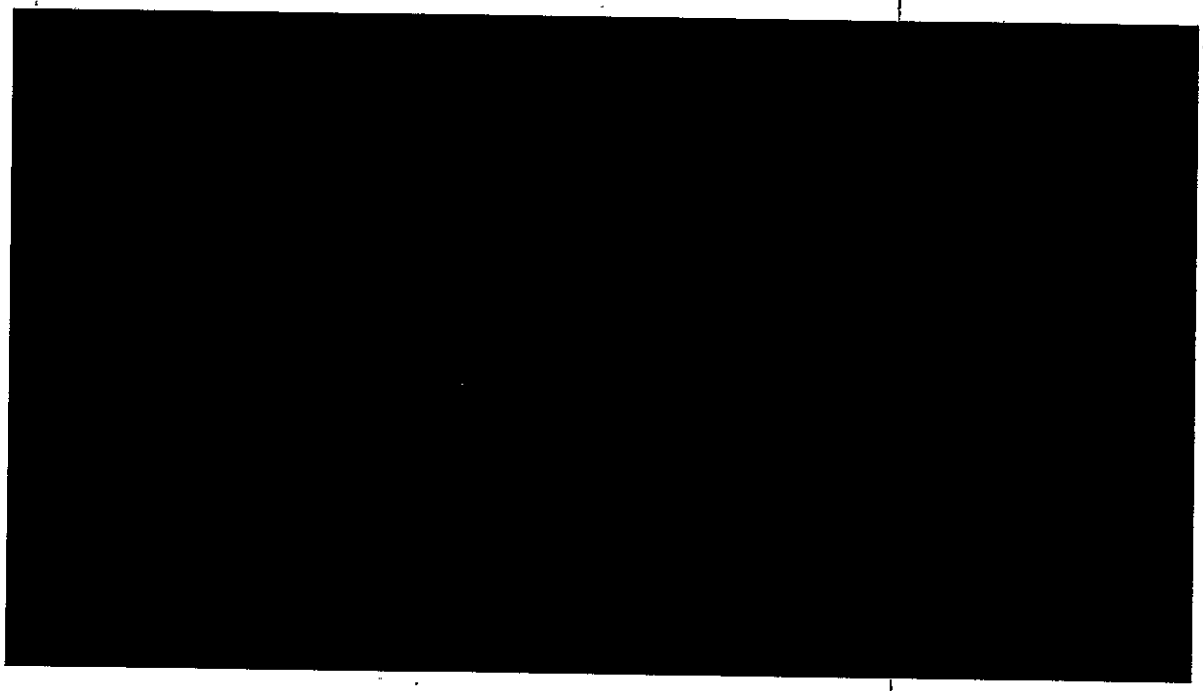

South Africa: Uranium Enrichment Technology

In late 1978 an official of the Uranium Enrichment Corporation of South Africa (UCOR) revealed that the South African enrichment process involves interacting gas streams. He also reaffirmed earlier South African statements that UCOR would be willing to license the enrichment technology to others for a fee.

According to the UCOR official, the enrichment technology evolved from a vortex process to a process involving the acceleration and interaction of gaseous streams of uranium hexafluoride and hydrogen. A mixture of uranium hexafluoride and hydrogen presumably makes up the gas in each stream. This is consistent with other recent suggestions that the South African enrichment process employs a technique currently being studied by West German scientists at Karlsruhe--the technique of opposed jets. The West Germans feel that the uranium isotope separation achieved when geometrically opposed streams of gas impinge on each other offers more efficient uranium enrichment than that obtainable with their Becker nozzle process.

The official also stated that UCOR was willing to license its enrichment technology "to anyone for a fee." Several years ago, that offer was made more frequently.

More recently South Africa has indicated that other requirements beyond the monetary considerations, such as nonproliferation safeguards, would have to be satisfied.

In any case, South Africa's first priority will be the construction of a domestic commercial enrichment plant, scheduled to be operating in the mid-1980s. Any transfer of technology which requires the assistance of UCOR scientists and engineers probably would be delayed until work on the South African plant tapered off. [redacted]