

Mossgas, the space and missile programme may owe its inspiration to the era of apartheid isolation, which is now over.

There may be positive spin-offs for such a home-grown industry, such as employment and a hi-tech infrastructure. But there may be negative effects, such as the need to sell missiles to rogue countries to turn a profit. That could lead to more sanctions.

There are vested interests on all sides. Therefore, a time-out is needed to enable objective and competent experts to examine the issues before we finally commit ourselves to something that could be very expensive and damaging—just as we are returning to the international fold.

Wynand Mouton

93WP0155D Johannesburg SUNDAY STAR in English
28 Mar 93 p 26

[Article by David Breier; First paragraph SUNDAY STAR comment]

[Text] Nuclear meltdown: The man who saw to it that South Africa's A-bombs were properly dismantled, with every gram of uranium accounted for, is P W Botha's neighbour. He tells his strange story.

"I felt very small standing in front of those devices, knowing each of them could destroy a city," says Wynand Mouton.

He was the trusted man appointed by President de Klerk to oversee the dismantling of South Africa's secret nuclear arsenal of six complete and one incomplete nuclear "devices"—which could have been deployed as atomic bombs at short notice.

Mouton (64), who was chairman of the SABC [South African Broadcasting Corporation] board in the early 1980s, is a nuclear physicist with years of academic experience in nuclear science at the universities of the Witwatersrand and Stellenbosch.

He now lives in semi-retirement in Wilderness, where his neighbour is none other than former president P W Botha, who played a key role in the development of South Africa's nuclear arsenal.

Botha was the gung-ho minister of defence in 1974 in the Vorster government, which took the secret decision to become a nuclear power. The nuclear weapons programme was largely developed after Botha assumed power in 1978.

Botha retired to Wilderness after he lost power in 1989. He often meets and chats with his neighbour Mouton, who also chose the beautiful area for his retirement home.

This is the Professor who defused S.A. nuclear threat

But little did the former president know during those peaceful chats in 1990 and 1991 that Mouton was secretly overseeing the hush-hush dismantling of the bombs that Botha built.

"We see each other often, but I never talked about it," Mouton told the SUNDAY STAR this week. He reported exclusively to De Klerk.

What the retired "Groot Krokodil" did not know was that his neighbour was paying frequent visits to Pelindaba, west of Pretoria, to oversee and check on the incredibly complex process of dismantling the bombs, conducted by a tightly knit team of a "few dozen" scientists. This took 18 months.

Mouton confesses that, despite his years of experience as a nuclear physicist, he was humbled by the experience. "I was more a basic scientist. This was applied nuclear physics."

Mouton was used to working with small reactors like the one at Wits, but had never been in the presence of weapons-grade uranium encased in the shiny cigar-shaped "bombs."

"I shivered when I stood in front of them and realised their power," he said.

Each bomb was comparable to the one that destroyed Hiroshima—small by superpower H-bomb standards, but big enough to destroy the likes of Johannesburg.

Without disclosing secrets, Mouton described the unbelievably difficult internationally prescribed process of melting down the highly enriched uranium, which is as heavy as gold. The uranium oxidises quickly and therefore must not come into contact with air. It is coated with nickel for much of the process.

The uranium is smelted into small blocks weighing a "couple of kilograms" each. This must be done with tremendous care to ensure it does not set off a chain reaction.

The small blocks of uranium were then stored in extremely secure conditions at Pelindaba. The rest of the hardware and blueprints were destroyed.

Vastrap Test Site

93WP0155E Johannesburg SUNDAY STAR in English
28 Mar 93 p 26

[Article by Brendan Seery: "'No Danger From Nuclear Bomb Tests"; quotation marks as published]

[Text] Residents of Upington would have been in no danger of radiation contamination if Armscor had gone ahead with underground testing of nuclear devices at a site about 100 km north-west of the town. That's what Armscor says.

The site was "never used as intended," claims the arms giant, and was "evacuated" after international reaction following its discovery by Soviet spy satellites in 1977. At the time Foreign Minister Pik Botha vigorously denied South Africa had a nuclear test facility or nuclear development programme.

Construction of the underground test facility at the SADF's [South African Defense Forces] Vastrap range began in the early 1970s in conditions of strict secrecy. RUC Mining was the company contracted to sink three shafts, each 500 metres deep, into the Kalahari.

Geologically, the area chosen is said to be one of the most stable in southern Africa.

The Vastrap nuclear test site had the additional advantage of being well away from prying eyes.

According to Armscor, "all safety aspects were considered when the site was chosen."

Geological Surveys

"Proper geological surveys were done, factors such as water contamination (short and long term), disruption of the earth's surface, impedance matching of back-filling material to that of the test shafts and damage predictions to structures in the area were carefully studied by the team of engineers and scientists working on the project."

The shafts were of such a depth that "once the shaft has been filled, no radiation could escape during or after the test," added Armscor.

Interestingly, the arms giant let slip the fact that "some basic information on the design requirements and layout of such a site was obtained from open literature."

The six nuclear bombs never got to the Kalahari site.

Kalahari Test Site

93WP0155F Johannesburg SUNDAY STAR in English
28 Mar 93 p 27

[Article by Mark Stansfield: "Terrain of Destruction"; first paragraph SUNDAY STAR comment; quotation marks as published]

[Text] Secret facility: Government officials admitted this week that a nuclear test site was constructed in the Kalahari desert. It was never used, they say. The SUNDAY STAR found the site this week.

There's miles and miles of sand and scrub bush in the Kalahari. We were told it would be almost impossible to find in the hundreds of square kilometres of monotonous red dunes.

But, hidden in a remote area, we did find one of South Africa's best-kept secrets: a nuclear test facility.

We visited it this week with permission to stomp and pry as much as we liked. We couldn't get inside the building

erected over the test shafts, however, because the SADF [South African Defense Forces] personnel escorting us had "forgotten the keys at home."

The quest to find South Africa's nuclear test facility started 12 years ago after a drunken conversation. There were few clues given at the time. "It" was hidden somewhere in the Kalahari, somewhere near Upington, and had a lime-decked road leading to it. It was a damn good bar-side yarn, little else.

This week, the Atomic Energy Corporation's (AEC) Nicholaas Ligthelm gave a few more hints, and some valuable information, after the Government came clean about its nuclear programme.

Ligthelm was the one who finally admitted "it" did exist. In Government and military parlance, "it" is referred to as "The Terrain."

Ligthelm said the site was under the control of the SADF. It had been developed should there be reason to conduct a nuclear test. It did indeed lie north of Upington, he said, but had never been used.

"Three shafts were drilled ... one has since been back-filled. The other two have had concrete "stoppers" placed in them and slabs of cement laid over them... A building has also since been erected over the shafts," he said.

"But I've never been there," he added.

Ligthelm did admit that Vienna-based International Atomic Energy Agency officials had visited the site themselves in 1991 in the company of AEC officials.

SADF personnel were amazed when told the news that they had under their control a secret the Government has been hiding successfully for about 20 years.

Well, South Africa's nuclear test site lies about 80 km north, and slightly west, of Upington at a place called Vastrap, and it was disguised as an S.A. Air Force-controlled test-range for aircraft-mounted munitions.

The base looks forlorn and abandoned now. Only two SAAF [South African Air Force] personnel stay permanently there, with a few Nama helpers.

The SAAF personnel and an S.A. Army commandant said they knew nothing about what had been going on at Vastrap—but an elderly Nama woman refreshed their memories.

"I have worked here 14 years in the kitchens," the old lady informed us.

"And I remember those godless people who used to come here ... so picky, they were: 'wouldn't eat this, wouldn't eat that, because of their religion, you know.'" She said she was talking about the Israelis "who don't believe in Jesus." "They used to fly in here for the tests," she added.

The commandant "hurrumphed" a lot, so she stopped telling her tale about the Israelis and the "tests."

The site itself is nothing spectacular. One would expect something better for something so terrifying as the testing of nuclear power.

Huddled inside the cockpit of a Piper Arrow we could not even see the building that has since been erected over the site—probably to disguise it.

The airspace above Vastrap is a "no-fly" zone, from ground level right into the stratosphere.

Our pilot Yannis assured us he was on the edge of the no-fly zone at 9,000 feet. All we could identify were the abandoned rows of barracks which lie about 15 km from the nuclear "shafts."

Then we drove out there.

The "Airforce Base Waterkloof: Vastrap Testing Range" sign looks innocent enough. So does the metal "sculpture" of a skeleton holding a sickle at the entrance to the "restricted" zone. A sign above the skeleton says "Welcome to the Fleshpots of Egypt."

One drives for about 20 km through the Kalahari dunes, and there stands a huge, newly built hangar with a concrete apron. Not a runway in sight, which makes the silver hangar look out of place, somehow. It is out of place: beneath it still exist two shafts where South Africa could have exploded the first nuclear device set off on African soil, a mere 80 km from Upington and the people who lived there under the shadow of one of man's darker threats.

The site is exactly as Lighthelm described it: a concrete slab with a building on it. Behind the building one can see where the third "back-filled" shaft may have been

excavated. The area is a churned mess of red sand, reinforced concrete, thick, twisted steel plates and chunks of granite which obviously came from deep beneath the earth.

The concrete foundations of the "barracks," built in the mid-70s, where the men who built the site stayed, are also still visible. The area has been scattered with fibre-glass models of tanks and other army vehicles, presumably to make it look like a conventional "battle school" to prying satellites.

There's little else left at such an historic site today.

In Upington, we told residents about what lay out there in the desert. They did not seem to understand the technology. Even the name Hiroshima meant nothing to them and they were incredulous about what we were telling them.

The three shafts drilled into the Kalahari desert, which would have been used "if the need ever arose," were excavated by RUC Mining Pty Ltd.

RUC's company secretary Pat Morrison this week said "he had been party to that," but declined to comment about the project until the Government gave him permission.

That permission was not forthcoming at the time of going to press.

David Kyd, director for the Vienna-based International Atomic Energy Agency, declined to comment on a 1991 visit IAEA inspectors had made to South Africa's nuclear test site.

"That remains confidential because our investigations are not complete and certain other nations would be annoyed to read of such things in the press," he explained.