

GMB/037/0253/27

African National Congress

51 Plein Street
Johannesburg 2001
PO Box 61884
Marshalltown 2107



Tel: (011) 330 7277
Fax: (011) 333 8870
Telex: 421252

DEPARTMENT OF INFORMATION AND PUBLICITY

ANC CONCERN ABOUT THE SOUTH AFRICAN GOVERNMENT'S NUCLEAR ACTIVITIES AND AMBITIONS

The African National Congress is deeply concerned about reports emanating from Europe and the United States about South Africa's nuclear activities and ambitions.

The reports disclose the following:

1. The International Atomic Energy Agency (IAEA) has determined that South Africa secretly produced several hundred kilograms of High Enriched Uranium (HEU).
2. This large HEU inventory indirectly confirms that South Africa has an active and secret nuclear development programme, since no South African nuclear facility requires uranium enriched to levels above 45% U-235.
3. Given new estimates of the amount of fuel needed for a country to make a nuclear weapon - Iraq planned to make a bomb with about fifteen kg, South Africa's presumed inventory could fuel about 25 nuclear weapons.

This estimate is consistent with the calculation done by Leonard Specter of the Carnegie Endowment for International Peace. In 1987 he stated that South Africa possessed about twenty nuclear weapons.

4. IAEA inspectors recently visited on short notice an abandoned facility near the Pelindaba uranium enrichment complex. They are said to have found equipment used to work on the shape of spherical fissile cores for a nuclear explosive device.

5. This site, known as "Building 5000", was long suspected by western governments as a nuclear weapons development centre in the 1970's.

6. Based on what it has learnt about activities at the nuclear weapons site, the US is reported to have asked South Africa to declare that it had a nuclear weapons program.

7. A CIA report made public under the Freedom of Information Act is said to reveal that Jacobus de Villiers, now the Chairman of the AEC, had been "directly involved in weapons design work at the Pelindaba nuclear research centre" period to 1979.

These reports raise some disturbing questions:

Is the De Klerk government deliberately concealing the possession of weapons grade material?

Has the weapons program been stopped?

The NP government must declare the extent of its nuclear weapons program now. To continue their policy of secrecy and uncertainty amounts to holding the people of South Africa hostage to a possible nuclear threat.

Waldo Stumpf, the Chief Executive of the AEC is reported to have stated in response to a question on SA's possession of nuclear weapons, "You must be naive if you think I'm going to answer that question". Statements of this nature by Mr. Stumpf and his colleagues are designed to leave South Africa and the international community guessing in the hope that the mere thought of the regime possessing nuclear weapons will act as a deterrent and have a restraining influence on voices calling for democracy in South Africa.

On both points, hiding High Enriched Uranium from the public and the possession of nuclear weapons, South African officials have stated that they are not compelled to disclose any information in terms of the Non-Proliferation Treaty (NPT). But the responsibilities of the government to the people of this country are much greater than what is contained in the NPT.

The De Klerk government and the AEC must reveal to all South Africans and the international community the nuclear program that it has pursued in the past, and is still pursuing. Stubbornly clinging to one interpretation of the NPT contributes to their continued crisis of legitimacy and suspicion of their motives for wanting to conceal nuclear capabilities. By revealing the extent of the nuclear program, all South Africans will be able to see what has been done in their name in the past, and it will help us to deal with this serious issue in the future. Furthermore, by disclosing the extent of South Africa's nuclear program prior to signing the NPT,

South Africa can set a good precedent for other nations to follow.

The African National Congress is deeply concerned that South Africa could still be involved in secretive nuclear activities at a time when the country eagerly awaits the introduction of a democratic government. To continue to act clandestinely and give ambiguous answers on nuclear matters undermines the important process of building the confidence of all South Africans in the process of democratizing our country.

The ANC has long been opposed to the militarism of the apartheid regime. We have also stated our opposition to the building, stockpiling and use of nuclear weapons. We believe that secret control of nuclear facilities, of undeclared stocks of weapons grade material, and possibly nuclear weapons by the minority regime and its military and intelligence agencies holds potential dangers for the people of our country and the whole Southern African region.

Control of nuclear facilities is a matter which should be taken up at an early opportunity by the transitional and interim government.

We are of the view that adherence to the NPT requires full cooperation by South Africa and other countries. In particular, we cannot allow our country to exclude some of its nuclear processing facilities and their complete records from inspection by the IAEA.

The assertion by the NP government that the Valindaba plant has been mothballed and is therefore exempt from inspection is suspect. If there is no activity at the plant there can be no reason for not opening it to inspection. Furthermore, to say that the NPT does not require South Africa to reveal nuclear activities prior to signing the agreement and that therefore such information will not be disclosed is tantamount to a confession of an ongoing nuclear conspiracy.

We are deeply concerned that weapons grade fissile material, and even nuclear weapons, may be concealed from our people and the international community.

The De Klerk government must admit the full extent of their nuclear weapons program and weapons grade uranium stockpile now.

Issued by the Department of Information and Publicity
P O B0x 61884
Marshalltown
2107

Incomplete!

PAGE 2

2ND STORY of Level 1 printed in FULL format.

Copyright 1992 McGraw-Hill Inc.
Nucleonics Week

October 8, 1992

SECTION: Vol. 33, No. 41; Pg. 2

LENGTH: 1328 words

HEADLINE: IAEA FOUND EVIDENCE OF NUCLEAR WEAPONS WORK IN SOUTH AFRICA

SUBLINE: Mark Hibbs, Bonn and Vienna

BODY:

IAEA inspectors found evidence of critical assemblies, testing gear, and equipment for metallurgical research and processing during a recent visit to an abandoned facility near South Africa's Pelindaba nuclear research center, Nucleonics Week has learned.

Using this equipment, sources said, South African experts worked on the shape of spherical fissile cores for a nuclear explosive device.

The site, located just south of the Pelindaba uranium enrichment complex, had long been suspected by western governments as having served as a nuclear weapons development center during the 1970s. The IAEA visited the site on short notice when inspectors were elsewhere in the field, on the basis of information provided by a member state.

Since Pretoria signed and ratified the Nuclear Nonproliferation Treaty (NPT) last year, the IAEA has conducted nearly 80 inspection visits in South Africa at a cost of over 400 inspection man-hours. Officials said that most visits were aimed at verifying South Africa's declaration of its nuclear materials inventory.

In a report released two weeks ago on South Africa's nuclear capabilities prepared for the IAEA Board of Governors at the behest of the agency's 1991 General Conference, the IAEA made no reference to any weapons-related activities at the abandoned facility at Pelindaba, although a limited amount of information about the facility is said to have been included in the IAEA report after the matter was deliberated by senior IAEA officials.

The IAEA report said only that a site southwest of the enrichment complex, called Building 5000, "was stated (by South Africa) to have been used as a general-purpose critical facility by the Reactor Development Group (of the Atomic Energy Corporation of South Africa, AEC) which was disbanded several years ago. According to the AEC, the facility itself was abandoned in the early 1980s. This was evident from the condition of the building, which was found to be unoccupied and appeared to have been out of use for many years, except for the storage of a small quantity of radioactive waste and redundant equipment, all of which was stated to have originated from elsewhere on the Pelindaba site."

But in part because of what it has learned about activities at the Pelindaba site, sources said, the U.S. government recently asked South Africa to admit to having aimed at nuclear weapons development in the past. The sources said

Nucleonics Week, October 8, 1992

at South Africa had refused to declare it had had a nuclear weapons program.

Waldo Stumpf, AEC chief executive, would neither confirm nor deny to Nucleonics Week last month that the U.S. or other governments had made such a request. "There is nothing in the NPT requiring South Africa to make a statement to the IAEA or to anybody else about alleged past activities," the South African official said. Stumpf also refused to comment on whether South Africa had had a nuclear weapons development program.

Western intelligence agencies have long believed that the Pelindaba site was the center of Pretoria's nuclear weapons development activities. A memorandum from the U.S. Central Intelligence Agency (CIA), made public under the U.S. Freedom of Information Act, said that Jacobus de Villiers, now AEC chairman and then a senior AEC official, had been "directly involved in weapons design work at the Pelindaba nuclear research center" prior to 1979.

"We Are Not Iraq" Stumpf told Nucleonics Week that South Africa "had no obligations" pertaining to nuclear weapons development prior to signing and ratifying the NPT in 1991. "If Iraq did something wrong after it signed the NPT, that is one thing. We are not Iraq," he said.

"South Africa signed the NPT with honorable intentions and has presented its inventory (of nuclear materials) and opened its program to the IAEA. What we did in the past is simply not relevant," the AEC director said.

According to a senior IAEA official, South Africa's refusal to reveal details about its nuclear past is "wholly consistent with its obligations under the NPT."

Such is also the prevailing attitude within the U.S. government, sources said. The U.S. Department of State, one official said, "now takes the position that, since South Africa has formally eschewed nuclear weapons ambitions, a full accounting of previous nuclear activities is not necessary." South Africa could not have signed and ratified the NPT, this source said, if it had intended to violate the treaty.

The situation is not without precedent: when it was revealed during the 1980s that Sweden had worked on nuclear weapons in the 1950s and 1960s, it raised no official concern, and Sweden was not subjected to any pressure to reveal past activities to the IAEA.

But not all U.S. executive agency officials share this view. Regardless of South Africa's apparently good intentions, one official argued, "the IAEA should take a very hard line on (South Africa's) inventory and activities because the result will serve as a precedent" for pending IAEA verification of declarations submitted by Brazil, Argentina, and North Korea. These three states also engaged in clandestine activities prior to consenting to full-scope IAEA safeguards or their equivalent.

The IAEA has no mandate to search for evidence of weapons development activities.

IAEA Director General Hans Blix told Nucleonics Week September 25 that the IAEA "has made a cautious statement that, thus far, we see no evidence" contradicting the South African fissile material inventory declaration made in

Nucleonics Week, October 8, 1992

ate 1991.

"We cannot go through every nook and cranny" to make sure all nuclear activities have been reported, Blix said. "I doubt that we will ever say that the inventory is correct. We will say that we have found no evidence that there are any discrepancies."

But at some point the IAEA must express confidence in the accuracy of the South African inventory. After that, the IAEA will apply routine safeguards at a small number of locations covered by facility-specific agreements which define and limit inspectors' rights of access.

Blix and other IAEA officials stated that, in the course of verifying South Africa's materials inventory, the IAEA's rights of access are strictly limited to sites which may be suspected of hosting nuclear materials. "If we do get information that there may be fissile material at a (non-declared) site, we will check it if the information seems plausible," Blix said.

Inventory a Bargaining Chip? In the meantime, the IAEA has more work to do before it can confidently accept the South African inventory as accounted for and verified.

Official sources said records indicated that, between 1978 and 1989, the plant at Valindaba processed several hundred kilograms of high-enriched uranium (HEU) with concentrations of U-235 far in excess of the 45% U-235 required for the Safari research reactor (NuclearFuel, 28 Sept., 1).

These sources also said that Pretoria has balked at giving the IAEA data which identify precise enrichment levels for the highest concentrations of U-235 produced at Valindaba. They said that information obtained by the IAEA describes the material as having been enriched to between 60% and 90% U-235.

One source asserted that Pretoria had tried to use information about its fissile material inventory as a bargaining chip to gain a permanent seat on the IAEA Board of Governors. Before it was suspended from exercising its IAEA membership rights and privileges in 1979, South Africa sat on the board as the African continent's most-developed nuclear nation. It was subsequently supplanted in that position by Egypt. There has been some speculation that South Africa has sought to reclaim the African seat on the Board, but Stumpf denied that allegation, saying, "We do not aim to take over anybody else's seat."

IAEA officials said the attempt by some to expand the Board to allow South Africa, or any other state, a permanent seat, would not be successful.

1ST STORY of Level 1 printed in FULL format.

Copyright 1992 McGraw-Hill Inc.
NuclearFuel

October 21, 1992

SECTION: NONPROLIFERATION; Vol. 17, No. 21; Pg. 3

LENGTH: 796 words

HEADLINE: WASHINGTON WANTS TO PURCHASE SOUTH AFRICAN HEU INVENTORY

BYLINE: Mark Hibbs, Bonn

BODY:

The U.S. may purchase a significant part of South Africa's large inventory of high-enriched uranium (HEU) in a pending arrangement modeled on plans to purchase HEU from the Russian Federation, officials said last week.

They said that Pretoria has offered to sell the material to both the U.S. and Britain after informing Washington at the IAEA general conference in Vienna late last month that it would float the stockpile to one or more nuclear weapon states.

A U.S. official said that the State Department is presently formulating policy for transfer of the HEU from South Africa to the U.S. "We told (South Africa) this would be the easiest way of resolving the biggest nonproliferation problem in southern Africa," he said.

Timothy Walker, undersecretary for atomic energy in Britain's Department of Energy, told NuclearFuel last week that South Africa had made no offer to Britain during the conference, nor had it indicated it would make such an offer. According to other official sources, South Africa indicated only last week that it would make an offer of HEU to Britain.

While the U.S. favors purchase of weapons-grade uranium for security policy reasons, a U.K. official said any purchase by Britain of South African enriched uranium would have to be considered from a commercial perspective and would likely take into account the low market price of SWU. "The (British) government is not in the business of buying enriched uranium," he said.

Sources said South Africa was proposing several hundred kilograms of uranium in various enrichments and forms, including both UF₆ and metal. They described the HEU as having enrichment levels of between 60% and 90% U-235 but said that South Africa has balked at revealing the precise levels of enrichment -- either to the IAEA, which is presently trying to verify Pretoria's late-1991 fissile material inventory declaration, or to prospective buyers. Western officials conjectured that South Africa may have made two offers for different quantities of HEU in order to prevent a single purchasing state from gaining knowledge about the size of its HEU inventory.

Prior to any transfer of the material from South Africa, major questions on both blending and safeguarding of the material must be resolved.

If the uranium is to be transferred to the U.S., sources said, Washington would want it kept as HEU, to be blended down to lower enrichment levels in

NuclearFuel, October 21, 1992

the U.S. South Africa, in part for nonproliferation and security reasons but also to disguise enrichment levels, would prefer to dilute the material down to low-enriched uranium (LEU) before exporting it.

Some HEU is already being blended down to LEU in the presence of IAEA safeguards personnel in South Africa. The IAEA would have to be involved in safeguarding any HEU transferred from South Africa to the U.S. However, as is the case for Russian HEU to be transferred to the U.S., there is no agreement among U.S. agencies on the sensitive subject of termination of safeguards.

While the State Department is said to seek safeguards in perpetuity for the South African HEU, preserving the peaceful-use status of the material, some officials at the Department of Defense (DOD) and DOE are said to favor bilateral safeguards arrangements covering transfer of the HEU and might seek to add it to the U.S. HEU stockpile.

U.S.-South African Commerce Warming

In an effort to improve relations with Pretoria, the U.S. has withheld from the public what it knows about past South African nuclear activities and weapons-grade material inventory.

While IAEA inspectors have found evidence for weapons-related nuclear activities near the Pelindaba uranium enrichment complex (Nucleonics Week, 8 Oct., 2) and evidence indicates that South Africa produced large amounts of weapons-usable material (NF, 28 Sept., 1), the matter of South Africa's nuclear capabilities, which was addressed by the IAEA Board of Governors last month at the IAEA at the behest of the 1991 General Conference, drew little attention.

Meanwhile, U.S. nuclear exports have begun to trickle to South Africa. On March 30, the NRC approved an export license XCOM-1061 for a flux monitoring control system for South Africa's Safari research reactor. DOE has approved two 10 CFR Part 810 technology transfers to South Africa: a chemistry training system for the Koeberg power reactors in February and an information system from Halliburton NUS Environmental Corp. in May.

Diplomats said South African officials in Vienna have recently told the IAEA that Pretoria seeks to take an active part in the Zangger Committee on export controls. They have also indicated that full-scope safeguards will be a condition of all future nuclear cooperation agreements concluded by Pretoria.

PAGE 20

5TH STORY of Level 1 printed in FULL format.

Copyright 1992 McGraw-Hill Inc.
NuclearFuel

September 28, 1992

SECTION: Vol. 17, No. 20; Pg. 1

LENGTH: 1402 words

HEADLINE: IAEA BELIEVES SOUTH AFRICA PRODUCED MORE THAN 200 KG OF
HIGH-ENRICHED URANIUM

BYLINE: Mark Hibbs, Vienna

BODY:

The IAEA has determined that South Africa clandestinely produced several hundred kilograms of weapons-grade uranium during the 1970s and 1980s, NuclearFuel has learned.

According to official sources, IAEA safeguards experts have determined that South Africa produced far in excess of 200 kg of high-enriched uranium (HEU) at the pilot uranium enrichment plant at Valindaba, the so-called Y-plant. They said information given to the IAEA by the South African government indicates that the amount of weapons-grade uranium produced at the Y-plant may well be in excess of 400 kg. "More examination of the inventory is needed to get the numbers harder," one official said.

Given new estimates of the amount of fuel needed for a country to make its first nuclear weapon -- Iraq had planned to make a fission bomb with about 15 kg -- South Africa's presumed HEU inventory could fuel about 25 nuclear weapons.

Sources said that the large HEU inventory has indirectly confirmed that South Africa had an active and secret nuclear weapons development program, since no South African nuclear facility required uranium enriched to levels above 45% U-235.

According to the IAEA, some HEU produced by South Africa will be diluted to under 5% enrichment in operations to begin this month under the supervision of IAEA inspectors.

Western officials said that the discovery that large amounts of weapons-grade U had been produced in South Africa, plus clarification by the IAEA that some low-enriched uranium (LEU) of Chinese origin had not been used as a feedstock for higher enrichment, supported intelligence estimations that the throughput of the now-decommissioned Y-plant was considerably greater than the generally published figures of 10,000 SWU/year. One official said the Y-plant's nominal throughput might be as much as twice that high.

Queried by NuclearFuel in Vienna, South African officials refused to disclose the throughput of the Y-plant, saying that information is classified.

Records obtained by the IAEA indicate that the Y-plant began operating in 1974. HEU production began in January 1978 and ended in November 1989, although technical problems interrupted production between August 1979 and July 1981. Production levels fluctuated after that as improved separating elements were

NuclearFuel, September 28, 1992

added. Some LEU fuel for the Koeberg PWRs was also produced at the plant, which was also fed with depleted uranium for a short period.

Since South Africa signed the Nuclear Nonproliferation Treaty (NPT) and declared an initial inventory of fissile material to the IAEA last year, the IAEA has been at work verifying the inventory declaration. IAEA spokesman David Kyd said that the Pretoria government very quickly presented an inventory statement to the IAEA and that, thus far, information compiled by IAEA safeguards officials does not indicate any discrepancies with the inventory declaration made by the South African government.

However, the IAEA still has work to do in order to define precisely the country's HEU inventory. The IAEA "has defined an upper bound and a lower bound" for cumulative production of weapons-grade U by South Africa, one official said, but there is a "lot of effort still ahead to more precisely define the enrichment grades and volumes of uranium processed."

Too Much Detail

Officials said Pretoria objected to the level of detail in a report on the IAEA inspection effort in South Africa, prepared by IAEA General Director Hans Blix at the behest of last year's IAEA General Conference. Nonetheless, the Blix report did not disclose the IAEA's information about foreign sources of nuclear materials obtained by South Africa, nor does it assert that South Africa enriched any uranium to beyond 20%.

Waldo Stumpf, chief executive of the Atomic Energy Corporation of South Africa (AEC) and a senior member of the South African delegation to this year's IAEA conference, stated only that Blix "expressed his full satisfaction about the cooperation provided by South Africa" in complying with its obligations under the NPT.

Armed with information from Western intelligence agencies and other sources, Washington recently tried to persuade Pretoria to declare that it had had a program to develop nuclear weapons during the 1970s and 1980s, sources said, saying the South Africans had refused.

Documents obtained under the U.S. Freedom of Information Act reveal that the U.S. Central Intelligence Agency (CIA) was convinced that South Africa had launched a nuclear weapons program with the participation of AEC Chairman Jacobus de Villiers.

Stumpf would neither confirm nor deny that South Africa had a nuclear weapons program. "You must be naive if you think I am going to answer that question," Stumpf told NuclearFuel.

The Blix report noted that "the initial assistance offered by South Africa, namely, the submission of operating records of the decommissioned (Y-plant), was welcomed but was not considered to be sufficient" by the IAEA.

Thereafter, Pretoria agreed to provide more records from the Y-plant, including records for electricity consumption since 1980, pre-September 1981 operating records for the follow-on, semi-commercial enrichment facility at Valindaba, and historical flows of nuclear material including that from foreign sources.

PAGE 22

NuclearFuel, September 28, 1992

MUF Values Uncertain, Unusable

South Africa also agreed to hand over historical records of material unaccounted for (MUF) which the AEC had kept for accounting purposes.

Last year, East German documents obtained by NuclearFuel alleged that a sub-significant kilogram quantity of uranium enriched to 90% U-235 had been diverted to Botswana and then brokered to a cabinet minister of the government of Mozambique. At the time, South African authorities refused to confirm or deny the allegations (NF, 23 Dec.'91, 7).

Meanwhile, IAEA inspectors have confirmed that the separation units at the Y-plant have been dismantled and removed, and that the rest of the facility has been decommissioned and partly dismantled.

The IAEA has found what it calls an "apparent discrepancy" in the fissile materials balance it calculated at the Y-plant. According to its report to the General Conference, "this may be the result of the material accountancy system, since while the methods used to account for the enriched uranium product were in line with contemporary safeguards accounting methods, no formal measurement control program had existed for the depleted uranium product which was a major component of the U-235 balance. This situation, according to (the AEC), reflected the low financial value put on the depleted uranium by the plant management."

Some of the HEU made at the Y-plant was used to upgrade imported LEU and domestic natural uranium to the enrichment required for Koeberg fuel; some was converted to uranium metal, and some was used to fabricate fuel for the Safari research reactor. The IAEA report describes the Safari fuel as "in various chemical and physical forms and enrichments."

Records for the semi-commercial plant indicate that commissioning began in June 1984 but full cascade operation did not begin until August 1988. The plant has apparently operated continuously since, with the exception of one interruption in 1990. As in the case of the Y-plant, records indicate a discrepancy in the semi-commercial plant's material balance for U-235.

The IAEA reported that the accuracy of material balances in general "was impaired by such factors as the non-availability of suitable instruments to measure process hold-ups, the unwillingness of the plant management to interrupt production in order to drain condensers or to transfer material to measurement points, and the lack of comprehensive measurement control programs."

While South Africa did provide MUF values, they were considered unusable by IAEA inspectors "in view of the uncertainties associated with their determination."

South Africa also reported that several metric tons of unsafeguarded LEU were obtained from a foreign source for use in Koeberg fuel. Neither the IAEA nor South Africa would reveal the source of that material. But well-placed sources in Vienna said that it came from China, as was reported by British intelligence in 1988 (NF, 25 July '88, 7). Contrary to speculation, however, the Chinese-origin LEU was apparently not used as feedstock for the Y-plant to produce HEU.