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Summary:

Background on US-South African nuclear relations and uranium cooperation from the end of the Second World War to the early 1980s. Also addressed is the Vela incident of September 1979 and the international community’s backlash against the South African government.

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International Nuclear Fuel-Cycle Evaluation

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SOUTH AFRICAN - UNITED STATES' NUCLEAR RELATIONS

INTRODUCTION

1) South African - United States' nuclear relations date back to just after the second World War when the Western Allies, and in particular the United States was in dire need of uranium for its military programs.

In collaboration with the Combined Development Agency (CDA), South Africa developed its uranium industry to supply uranium under contract to the CDA free of safeguards. These contracts expired in the late sixties when our production reached a level of over 3 000 tons per annum. When these contracts were not renewed and the US placed an embargo on foreign imports of uranium to the States, South Africa was hard put to maintain its uranium industry on a viable level. Other factors doubtless also contributed to the softening of the uranium market.

2) An Agreement for Cooperation on the Peaceful uses of Atomic Energy with a duration of 10 years was concluded with the US in 1957. Under this Agreement the US undertook to sanction the supply of the SAFARI research reactor to South Africa and to meet the fuel requirements for this reactor under a bilateral US-SA safeguards agreement. The 1957 Agreement for Co-operation was subsequently reviewed, amended and renewed in 1962, 1967 and again in 1974. (The 1962 amendment permitted the rental of HEU for SAFARI in addition to the purchase thereof by South Africa. The agreement was renewed in 1967 for a further 10 years after South Africa had on the insistence of the USA given assurances on its policy with regard to uranium sales. The trilateral safeguards agreement between the USA, South Africa and the IAEA was also amended to ensure the continued application of safeguards after expiry of the US-SA agreement.

In 1974 the Agreement was extended from 20 to 30 years (until 2007) and to provide for the supply of SWU's by the US for an installed capacity of 2000 MW(e) for the life (25 years after 1982) of the proposed KOEBERG reactors).

The 1974 amendment provided for the supply of enriched uranium for the KOEBERG-reactors under contract with ERDA which was later transferred to the DOE. The 1974 Agreement as well as the DOE supply contracts only provided for IAEA Safeguards on such facilities, and on fuel, to be transferred to South Africa by the USA.

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These agreements and safeguards arrangements were and are still diligently honoured by South Africa.

3) During the latter half of 1976 it became clear to South Africa that it would become increasingly difficult to obtain fuel for its research reactor from the US. Although the US never refused the required export permit for a batch of fuel, at that time on order and paid for by South Africa, unacceptable delays were experienced resulting in the cancellation of the order by South Africa when it became evident in 1977 that the delivery of the fuel would not be allowed by the previous US Administration. During the same period USDOE refused to return reclaimed enriched uranium from SAFARI fuel which was reprocessed in the US and it was only after the personal intervention of Ambassador Gerard Smith in 1978 that DOE agreed to compensate South Africa for the value of this uranium.

4) Since early in 1977 SA-US relations in the nuclear field deteriorated rapidly to the extent that when the NNPA was passed by the US Congress in March 1978, and President Carter instituted the INFCE studies, South Africa, although one of the three major uranium producers in the Western World, was not invited to participate. Only after diplomatic representations to the US Administration was South Africa allowed to take part in the INFCE discussions.

South Africa then took an active part in the INFCE and made valued contributions.

5) In June of 1978 discussions took place ~~on US initiative~~ in Pretoria on future nuclear relations between the US and South Africa, specifically to renegotiate the existing agreements between the US and South Africa and for the supply of fuel for South Africa's civil nuclear energy program (KOEBERG) and its research reactor SAFARI-1 under the NNPA regime. During these discussions it became abundantly clear that the US would not supply the fuel in question unless South Africa acceded to NPT and subjected all its nuclear facilities and activities to international safeguards.

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Although South Africa has repeatedly stated that it will observe the principles of the NPT, it was also clear that South Africa would not even be allowed to participate in a US investigation aimed at reducing the enrichment level of the fuel for research reactors, in which we expressed genuine interest in the spirit of realising world-wide non-proliferation objectives. (At the time South Africa was already engaged in similar studies as was confirmed to the US delegation and subsequently reported to INFCE). South Africa also indicated that she was in principle not opposed to accession to NPT if her basic requirements could be met.

6) Subsequent discussions to those in June 1978 revealed that South Africa was being treated as a "special case" by the US administration and that even if South Africa should accede to the NPT, the US would find it difficult to provide South Africa timeously with the enriched uranium destined for KOEBERG. South Africa was also effectively prevented through US diplomatic intervention from obtaining fuel from any other source unless she accepted the conditions unilaterally imposed on us by the US. Furthermore it became impossible for South Africa's nuclear scientists to obtain visas to visit the USA even when personally invited by US organisations (Government as well as private) to participate in symposia and conferences.

7) This hardening in the US and other Western nations' attitudes towards South Africa and South Africa's subsequent disillusionment in these matters was aggravated by the unprecedented reaction of the US and other Western States to the Soviet allegation in 1977 that South Africa was preparing for a nuclear test in the Kalahari. Emphatic denial by South Africa of these allegations brought no relief, and the Group of 77 seized on these "revelations" as proof of South Africa's purported "nuclear (military) intentions". The September 22,1979 "event" in the "Southern Seas" and the way in which it was "leaked" to the press, and the US's reluctance to absolve South Africa from the allegation that she was responsible for a nuclear test, further aggravated the situation, and the spectre of an economic or nuclear boycott of South Africa by the UN became more real as time went on.

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The latest reporting of the "flash" of December 16, 1980, although immediately denied by the US as being a nuclear event, in no way alleviated the situation.

In this regard South Africa was subjected to vicious attacks by the Group of 77 in all international forums. Notably, the credentials of the South African delegation to the IAEA General Conference in New Delhi in 1979 was rejected on illegal grounds and with very little and then only token opposition from the Western Powers. More recently the South African delegate to the second meeting in March 1981 of the Committee on Assurances of Supply, a technical committee of the IAEA to which we were invited, was subjected to vitriolic attacks by some African States, effectively preventing him from participating in the proceedings of this committee. None of the Western countries made any statement in disapproval of these proceedings.

8) In the meantime South Africa had developed an enrichment process of its own and had started with the erection of a pilot enrichment plant in 1970 to prove the process on a semi-industrial scale. Perceiving a decided economic advantage in marketing its considerable uranium reserves in an enriched form, South Africa expressed its willingness to share this technology with interested countries and was soliciting international participation in the erection of a commercial enrichment plant. Although some preliminary discussions did take place with interested parties, the international political climate, especially in the nuclear field, effectively prohibited foreign participation in such a venture.

9) In the face of this persecution on the nuclear front, as perceived by South Africa, we had no alternative but to go it alone and to take such steps as were deemed necessary in order to safeguard our legitimate energy security objectives, as well as to secure the needs of our nuclear research programs. To this end a decision was taken and announced in 1978 to expand its pilot enrichment plant so as to provide in our own fuel requirements in the short term. This plant is being constructed without foreign assistance, using our own technology.

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It must be remembered that the construction of KOEBERG was well advanced in 1978. Furthermore our nuclear research program and notably the local production of isotopes for medical uses was primarily dependant on the continued operation of SAFARI-1.

Contracts for the supply of KOEBERG and its fuel as well as for SAFARI-1 fuel, were entered into under international agreements and safeguards. The unilateral imposition of new conditions and requirements forced South Africa to either immediately and summarily accede to these new conditions or to abandon its civil nuclear energy program at great cost and to seriously curtail its nuclear research program.

THE PRESENT POSITION

10) The situation and events as sketched above and the unilateral actions of various nuclear supplier nations has caused South Africa to lose confidence in the validity of international agreements in the nuclear field and has led to a loss of confidence in the US as a reliable supplier of nuclear fuel. This loss of confidence has also resulted in doubts being raised on whether South Africa, even if she did accede to NPT, would receive fair and equitable treatment or that she would not still be treated as a "special case" - especially in the advent of nuclear sanctions or even a total economic boycott imposed by the UN. Accession to NPT by South Africa under these circumstances and at this juncture can therefore only be considered subject to further serious revision in the light of developments which are expected to occur in the coming months.

11) Where KOEBERG is scheduled for initial fuel loading in March 1982 and no firm undertaking for the supply of enriched uranium could as yet be obtained, the chances are that the scheduled start-up of KOEBERG would be seriously delayed at great cost to South Africa.

12) South Africa would therefore welcome the early restoration of mutual confidence and the normalisation of relations between herself and the USA in these matters.

At the same time South Africa is aware of the difficult position in which the USA finds herself at this point in time especially vis-a-vis the Third World Countries in relation to nuclear supplies to South Africa under the NNPA regime.

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We therefore welcome the opportunity to have frank and open discussions in an effort to resolve these issues and to enable South Africa to proceed with its nuclear energy program as planned.

To this end we feel that it would be counterproductive to proceed along the lines as dictated by the previous US Administration and which led to the abortive negotiations which started in June 1978, and the present impasse on the fuel issue.

13) In order to clear the way for these discussions South Africa is willing to reiterate the following assurances: to the U.S

(i) South Africa is still not in principle opposed to accession to the NPT providing, of course, that its basic requirements could be met;

(ii) in the meantime, as in the past South Africa will continue to conduct and administer its nuclear affairs in a manner which is in line with the spirit, principles and goals of the NPT.

(iii) South Africa's nuclear programs are aimed at the peaceful application of nuclear energy and at no time in the past has she tested, or has she now any intention to test nuclear explosive devices.

Furthermore, for the information of the USA, South Africa, as has been announced, has since 1978 been engaged in the expansion of its uranium enrichment facilities so as to provide in our immediate fuel requirements. This plant will produce uranium enriched to a maximum of 5 % contained U^{235}. Furthermore, we have on our own developed a fuel element for the SAFARI-reactor which will use uranium enriched to only 45 % in U^{235} content. The intention to do this was announced in 1978 to the US delegation in South Africa and also at INFCE. We have also succeeded, at nearly prohibitive cost in relation to our nuclear research program, to produce a limited quantity of 45 % enriched uranium and have manufactured it into fuel elements for use in our research reactor. It is our intention to start using these fuel elements in SAFARI-1 for the first time during the second

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week of April 1981 when an inspection visit of the IAEA inspectors is expected. Needless to say, this fuel will be taken up in the inventory of the IAEA for the SAFARI-reactor and will be subject to safeguards in accordance with the requirements of our safeguards agreements.

Pending the present discussions with the USA, the IAEA has not yet been informed of this intention.

14) In the light of our understanding of the US position as mentioned in par. 12 above, we offer the following proposal to the USA:

(i) If it be considered impossible for the US to supply the required enriched uranium to South Africa through France for the KOEBERG reactors under the present circumstances, the USA permits France as soon as possible to supply the two initial fuel loadings and two reloads for the KOEBERG power station.

(ii) DOE agrees to either cancel the present contract for the supply of enriched uranium with ESCOM at no cost, or DOE agrees to postpone execution of the contract at no cost until such time as an agreement can be reached between the US and South African authorities which would permit the US to resume deliveries of fuel to South Africa.

(iii) Subsequent to these interim arrangements, and at such time when the new US Administration has settled its nuclear policies, negotiations on South Africa's acceptance of further conditions as required by the USA, shall be resumed.

20 MARCH 1981
PELINDABA